UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-Q

(Mark One)

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended September 30, 2024

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from _____to _____

Commission File Number: 001-39122

89bio, Inc.

(Exact Name of Registrant as Specified in its Charter)

Delaware	**36-4946844**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
655 Montgomery Street, Suite 1500 San Francisco, California	**94111**
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code: (415) 432-9270

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common stock, par value $0.001 per share	ETNB	Nasdaq Global Market

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
Emerging growth company	☐		

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of October 31, 2024, the registrant had 106,126,338 shares of common stock, $0.001 par value per share, outstanding.

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PART I—FINANCIAL INFORMATION

Item 1. Financial Statements.

89bio, Inc.
Condensed Consolidated Balance Sheets
(Unaudited)
(In thousands, except share and per share amounts)

	September 30, 2024	December 31, 2023
Assets		
Current assets:		
Cash and cash equivalents	$ 91,411	$ 316,161
Marketable securities	332,363	262,709
Prepaid and other current assets	32,432	14,664
Total current assets	456,206	593,534
Operating lease right-of-use assets	1,760	2,293
Property and equipment, net	17	46
Other assets	314	396
Total assets	$ 458,297	$ 596,269
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$ 19,490	$ 8,585
Accrued expenses	18,898	20,530
Operating lease liabilities, current	743	496
Total current liabilities	39,131	29,611
Operating lease liabilities, noncurrent	1,281	1,817
Warrant liability	487	—
Term loan, noncurrent, net	35,544	24,795
Other noncurrent liabilities	3,752	3,740
Total liabilities	80,195	59,963
Commitments and contingencies (Note 5)		
Stockholders' equity:		
Common stock, $0.001 par value: 200,000,000 shares authorized; 106,126,338 and 93,269,377 shares issued and outstanding as of September 30, 2024 and December 31, 2023, respectively	106	93
Additional paid-in capital	1,082,884	993,455
Accumulated other comprehensive income	1,269	190
Accumulated deficit	(706,157)	(457,432)
Total stockholders' equity	378,102	536,306
Total liabilities and stockholders' equity	$ 458,297	$ 596,269

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

89bio, Inc.
Condensed Consolidated Statements of Operations and Comprehensive Loss
(Unaudited)
(In thousands, except share and per share amounts)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
Operating expenses:				
Research and development	$ 141,441	$ 31,417	$ 233,734	$ 88,638
General and administrative	10,497	7,928	28,917	21,360
Total operating expenses	151,938	39,345	262,651	109,998
Loss from operations	(151,938)	(39,345)	(262,651)	(109,998)
Interest expense	(2,362)	(959)	(4,099)	(3,928)
Interest income and other, net	5,431	5,579	18,460	11,972
Net loss before income tax	(148,869)	(34,725)	(248,290)	(101,954)
Income tax expense	(204)	—	(435)	—
Net loss	$ (149,073)	$ (34,725)	$ (248,725)	$ (101,954)
Other comprehensive income (loss):				
Unrealized gain (loss) on marketable securities	1,962	41	1,079	(200)
Foreign currency translation adjustments	(10)	6	—	3
Total other comprehensive income (loss)	$ 1,952	$ 47	$ 1,079	$ (197)
Comprehensive loss	$ (147,121)	$ (34,678)	$ (247,646)	$ (102,151)
Net loss per share, basic and diluted	$ (1.39)	$ (0.45)	$ (2.46)	$ (1.50)
Weighted-average shares used to compute net loss per share, basic and diluted	107,075,197	76,336,050	100,940,155	67,962,848

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

89bio, Inc.
Condensed Consolidated Statements of Stockholders' Equity
(Unaudited)
(In thousands, except share amounts)

	Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amounts				
Balance as of December 31, 2023	93,269,377	$ 93	$ 993,455	$ 190	$ (457,432)	$ 536,306
Issuance of common stock in at-the-market public offerings, net of issuance costs	1,396,888	2	21,047	—	—	21,049
Issuance of common stock upon exercise of common stock warrants	337,713	—	1,798	—	—	1,798
Issuance of common stock upon exercise of stock options	1,626	—	7	—	—	7
Issuance of common stock upon vesting of restricted stock units, net of tax withholding for net share settlement	194,120	—	(1,229)	—	—	(1,229)
Stock-based compensation	—	—	4,998	—	—	4,998
Net loss	—	—	—	—	(51,681)	(51,681)
Other comprehensive loss	—	—	—	(709)	—	(709)
Balance as of March 31, 2024	95,199,724	95	1,020,076	(519)	(509,113)	510,539
Issuance of common stock upon exercise of common stock warrants	8,854,576	9	47,142	—	—	47,151
Issuance of common stock upon cashless exercise of pre-funded warrants	799,906	1	(1)	—	—	—
Issuance of common stock upon exercise of stock options	26,355	—	54	—	—	54
Issuance of common stock upon vesting of restricted stock units, net of tax withholding for net share settlement	8,490	—	(39)	—	—	(39)
Issuance of common stock under employee stock purchase plan	26,125	—	178	—	—	178
Stock-based compensation	—	—	5,169	—	—	5,169
Net loss	—	—	—	—	(47,971)	(47,971)
Other comprehensive loss	—	—	—	(164)	—	(164)
Balance as of June 30, 2024	104,915,176	105	1,072,579	(683)	(557,084)	514,917
Issuance of common stock upon exercise of common stock warrants	987,500	1	5,257	—	—	5,258
Issuance of common stock upon exercise of stock options	18,022	—	82	—	—	82
Issuance of common stock upon vesting of restricted stock units, net of tax withholding for net share settlement	205,640	—	(904)	—	—	(904)
Issuance of common stock warrants in connection with term loan	—	—	608	—	—	608
Stock-based compensation	—	—	5,262	—	—	5,262
Net loss	—	—	—	—	(149,073)	(149,073)
Other comprehensive income	—	—	—	1,952	—	1,952
Balance as of September 30, 2024	106,126,338	$ 106	$ 1,082,884	$ 1,269	$ (706,157)	$ 378,102

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

89bio, Inc.
Condensed Consolidated Statements of Stockholders' Equity
(Unaudited)
(In thousands, except share amounts)

	Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amounts				
Balance as of December 31, 2022	50,560,590	$ 51	$ 467,374	$ (350)	$ (315,243)	$ 151,832
Issuance of common stock in public offerings, net of issuance costs	19,461,538	19	296,798			296,817
Issuance of common stock in at-the-market public offerings, net of issuance costs	968,000	1	13,421	—	—	13,422
Issuance of common stock upon exercise of common stock warrants	1,682,500	2	8,958	—	—	8,960
Issuance of common stock upon exercise of stock options	61,408	—	185	—	—	185
Issuance of common stock upon vesting of restricted stock units, net of tax withholding for net share settlement	133,669	—	(693)	—	—	(693)
Issuance of common stock warrants in connection with term loan	—	—	482	—	—	482
Stock-based compensation	—	—	3,551	—	—	3,551
Net loss	—	—	—	—	(28,836)	(28,836)
Other comprehensive income	—	—	—	110	—	110
Balance as of March 31, 2023	72,867,705	73	790,076	(240)	(344,079)	445,830
Issuance of common stock in at-the-market public offerings, net of issuance costs	1,200,539	1	23,666	—	—	23,667
Issuance of common stock upon exercise of common stock warrants	1,245,070	1	6,629	—	—	6,630
Issuance of common stock upon exercise of stock options	107,832	—	327	—	—	327
Issuance of common stock upon vesting of restricted stock units, net of tax withholding for net share settlement	31,527	—	—	—	—	—
Issuance of common stock under employee stock purchase plan	13,927	—	142	—	—	142
Stock-based compensation	—	—	4,137	—	—	4,137
Net loss	—	—	—	—	(38,393)	(38,393)
Other comprehensive loss	—	—	—	(354)	—	(354)
Balance as of June 30, 2023	75,466,600	75	824,977	(594)	(382,472)	441,986
Issuance of common stock upon exercise of stock options	27,372	—	117	—	—	117
Issuance of common stock upon vesting of restricted stock units, net of tax withholding for net share settlement	144,544	—	(1,597)	—	—	(1,597)
Stock-based compensation	—	—	4,381	—	—	4,381
Net loss	—	—	—	—	(34,725)	(34,725)
Other comprehensive income	—	—	—	47	—	47
Balance as of September 30, 2023	75,638,516	$ 75	$ 827,878	$ (547)	$ (417,197)	$ 410,209

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

89bio, Inc.
Condensed Consolidated Statements of Cash Flows
(Unaudited)
(In thousands)

	Nine Months Ended September 30,	
	2024	**2023**
Cash flows from operating activities:		
Net loss	$ (248,725)	$ (101,954)
Adjustments to reconcile net loss to net cash used in operating activities:		
Stock-based compensation	15,429	12,069
Net accretion of discounts on investments in marketable securities	(7,887)	(4,297)
Amortization of debt discount and accretion of deferred debt costs	505	695
Loss on extinguishment of debt	1,503	1,208
Noncash operating lease expense	533	125
Depreciation	29	34
Changes in operating assets and liabilities:		
Prepaid and other assets	(17,199)	(3,238)
Accounts payable	11,021	(1,599)
Accrued expenses	(1,175)	2,189
Operating lease liabilities	(289)	(125)
Other noncurrent liabilities	12	—
Net cash used in operating activities	(246,243)	(94,893)
Cash flows from investing activities:		
Proceeds from sales and maturities of marketable securities	252,375	157,428
Purchases of marketable securities	(313,063)	(216,804)
Net cash used in investing activities	(60,688)	(59,376)
Cash flows from financing activities:		
Proceeds from issuance of common stock in public offerings, net of issuance costs	—	296,817
Payments of deferred offering costs	(116)	—
Proceeds from issuance of common stock in at-the-market public offerings, net of issuance costs	21,049	37,089
Proceeds from term loan facility, net of issuance costs	9,349	24,363
Proceeds from issuance of common stock upon exercise of common stock warrants	54,207	15,590
Proceeds from issuance of common stock upon exercise of stock options	143	629
Proceeds from issuance of common stock under employee stock purchase plan	178	142
Payments for taxes related to net share settlement upon vesting of restricted stock units	(2,629)	(2,290)
Repayment of term loan	—	(21,400)
Net cash provided by financing activities	82,181	350,940
Net change in cash and cash equivalents	(224,750)	196,671
Cash and cash equivalents at beginning of period	316,161	55,255
Cash and cash equivalents at end of period	$ 91,411	$ 251,926
Supplemental disclosures of cash information:		
Cash paid for interest	$ 2,053	$ 1,913
Cash paid for amounts included in the measurement of lease liabilities	$ 506	$ 139
Supplemental disclosures of noncash information:		
Issuance of common stock warrants in connection with term loan	$ 608	$ 482

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

1. Organization and Liquidity

Description of Business

89bio, Inc. ("89bio" or the "Company") is a clinical-stage biopharmaceutical company focused on the development and commercialization of innovative therapies for the treatment of liver and cardio-metabolic diseases. The Company's lead product candidate, pegozafermin, a specifically engineered glycoPEGylated analog of fibroblast growth factor 21 ("FGF21"), is currently being developed for the treatment of metabolic dysfunction-associated steatohepatitis ("MASH"), previously known as nonalcoholic steatohepatitis, and for the treatment of severe hypertriglyceridemia ("SHTG").

89bio was formed as a Delaware corporation in June 2019 to carry on the business of 89Bio Ltd., which was incorporated in Israel in January 2018.

Liquidity

The Company has incurred significant losses and negative cash flows from operations since inception and had an accumulated deficit of $706.2 million as of September 30, 2024. The Company has historically financed its operations primarily through the sale of equity securities, including warrants, and from borrowings under term loan facilities. To date, none of the Company's product candidates have been approved for sale, and the Company has not generated any revenue from commercial products. The Company expects operating losses to continue and increase for the foreseeable future as the Company progresses its clinical development activities for its product candidates.

The Company believes its existing cash, cash equivalents and marketable securities of $423.8 million as of September 30, 2024 will be sufficient to fund its planned operating expense and capital expenditure requirements for a period of at least one year from the date of the issuance of these financial statements.

2. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying interim unaudited condensed consolidated financial statements have been prepared in conformity with accounting principles generally accepted in the United States ("U.S. GAAP"), the instructions to Form 10-Q and Rule 10-01 of Regulation S-X and applicable rules and regulations of the Securities and Exchange Commission ("SEC") regarding interim financial reporting.

Unaudited Interim Condensed Consolidated Financial Statements

The accompanying interim condensed consolidated financial statements are unaudited. The interim unaudited condensed consolidated financial statements have been prepared on the same basis as the audited consolidated financial statements as of and for the year ended December 31, 2023 and reflect all normal recurring adjustments that are necessary to present fairly the results for the interim periods presented. Interim results are not necessarily indicative of the results to be expected for the full year ending December 31, 2024 or for any other future annual or interim period. The condensed consolidated balance sheet as of December 31, 2023 was derived from the audited financial statements as of that date and, due to its summary nature, does not include all the disclosures required by U.S. GAAP in audited financial statements. These condensed consolidated financial statements should be read in conjunction with the Company's audited consolidated financial statements included in the Annual Report on Form 10-K for the year ended December 31, 2023, which was filed with the SEC on March 1, 2024.

Principles of Consolidation

The accompanying condensed consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries. All intercompany balances and transactions have been eliminated in consolidation. For the Company and its subsidiary in Israel, the functional currency has been determined to be the U.S. Dollar.

Use of Estimates

The preparation of condensed consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities as of the date of the condensed consolidated financial statements and the reported amounts of expenses during the reporting period. Significant estimates and assumptions made in the accompanying condensed consolidated financial statements include but are not limited to accruals for uncertain tax positions, accrued research and development expenses and the valuation of stock options. The

Company evaluates its estimates and assumptions on an ongoing basis using historical experience and other factors and adjusts those estimates and assumptions when facts and circumstances dictate. Actual results could differ from those estimates.

Fair Value Measurements

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability (an exit price) in an orderly transaction between market participants at the reporting date. Assets and liabilities recorded at fair value are categorized based upon the level of judgment associated with the inputs used to measure their fair value. Hierarchical levels are directly related to the amount of subjectivity with the inputs to the valuation of these assets or liabilities as follows:

Level 1—Observable inputs such as unadjusted, quoted prices in active markets for identical assets or liabilities at the measurement date;

Level 2—Inputs (other than quoted prices included in Level 1) are either directly or indirectly observable inputs for similar assets or liabilities. These include quoted prices for identical or similar assets or liabilities in active markets and quoted prices for identical or similar assets or liabilities in markets that are not active; and

Level 3—Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

Assets and Liabilities Measured at Fair Value on a Recurring Basis

Financial instruments measured and recorded at fair value on a recurring basis consist of cash equivalents and marketable securities and common stock warrants issued in connection with a term loan facility that do not meet all of the criteria for equity classification.

Financial Instruments Not Carried at Fair Value

The Company's financial instruments, including cash, other current assets, accounts payable and accrued expenses are carried at cost which approximates their fair value because of the short-term nature of these financial instruments. The fair value of the Company's term loan approximates its carrying value, or amortized cost, due to the prevailing market rates of interest it bears.

Cash and Cash Equivalents

The Company considers all highly liquid investments purchased with original maturities of three months or less from the purchase date to be cash equivalents. Cash equivalents primarily consist of amounts invested in money market funds, commercial paper and U.S. government treasury securities and are carried at fair value.

Marketable Securities

The Company invests its excess cash in marketable securities with high credit ratings including money market funds, commercial paper, securities issued by the U.S. government and its agencies and corporate debt securities. The Company accounts for all marketable securities as available-for-sale, as the sale of such securities may be required prior to maturity. These marketable securities are carried at fair value, with unrealized gains and losses reported as accumulated other comprehensive income (loss) until realized. The cost of debt securities is adjusted for accretion of premiums and amortization of discounts to maturity. Such amortization and accretion, as well as interest and dividends, are included in interest income and other, net. Realized gains and losses from the sale of marketable securities, if any, are determined on a specific identification basis and are also included in interest income and other, net. The Company's marketable securities are classified as current assets, which reflects management's intention to use the proceeds from sales of these securities to fund its operations, as necessary, even though the stated maturity date may be one year or more beyond the current balance sheet date.

The Company periodically assesses its marketable securities for impairment. For marketable securities in an unrealized loss position, this assessment first takes into account the Company's intent to sell, or whether it is more likely than not that it will be required to sell the security before recovery of its amortized cost basis. If either of these criteria are met, the marketable security's amortized cost basis is written down to fair value through interest income and other, net. For marketable securities in an unrealized loss position that do not meet the aforementioned criteria, the Company assesses whether the decline in fair value has resulted from credit losses or other factors. In making this assessment, the Company considers the extent to which fair value is less than amortized cost, any changes to the rating of the security by a rating agency, and any adverse conditions specifically related to the security, among other factors. If this assessment indicates that a credit loss may exist, the present value of cash flows expected to be collected from the security are compared to the amortized cost basis of the security. If the present value of cash flows expected to be collected is less than the amortized cost basis, a credit loss exists and an allowance for credit losses will be recorded in interest income and other, net, limited by the amount that the fair value is less than the amortized cost basis. Any additional impairment not recorded through an allowance for credit losses is recognized in other comprehensive loss. Changes in the allowance for credit losses are recorded as provision for (or reversal of) credit loss expense. Losses are charged against the allowance when management believes the

uncollectability of a security is confirmed or when either of the criteria regarding intent or requirement to sell is met. These changes are recorded in interest income and other, net.

Income Taxes

The Company accounts for uncertain tax positions using a more-likely-than-not threshold for recognizing and resolving uncertain tax positions. This evaluation is based on factors including, but not limited to, changes in facts or circumstances, changes in tax law, effectively settled issues under audit, and new audit activity. Interest and penalties related to unrecognized tax benefits are included within income tax expense. For the three and nine months ended September 30, 2024, the Company recorded income tax expense related to its foreign operations in Israel of $0.2 million and $0.4 million, respectively.

Basic and Diluted Net Loss per Share

Basic and diluted net loss per share is calculated based upon the weighted-average number of shares of common stock outstanding during the period. Shares of common stock that are potentially issuable for little or no cash consideration at issuance, such as the Company's pre-funded warrants issued in July 2022 and December 2023, are included in the calculation of basic and diluted net loss per share, even if they are antidilutive. During periods of income, participating securities are allocated a proportional share of income determined by dividing total weighted-average participating securities by the sum of the total weighted-average common shares and participating securities (the "two-class method"). Shares of the Company's common stock warrants participate in any dividends that may be declared by the Company and are therefore considered to be participating securities. Participating securities have the effect of diluting both basic and diluted earnings per share during periods of income. During periods of loss, no loss is allocated to participating securities since they have no contractual obligation to share in the losses of the Company. Diluted loss per share is computed after considering the dilutive effect of stock options, restricted stock units ("RSUs"), performance stock units ("PSUs") and common stock warrants, except where such non-participating securities would be anti-dilutive. As the Company incurred net losses for the periods presented, basic net loss per share is the same as diluted net loss per share since the effects of potentially dilutive securities are antidilutive.

Recently Adopted Accounting Standards

The Company did not adopt any new standards or updates issued by the Financial Accounting Standards Board ("FASB") during the nine months ended September 30, 2024 that had a material impact on the Company's consolidated financial statements and related disclosures.

Accounting Pronouncements Not Yet Adopted

In November 2023, the FASB issued ASU No. 2023-07, *Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures* ("ASU 2023-07"), which is intended to improve reportable segment disclosure requirements, primarily through enhanced disclosures about significant expenses. ASU 2023-07 requires disclosures to include significant segment expenses that are regularly provided to the chief operating decision maker ("CODM"), a description of other segment items by reportable segment, and any additional measures of a segment's profit or loss used by the CODM when deciding how to allocate resources. The ASU also requires all annual disclosures required by Topic 280 to be included in interim periods. All disclosure requirements under this ASU are also required for public entities with a single reportable segment. The ASU is effective for the Company's annual periods beginning on January 1, 2024 and interim periods beginning on January 1, 2025. Early adoption is permitted and requires retrospective application to all prior periods presented in the financial statements. The Company expects to adopt ASU 2023-07 in its Annual Report on Form 10-K for the year ending December 31, 2024 and in the interim periods thereafter. The Company is in the process of evaluating the requirements of this update, which is expected to result in expanded disclosures within the consolidated financial statements upon adoption.

In December 2023, the FASB issued ASU No. 2023-09, *Income Taxes (Topic 740): Improvements to Income Tax Disclosures* ("ASU 2023-09"), which requires companies to disclose, on an annual basis, specific categories in the effective tax rate reconciliation and provide additional information for reconciling items that meet a quantitative threshold. In addition, ASU 2023-09 requires companies to disclose additional information about income taxes paid. The ASU is effective for the Company's annual periods beginning on January 1, 2025 and will be applied on a prospective basis with the option to apply the standard retrospectively. Early adoption is permitted. The Company expects to adopt ASU 2023-09 in its Annual Report on Form 10-K for the year ending December 31, 2025 and in annual periods thereafter. The Company is in the process of evaluating the requirements of this update, which is expected to result in expanded disclosures within the consolidated financial statements upon adoption.

3. Fair Value Measurements

The following tables present the Company's financial assets measured at fair value on a recurring basis by level within the fair value hierarchy for the periods indicated (in thousands):

		September 30, 2024			
	Valuation Hierarchy	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
Assets:					
Money market funds	Level 1	$ 25,447	$ —	$ —	$ 25,447
Commercial paper	Level 2	58,250	44	(1)	58,293
U.S. government bonds	Level 2	192,065	929	(5)	192,989
Agency bonds	Level 2	60,421	251	(2)	60,670
Corporate debt securities	Level 2	4,636	35	(3)	4,668
U.S. Treasury securities	Level 2	25,711	13	—	25,724
Agency discount securities	Level 2	3,963	4	—	3,967
Total cash equivalents and marketable securities		$ 370,493	$ 1,276	$ (11)	$ 371,758
Classified as:					
Cash equivalents					$ 39,395
Marketable securities					332,363
Total cash equivalents and marketable securities					$ 371,758

		December 31, 2023			
	Valuation Hierarchy	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
Assets:					
Money market funds	Level 1	$ 493	$ —	$ —	$ 493
Commercial paper	Level 2	94,261	—	(55)	94,206
U.S. government bonds	Level 2	137,976	250	(142)	138,084
Agency bonds	Level 2	45,481	152	(44)	45,589
Corporate debt securities	Level 2	3,177	—	(12)	3,165
U.S. Treasury securities	Level 2	71,754	36	(1)	71,789
Agency discount securities	Level 2	7,975	1	—	7,976
Total cash equivalents and marketable securities		$ 361,117	$ 439	$ (254)	$ 361,302
Classified as:					
Cash equivalents					$ 98,593
Marketable securities					262,709
Total cash equivalents and marketable securities					$ 361,302

The valuation techniques used to measure the fair values of the Company's Level 2 financial instruments, which generally have counterparties with high credit ratings, are based on quoted market prices when available. If quoted market prices are not available, the fair value for the security is estimated under the market or income approach using pricing models with market observable inputs.

The following table summarizes the estimated fair value of investments in marketable securities by effective contractual maturity dates as of September 30, 2024 (in thousands):

Within one year	$ 306,129
After one year through two years	65,629
Total cash equivalents and marketable securities	$ 371,758

As of September 30, 2024, the Company's marketable securities in an unrealized loss position include primarily fixed-rate debt securities of varying maturities, which are sensitive to changes in the yield curve and other market conditions. All of the fixed-rate debt securities in a loss position are investment-grade debt securities. The Company has the intent and ability to hold such securities until recovery of the unrealized losses. Based on the Company's assessment, the unrealized losses as of September 30, 2024 were

immaterial and not related to increased credit risks associated with specific securities. No allowance for credit losses was recorded as of September 30, 2024 and December 31, 2023.

Warrant Liability

As of September 30, 2024, the Company's only financial liability measured at fair value on a recurring basis relates to warrants to purchase up to 311,996 shares of the Company's common stock issued in connection with the Term Loan (See Note 6). The number of warrants that become exercisable is contingent on subsequent loan advances by the Company under the Term Loan facility. As such, the warrants are not considered to be indexed to the Company's own stock and were accounted for as a liability. The Company recorded the fair value of the warrants upon issuance using a probability-weighted scenario analysis with a Black-Scholes valuation model and is required to revalue the warrants at each reporting date with any changes in fair value recorded on the consolidated statements of operations and comprehensive loss until the exercise contingencies are resolved. The valuation of the warrants is considered under Level 3 of the fair value hierarchy, taking into account the likelihood of the warrants becoming exercisable and the fair value of the underlying common stock of the Company.

The warrants had a fair value of $0.5 million as of the issuance date and September 30, 2024, based on a Black-Scholes valuation with the following assumptions: risk-free interest rate of 3.8%, no dividends, expected volatility of 88.1% and expected term of 10.0 years.

4. Balance Sheet Components

Prepaid and other current assets consist of the following as of the periods presented (in thousands):

	September 30, 2024	December 31, 2023
Prepaid research and development	$ 28,762	$ 11,579
Prepaid taxes	373	614
Prepaid other	2,810	2,471
Deferred debt issuance costs	487	—
Total prepaid and other current assets	$ 32,432	$ 14,664

Accrued expenses consist of the following as of the periods presented (in thousands):

	September 30, 2024	December 31, 2023
Accrued research and development expenses	$ 11,583	$ 13,017
Accrued employee and related expenses	5,251	6,248
Accrued professional and legal fees	1,607	1,110
Accrued other expenses	457	155
Total accrued expenses	$ 18,898	$ 20,530

5. Commitments and Contingencies

Asset Transfer and License Agreement with Teva Pharmaceutical Industries Ltd

In April 2018, the Company concurrently entered into two Asset Transfer and License Agreements (the "Teva Agreements") with Teva Pharmaceutical Industries Ltd ("Teva") under which it acquired certain patents and intellectual property relating to two programs: (1) Teva's glycoPEGylated FGF21 program including the compound TEV-47948 (pegozafermin), a glycoPEGylated long-acting FGF21 and (2) Teva's development program of small molecule inhibitors of Fatty Acid Synthase, under which the Company did not develop product candidates, and all rights associated with the program are being returned to Teva. Pursuant to the Teva Agreements, the Company paid Teva an initial nonrefundable upfront payment of $6.0 million. Under each license agreement, the Company is required to pay Teva $2.5 million upon the achievement of a specified clinical development milestone, and additional payments totaling up to $65.0 million upon achievement of certain commercial milestones. Each milestone payment shall be payable once, upon the first occurrence of the applicable milestone. The Company is also obligated to pay Teva tiered royalties at percentages in the low-to-mid single-digits on worldwide net sales on all products containing the Teva compounds.

The Teva Agreements can be terminated (i) by the Company without cause upon 120 days' written notice to Teva, (ii) by either party, if the other party materially breaches any of its obligations under the Teva Agreements and fails to cure such breach within 60 days after receiving notice thereof, or (iii) by either party, if a bankruptcy petition is filed against the other party and is not dismissed

within 60 days. In addition, Teva can also terminate the agreement related to their glycoPEGylated FGF21 program in the event the Company, or any of its affiliates or sublicensees, challenges any of the Teva patents licensed to the Company, and the challenge is not withdrawn within 30 days of written notice from Teva.

In the fourth quarter of 2023, the Company made a $2.5 million milestone payment to Teva following the achievement of a clinical development milestone under the FGF21 program in SHTG. As of September 30, 2024, the timing and likelihood of achieving any remaining milestones are uncertain. Milestone payment obligations will be recognized when payment becomes probable and reasonably estimable, which is generally upon achievement of the applicable milestone.

BiBo Collaboration Agreement

On April 4, 2024, the Company entered into a collaboration agreement (the "Collaboration Agreement") with BiBo Biopharma Engineering Co., Ltd., a company incorporated under the laws of the People's Republic of China ("BiBo"), pursuant to which BiBo will construct a production facility specifically designed to supply the Company with pegozafermin for commercialization, if approved (the "Production Facility").

Pursuant to the Collaboration Agreement, BiBo will build the Production Facility at BiBo's facility in the Lin-gang Special Area of China (Shanghai) Pilot Free Trade Zone to manufacture the bulk active ingredient (the "Drug Substance") required to produce pegozafermin for commercial supply. The platform is expected to provide the Company with manufacturing capacity to meet its commercial needs. Under the Collaboration Agreement, the Company is required to pay BiBo an aggregate of $135.0 million (exclusive of applicable value-added tax) toward the construction of the Production Facility (collectively, the "Payment"), of which $81.0 million (net of applicable value-added tax) in milestone payments were paid during the three months ended September 30, 2024 and recorded in "Research and Development" in the consolidated statements of operations and comprehensive loss. The remainder of the Payment will become payable upon achievement of certain specified milestones, of which up to an additional $40.5 million of the Payment could become payable by the end of 2024. If the actual costs of the Production Facility are substantially greater than the estimated budget, the parties will negotiate a means of allocating such cost overruns.

6. Term Loan Facility

Existing Loan Agreement

In January 2023, the Company entered into a Loan and Security Agreement (the "Existing Loan Agreement") with the lender parties thereto (the "Lenders"), K2 HealthVentures LLC as administrative agent and Ankura Trust Company, LLC as collateral agent. The Existing Loan Agreement provided for a term loan facility with a maximum aggregate principal of $100.0 million, consisting of up to four separate delayed-draw term loans ("Initial Term Loan"). Upon execution of the agreement, the Company drew $25.0 million pursuant to the Existing Loan Agreement. An additional $25.0 million expired undrawn and $50.0 million available at the Lenders' discretion lapsed upon refinancing of the debt (discussed below). Additionally, the Lenders may elect to convert up to an aggregate of $7.5 million of the principal amount of the Initial Term Loan then outstanding into shares of the Company's common stock at a conversion price of $12.6943 per share. Notwithstanding the debt refinancing transaction, this conversion right remains outstanding under the Loan Agreement (as defined below). The Initial Term Loan bore interest equal to the greater of (i) 8.45% and (ii) the sum of (a) the Prime Rate as reported in The Wall Street Journal plus (b) 1.25% and provided for interest-only payments through February 1, 2025. Upon prepayment or maturity, the Company was required to pay an end of term fee equal to 5.95% of the aggregate principal amount of term loans advanced. In connection with the debt refinancing transaction, the Lenders agreed to defer the payment of the existing end of term fee of $1.5 million to its originally scheduled maturity date of January 1, 2027.

In connection with the advance of the Initial Term Loan, the Company issued warrants to purchase 51,204 shares of the Company's common stock, which remain outstanding as of September 30, 2024. The warrants became exercisable from the date of issuance and have a term of ten years with an exercise price of $9.76 per share of common stock. The Company also issued to the Lenders warrants to purchase 153,611 shares of common stock that were contingently exercisable upon funding of delayed-draw term loans. These contingently exercisable warrants were either forfeited upon expiration of the respective delayed-draw period or cancelled in connection with the debt refinancing transaction.

Amended Loan Agreement

In September 2024, the Company entered into an amendment to the Existing Loan Agreement (the "Amendment" and the Existing Loan Agreement, as amended by the Amendment, the "Loan Agreement") increasing the maximum aggregate principal amount in delayed-draw term loans to $150.0 million (the "Term Loan") from $100.0 million. The Loan Agreement consists of (i) a first tranche of $70.0 million, of which $35.0 million was funded at closing (including the refinancing of the existing $25.0 million principal balance outstanding) and of which an additional $35.0 million is available through June 30, 2025, (ii) a second tranche of $30.0 million available to be funded upon the achievement of a specific clinical development milestone through December 31, 2025, and (iii) a third tranche of up to $50.0 million upon the Company's request, subject to review by the Lenders of certain information from the Company and discretionary approval by the Lenders.

The obligations of the Company under the Loan Agreement are secured by substantially all of the assets of the Company, excluding intellectual property. The Loan Agreement contains customary representations and warranties, restricts certain activities and includes customary events of default, including payment default, breach of covenants, change of control, and material adverse effects. In addition, commencing January 1, 2026, the Company is required to maintain minimum unrestricted cash, cash equivalents and marketable securities equal to 5.0 times the average change in cash, cash equivalents and marketable securities measured over the trailing three-month period. As of September 30, 2024, the Company was in compliance with all covenants of the Loan Agreement.

Borrowings under the Loan Agreement mature on October 1, 2028 and provide for interest-only payments until January 1, 2027, which can be extended to January 1, 2028 upon achievement of a clinical milestone. Consecutive equal payments of principal and interest are due once the interest-only period has lapsed. The Term Loan bears interest equal to the greater of (i) 8.95% and (ii) the sum of (a) the Prime Rate as reported in The Wall Street Journal plus (b) 1.75%. On the date the debt was refinanced and on September 30, 2024, the stated interest rate on the outstanding Term Loan was 9.75%. An end of term fee of 5.95% of the aggregate principal amount of term loans advanced is also payable. The Company has the option to prepay the entire outstanding balance of borrowings under the Loan Agreement, subject to a prepayment fee ranging from 1.0% to 3.0% depending on the timing of such prepayment.

In connection with the Amendment, the Company issued warrants to purchase up to 406,951 shares of the Company's common stock at an exercise price of $7.3719 per share that expire 10 years from the date of issuance. Of the 406,951 shares underlying the warrants issued, 94,955 shares were immediately exercisable upon the advance of $35.0 million at closing (including the refinancing of the existing $25.0 million principal balance outstanding) and met the criteria for equity classification. The remaining 311,996 shares become exercisable in proportion to future advances of term loans and were liability classified and subject to remeasurement at each reporting period (see Note 3). In addition to the conversion right carried over from the Initial Term Loan, the Lenders may elect to convert up to an additional aggregate of $5.0 million of the principal amount of the Term Loan then outstanding into shares of the Company's common stock at a conversion price of $9.5835 per share.

The Company evaluated the debt refinancing to determine if it was an extinguishment or a modification of the debt. Due to the addition of a substantive conversion feature (it is reasonably possible that the conversion feature may be exercised and affect the manner of the debt instrument's settlement), the Company determined that the refinancing was an extinguishment of debt. The Company measured the loss on extinguishment of debt based on the difference between the net carrying amount of the extinguished debt and the reacquisition price of the new debt, which included $0.7 million for amendment fees paid to the lender. The Company recorded a loss on extinguishment of debt in the amount of $1.5 million as a component of "Interest Expense" in the consolidated statements of operations and comprehensive loss for the three months ended September 30, 2024.

The Company assessed the embedded conversion feature and concluded that bifurcation and separate accounting as a derivative liability were not required because the feature is indexed to the Company's own stock and meets the criteria for equity classification. The immediately exercisable warrants to purchase 94,955 shares of the Company's common stock issued to the Lenders had a fair value of $0.6 million and was recorded as debt discount with a corresponding entry to additional paid-in capital. The contingently exercisable warrants to purchase 311,996 shares of the Company's common stock had a fair value of $0.5 million at issuance and was recorded as deferred debt issuance costs within other current assets with a corresponding entry to warrant liability (see Note 3). The deferred debt issuance costs will be amortized to interest expense over the respective delayed-draw term loan commitment periods under the Loan Agreement.

The expected repayments of principal amounts due on borrowings as of September 30, 2024 are as follows (in thousands):

2024 (remaining three months)	$	—
2025		—
2026		—
2027		18,280
2028		16,720
Total principal outstanding		35,000
Plus accumulated accretion of end of term fees		1,152
Less unamortized debt discount		(608)
Total net carrying value		35,544
Term loan, current		—
Term loan, noncurrent, net	$	35,544

7. Stockholders' Equity

Common Stock Reserved for Issuance

The Company had the following shares of common stock reserved for future issuance, on an as-if-converted basis, as of the periods presented:

	September 30, 2024	December 31, 2023
Stock options outstanding	7,454,242	4,686,577
RSUs and PSUs outstanding	1,155,462	987,550
Shares available for future grants under equity incentive plans	3,132,175	1,790,684
Shares available for future issuance under the employee stock purchase plan	2,114,176	1,207,607
Warrants to purchase common stock outstanding	517,078	10,412,806
Pre-funded warrants to purchase common stock outstanding	1,081,081	1,881,081
Conversion feature related to outstanding term loan	1,112,546	590,816
Total available for future issuance	16,566,760	21,557,121

At-the-Market ("ATM") Offerings

In March 2021, the Company entered into an ATM sales agreement (as amended, the "Sales Agreement") with Leerink Partners LLC and Cantor Fitzgerald & Co. (the "Sales Agents") pursuant to which the Company may offer and sell shares up to $75.0 million of its common stock (the "2021 ATM Facility") from time to time pursuant to an effective registration statement. The Sales Agents are entitled to compensation at a commission of up to 3.0% of the aggregate gross sales price per share sold under the Sales Agreement. In February 2023, the Company entered into an amendment to the Sales Agreement, establishing a new ATM facility with an aggregate offering amount of up to $150.0 million of its common stock (the "2023 ATM Facility") pursuant to an effective registration statement.

During the nine months ended September 30, 2023, the Company sold 2,168,539 shares of its common stock under its 2021 ATM Facility and 2023 ATM Facility and received net proceeds of $37.1 million.

During the nine months ended September 30, 2024, the Company sold 1,396,888 shares of its common stock under the 2023 ATM Facility resulting in net proceeds of $21.0 million. There were no sales under the 2023 ATM Facility for the three months ended September 30, 2024. As of September 30, 2024, there was $104.4 million remaining for future sales under the 2023 ATM Facility.

Underwritten Public Offerings

In March 2023, the Company completed an underwritten public offering of its common stock. The Company sold 19,461,538 shares of its common stock at a public offering price of $16.25 per share and received net proceeds of $296.8 million, net of underwriting discounts and commissions of $19.0 million and other offering costs of $0.5 million.

Common Stock Warrants

As of September 30, 2024, the Company's outstanding warrants to purchase shares of its common stock were as follows:

	Shares of Common Stock Underlying Warrants	Exercise Price Per Share	Expiration Date
Warrant issued in connection with term loan (SVB)	25,000	$22.06	June 30, 2025
Warrant issued in connection with term loan (SVB)	33,923	19.12	May 28, 2031
Warrants issued in connection with term loan facility	51,204	9.76	January 27, 2033
Warrants issued in connection with amended term loan facility	406,951	7.3719	September 30, 2034
Pre-funded warrants issued in connection with public offerings	1,081,081	0.001	Do not expire
Total outstanding	1,598,159		

Warrants to purchase 2,927,570 shares of common stock were exercised during the nine months ended September 30, 2023, generating $15.6 million in cash proceeds.

Warrants to purchase 10,179,789 shares of common stock were exercised during the nine months ended September 30, 2024, generating $54.2 million in cash proceeds.

8. Stock-Based Compensation

Equity Incentive Plans

The Company has issued stock-based awards from various equity incentive and stock purchase plans, as more fully described in Note 8—*Stock-Based Compensation* of the Company's Notes to Consolidated Financial Statements section in its Annual Report on Form 10-K for the year ended December 31, 2023.

On September 23, 2024, the Company's board of directors approved the Amended and Restated 2023 Inducement Plan (the "Amended and Restated 2023 Inducement Plan") to increase the number of shares reserved for issuance under the 2023 Inducement Plan from 1,500,000 shares of the Company's common stock to 2,500,000 without stockholder approval pursuant to Rule 5635(c)(4) of the Nasdaq Listing Rules.

Equity Incentive Plans Activity

Stock Options

The following table summarizes stock option activity under the Company's equity incentive plans for the nine months ended September 30, 2024:

	Number of Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term	Aggregate Intrinsic Value
			(In years)	(In thousands)
Balance outstanding as of December 31, 2023	4,686,577	$ 14.11	7.9	$ 11,712
Granted	3,108,400	9.65		
Exercised	(46,003)	3.08		
Forfeited	(294,732)	12.47		
Balance outstanding as of September 30, 2024	7,454,242	$ 12.38	8.0	$ 5,484
Exercisable as of September 30, 2024	2,957,728	$ 14.90	6.5	$ 4,568

The fair value of stock option awards granted for the periods indicated was estimated at the date of grant using a Black-Scholes option-pricing model with the following assumptions:

	Nine Months Ended September 30,	
	2024	2023
Expected term (years)	5.5–6.1	5.5–6.1
Expected volatility	86.5–91.5%	91.6–99.2%
Risk-free interest rate	3.5–4.6%	3.4–4.6%
Expected dividend	—	—

As of September 30, 2024, total unrecognized stock-based compensation expense related to unvested stock options was $31.4 million, which is expected to be recognized over a weighted-average period of 2.8 years.

RSU and PSUs

The following table summarizes RSU and PSU activity for the nine months ended September 30, 2024:

	RSUs		PSUs	
	Number of Shares	Weighted-Average Grant Date Fair Value per Share	Number of Shares	Weighted-Average Grant Date Fair Value per Share
Balance outstanding as of December 31, 2023	688,382	$ 10.72	299,168	$ 5.96
Granted	681,950	9.90	192,000	9.98
Vested	(479,157)	8.95	(159,168)	7.00
Forfeited	(52,713)	8.72	(15,000)	9.98
Balance outstanding as of September 30, 2024	838,462	$ 11.19	317,000	$ 7.68

As of September 30, 2024, total unrecognized stock-based compensation expense related to RSUs and PSUs was $8.9 million, which is expected to be recognized over a weighted-average period of 1.6 years.

Stock-Based Compensation

The Company recorded stock-based compensation expense for the periods indicated as follows (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
Research and development	$ 2,327	$ 1,938	$ 6,984	$ 5,136
General and administrative	2,935	2,443	8,445	6,933
Total stock-based compensation	$ 5,262	$ 4,381	$ 15,429	$ 12,069

9. Net Loss Per Share

The following table presents the weighted-average shares outstanding used to calculate basic and diluted net loss per share for the periods indicated:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
Common stock	105,994,116	75,536,050	99,508,709	67,162,848
Pre-funded warrants	1,081,081	800,000	1,431,446	800,000
Total	107,075,197	76,336,050	100,940,155	67,962,848

The following outstanding potentially dilutive common stock equivalents have been excluded from the calculation of diluted net loss per share for the periods indicated due to their anti-dilutive effect:

	September 30,	
	2024	2023
Stock options outstanding	7,454,242	4,679,027
RSUs and PSUs outstanding	1,155,462	987,550
Warrants to purchase common stock	517,078	10,412,805
Conversion feature related to outstanding term loan	1,112,546	590,816
ESPP shares issuable	26,522	9,758
Total	10,265,850	16,679,956

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Forward Looking Statements

You should read the following discussion and analysis of our financial condition and results of operations together with our unaudited condensed consolidated financial statements and related notes and other financial information included elsewhere in this Quarterly Report on Form 10-Q and our consolidated financial statements and related notes and other financial information included in our Annual Report on Form 10-K for the year ended December 31, 2023. Some of the information contained in this discussion and analysis includes forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those described in or implied by these forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those identified below and those discussed in the section titled "Risk Factors" included elsewhere in this Quarterly Report on Form 10-Q.

Overview

We are a clinical-stage biopharmaceutical company focused on the development and commercialization of innovative therapies for the treatment of liver and cardio-metabolic diseases. Our lead product candidate, pegozafermin, a specifically engineered glycoPEGylated analog of fibroblast growth factor 21 ("FGF21"), is currently being developed for the treatment of metabolic dysfunction-associated steatohepatitis ("MASH"), previously known as nonalcoholic steatohepatitis, and for the treatment of severe hypertriglyceridemia ("SHTG").

MASH is a severe form of metabolic dysfunction-associated steatotic liver disease, previously known as nonalcoholic fatty liver disease, and is characterized by inflammation and fibrosis in the liver that can progress to cirrhosis, liver failure, hepatocellular carcinoma and death. In 2020 and 2022, we presented positive topline results from our Phase 1b/2a trial of pegozafermin in MASH patients, which have informed the advancement of our subsequent clinical strategy in MASH. In our Phase 2b ENLIVEN trial of pegozafermin in MASH patients, patients received weekly doses or an every-two-week dose of pegozafermin or placebo for 24 weeks followed by a blinded extension phase of an additional 24 weeks for a total treatment period of 48 weeks. We reported topline 24-week data from ENLIVEN in March 2023. The 44 mg every-two-week and the 30 mg weekly dose groups both met, with high statistical significance, both of the primary histology endpoints per the U.S. Food and Drug Administration ("FDA") guidance definitions on endpoints for accelerated approval in non-cirrhotic MASH patients. In September 2023, the FDA granted Breakthrough Therapy Designation to pegozafermin in patients with MASH. In addition, in March 2024, the EMA granted Priority Medicines ("PRIME") designation to pegozafermin in patients with MASH, based on clinical data from the Phase 2b ENLIVEN trial. In November 2023, we announced positive topline data from the blinded extension phase of our Phase 2b ENLIVEN trial at 48 weeks. Both the 44 mg every-two-week and 30 mg weekly dose groups demonstrated statistically significant improvements across Non-Invasive Tests ("NITs") representing key markers of liver health. The benefits observed at week 48 represented by NITs were consistent with the histology and NITs results observed at week 24, indicating sustained benefits over time.

In the fourth quarter of 2023, we held successful end-of-Phase 2 meetings with the FDA, supporting the advancement of pegozafermin into a Phase 3 program and future biologics license application ("BLA") filing. We received scientific advice from the European Medicines Agency ("EMA"), which generally aligned with the feedback from the FDA.

The Phase 3 ENLIGHTEN program includes two Phase 3 clinical trials evaluating patients with MASH: (i) ENLIGHTEN-Fibrosis, in patients with fibrosis stage F2-F3 (F2-F3), which we initiated in the first quarter of 2024 and (ii) ENLIGHTEN-Cirrhosis, in patients with compensated cirrhosis (F4), which we initiated in the second quarter of 2024.

We are also developing pegozafermin for the treatment of SHTG. In June 2022, we announced positive topline results from the ENTRIGUE Phase 2 trial of pegozafermin in SHTG patients. SHTG is a condition identified by severely elevated levels of triglycerides (≥500 mg/dL), which is associated with an increased risk of MASH, cardiovascular events and acute pancreatitis. The trial met its primary endpoint demonstrating statistically significant and clinically meaningful reductions in triglycerides from baseline and key secondary endpoints. We received feedback from the FDA supporting the advancement of pegozafermin and initiated our Phase 3 ENTRUST trial, the first of two recommended Phase 3 trials, in the second quarter of 2023. We expect to report topline results from our Phase 3 ENTRUST trial in 2025. Safety data from the ongoing SHTG Phase 3 program is expected to support the safety database requirements for MASH and vice versa.

In April 2024, we entered into a collaboration agreement (the "Collaboration Agreement") with BiBo Biopharma Engineering Co., Ltd., pursuant to which BiBo will construct a production facility specifically designed to supply us with pegozafermin for commercialization, if approved (the "Production Facility"). Pursuant to the Collaboration Agreement, BiBo will build the Production Facility at BiBo's facility in the Lin-gang Special Area of China (Shanghai) Pilot Free Trade Zone to manufacture the bulk active ingredient (the "Drug Substance") required to produce pegozafermin for commercial supply. The platform is expected to provide us with manufacturing capacity to meet our commercial needs.

We commenced operations in 2018 and have devoted substantially all of our resources to raising capital, acquiring our initial product candidate, identifying and developing pegozafermin, licensing certain related technology, conducting research and development activities (including preclinical studies and clinical trials) and providing general and administrative support for these operations. We currently have contractual relationships with Northway Biotechpharma ("BTPH") and BiBo pursuant to which they supply us with pegozafermin for our clinical trials.

We have incurred net losses since our inception. Our net losses for the nine months ended September 30, 2024 and 2023 were $248.7 million and $102.0 million, respectively. As of September 30, 2024, we had an accumulated deficit of $706.2 million. We expect to continue to incur significant expenses and increasing operating losses as we advance pegozafermin and any future product candidates through clinical trials, seek regulatory approval for pegozafermin and any future product candidates, expand our clinical, regulatory, quality, manufacturing and commercialization capabilities, protect our intellectual property, prepare for and, if approved, proceed to commercialization of pegozafermin and any future product candidates, expand our general and administrative support functions, including hiring additional personnel, and incur additional costs associated with operating as a public company. Our net losses may fluctuate significantly from quarter-to-quarter and year-to-year, depending on the timing of our clinical trials and our expenditures on other research and development activities.

Based on our current operating plan, we expect our existing cash, cash equivalents and marketable securities of $423.8 million as of September 30, 2024 will be sufficient to fund our operations for a period of at least one year from the date this Quarterly Report on Form 10-Q is filed with the Securities and Exchange Commission ("SEC").

Components of Results of Operations

Research and Development Expenses

Research and development expenses consist primarily of costs incurred for the development of our lead product candidate, pegozafermin. Our research and development expenses consist primarily of external costs related to preclinical and clinical development, including costs related to acquiring patents and intellectual property, expenses incurred under license agreements and agreements with contract research organizations and consultants, costs related to acquiring and manufacturing clinical trial materials, including under agreements with contract manufacturing organizations and other vendors, costs related to the preparation of regulatory submissions and expenses related to laboratory supplies and services, as well as personnel costs. Personnel costs consist of salaries, employee benefits and stock-based compensation for individuals involved in research and development efforts.

We expense all research and development expenses in the periods in which they are incurred. We accrue for costs incurred as services are provided based on invoices and statements received from our external service providers and by monitoring the status of their activities. We adjust our accrued expenses as actual costs become known.

Payments associated with licensing agreements to acquire licenses to develop, use, manufacture and commercialize products that have not reached technological feasibility and do not have alternate commercial use are expensed as incurred. Where contingent milestone payments are due to third parties under research and development arrangements or license agreements, the milestone payment obligations are expensed when payment becomes probable and reasonably estimable, which is generally upon achievement of the milestone.

We expect our research and development expenses to increase for the foreseeable future as we continue the development of pegozafermin and continue to invest in research and development activities. The process of conducting the necessary clinical research to obtain regulatory approval is costly and time-consuming, and the successful development of pegozafermin and any future product candidates is highly uncertain. To the extent that pegozafermin continues to advance into larger and later stage clinical trials, our expenses will increase substantially and may become more variable. The actual probability of success for pegozafermin or any future product candidate may be affected by a variety of factors, including the safety and efficacy of our product candidates, investment in our clinical programs, manufacturing capability and competition with other products. As a result, we are unable to determine the timing of initiation, duration and completion costs of our research and development efforts or when and to what extent we will generate revenue from the commercialization and sale of pegozafermin or any future product candidate.

General and Administrative Expenses

General and administrative expenses consist primarily of personnel costs, expenses for outside professional services, including legal, human resource, audit and accounting services, consulting costs and allocated facilities costs. Personnel and related costs consist of salaries, employee benefits and stock-based compensation for personnel in executive, finance, commercial and other administrative functions. Facilities costs consist of rent and maintenance of facilities. We expect our general and administrative expenses to increase for the foreseeable future as we increase the size of our administrative function to support the growth of our business and support our continued research and development activities.

Interest Expense

Interest expense consists of interest expense, accretion of final payment fees and amortization of deferred debt issuance costs related to our term loan facility, and loss on extinguishment of debt.

Interest Income and Other, Net

Interest income and other, net primarily consists of interest income including accretion of discount on marketable securities, offset by amortization of premium on marketable securities.

Results of Operations

Three Months Ended September 30, 2024 and 2023

The following table summarizes our results of operations for the periods presented (in thousands):

	Three months ended September 30,		
	2024	2023	Change
Operating expenses:			
Research and development	$ 141,441	$ 31,417	$ 110,024
General and administrative	10,497	7,928	2,569
Total operating expenses	151,938	39,345	112,593
Loss from operations	(151,938)	(39,345)	(112,593)
Interest expense	(2,362)	(959)	(1,403)
Interest income and other, net	5,431	5,579	(148)
Net loss before tax	$ (148,869)	$ (34,725)	$ (114,144)

Research and Development Expenses

The following table summarizes the period-over-period changes in research and development expenses for the periods presented (in thousands):

	Three months ended September 30,		
	2024	2023	Change
Contract manufacturing	$ 106,395	$ 14,517	$ 91,878
Clinical development	25,999	10,447	15,552
Personnel-related expenses	8,324	5,948	2,376
Other expenses	723	505	218
Total research and development expenses	$ 141,441	$ 31,417	$ 110,024

Research and development expenses increased by $110.0 million for the three months ended September 30, 2024 compared to the same period in 2023. The change in research and development expenses was primarily driven by an increase of $91.9 million in contract manufacturing costs, of which $81.0 million (net of applicable value-added tax) in milestone payments were incurred under the Collaboration Agreement to secure manufacturing capacity to produce pegozafermin for our commercial needs, and an increase of $15.6 million in clinical development costs primarily related to the conduct of two Phase 3 clinical trials, ENLIGHTEN-Fibrosis and ENLIGHTEN-Cirrhosis. Also contributing to the change was an increase in personnel-related expenses of $2.4 million including stock-based compensation driven by higher headcount.

General and Administrative Expenses

General and administrative expenses increased by $2.6 million for the three months ended September 30, 2024 compared to the same period in 2023. The change in general and administrative expenses was primarily attributable to an increase of $1.4 million in personnel-related expenses including stock-based compensation driven by higher headcount, an increase of $0.6 million in professional fees and an increase of $0.6 million in facilities and other expenses.

Interest Expense

Interest expense increased by $1.4 million for the three months ended September 30, 2024 compared to the same period in 2023 and was primarily attributable to a loss on extinguishment of debt as we refinanced our existing term loan.

Interest Income and Other, Net

Interest income and other, net remained relatively flat for the three months ended September 30, 2024 compared to the same period in 2023 as interest income from higher market interest rates was offset by a decrease in the average invested balances compared to the same period in 2023.

Nine Months Ended September 30, 2024 and 2023

The following table summarizes our results of operations for the periods presented (in thousands):

	Nine months ended September 30,		
	2024	2023	Change
Operating expenses:			
Research and development	$ 233,734	$ 88,638	$ 145,096
General and administrative	28,917	21,360	7,557
Total operating expenses	262,651	109,998	152,653
Loss from operations	(262,651)	(109,998)	(152,653)
Interest expense	(4,099)	(3,928)	(171)
Interest income and other, net	18,460	11,972	6,488
Net loss before tax	$ (248,290)	$ (101,954)	$ (146,336)

Research and Development Expenses

The following table summarizes the period-over-period changes in research and development expenses for the periods presented (in thousands):

	Nine months ended September 30,		
	2024	2023	Change
Contract manufacturing	$ 144,764	$ 37,652	$ 107,112
Clinical development	62,872	33,501	29,371
Personnel-related expenses	23,904	16,263	7,641
Other expenses	2,194	1,222	972
Total research and development expenses	$ 233,734	$ 88,638	$ 145,096

Research and development expenses increased by $145.1 million for the nine months ended September 30, 2024 compared to the same period in 2023. The change in research and development expenses was primarily driven by an increase of $107.1 million in contract manufacturing costs, of which $81.0 million (net of applicable value-added tax) in milestone payments related to costs incurred under the Collaboration Agreement to secure manufacturing capacity to produce pegozafermin for our commercial needs, and an increase of $29.4 million in clinical development costs primarily due to our initiation of two Phase 3 clinical trials, ENLIGHTEN-Fibrosis and ENLIGHTEN-Cirrhosis. Also contributing to the change was an increase in personnel-related expenses of $7.6 million including stock-based compensation driven by higher headcount.

General and Administrative Expenses

General and administrative expenses increased by $7.6 million for the nine months ended September 30, 2024 compared to the same period in 2023. The change in general and administrative expenses was primarily attributable to an increase of $4.1 million in personnel-related expenses including stock-based compensation driven by higher headcount, an increase of $2.0 million in professional fees and an increase of $1.5 million in facilities and other expenses.

Interest Expense

Interest expense increased by $0.2 million for the nine months ended September 30, 2024 compared to the same period in 2023 primarily due to an increase in loss on extinguishment of debt.

Interest Income and Other, Net

Interest income and other, net increased by $6.5 million for the nine months ended September 30, 2024 compared to the same period in 2023. The increase was primarily driven by a change in market interest rates and higher average invested balances.

Liquidity and Capital Resources

To date, we have incurred significant net losses and negative cash flows from operations. As of September 30, 2024, we had cash, cash equivalents and marketable securities of $423.8 million and an accumulated deficit of $706.2 million.

Sources of Liquidity

At-the-Market ("ATM") Offerings

In March 2021, we entered into an ATM sales agreement (as amended, the "Sales Agreement") with Leerink Partners LLC and Cantor Fitzgerald & Co. (the "Sales Agents") pursuant to which we may offer and sell up to $75.0 million of shares of our common stock (the "2021 ATM Facility") from time to time pursuant to an effective registration statement. The Sales Agents are entitled to compensation at a commission of up to 3.0% of the aggregate gross sales price per share sold under the Sales Agreement. In February 2023, we entered into an amendment to the Sales Agreement, establishing a new ATM facility with an aggregate offering amount of up to $150.0 million of shares of our common stock (the "2023 ATM Facility") pursuant to an effective registration statement.

During the nine months ended September 30, 2023, we sold 2,168,539 shares of our common stock under our 2021 ATM Facility and 2023 ATM Facility and received net proceeds of $37.1 million.

During the nine months ended September 30, 2024, we sold 1,396,888 shares of our common stock under the 2023 ATM Facility resulting in net proceeds of $21.0 million. However, there were no sales under the 2023 ATM Facility for the three months ended September 30, 2024. As of September 30, 2024, there was $104.4 million remaining for future sales under the 2023 ATM Facility.

Underwritten Public Offerings

In March 2023, we completed an underwritten public offering of our common stock and raised net proceeds of $296.8 million, after deducting underwriting discounts and commissions of $19.0 million and other offering costs of $0.5 million.

In December 2023, we completed an underwritten public offering of our common stock and pre-funded warrants to purchase shares of our common stock and raised net proceeds of $161.8 million, after deducting underwriting discounts and commissions of $10.4 million and other offering costs of $0.4 million.

Exercises of Common Stock Warrants

Warrants to purchase 2,927,570 shares of common stock were exercised during the nine months ended September 30, 2023, generating $15.6 million in cash proceeds.

Warrants to purchase 10,179,789 shares of common stock were exercised during the nine months ended September 30, 2024, generating $54.2 million in cash proceeds.

Term Loan Facility

In January 2023, we entered into a Loan and Security Agreement (the "Existing Loan Agreement") with the lender parties thereto (the "Lenders"), K2 HealthVentures LLC as administrative agent and Ankura Trust Company, LLC as collateral agent. The Existing Loan Agreement provided for a term loan facility with a maximum aggregate principal of $100.0 million, consisting of up to four separate delayed-draw term loans ("Initial Term Loan"). Upon execution of the agreement, we drew $25.0 million pursuant to the Existing Loan Agreement. An additional $25.0 million expired undrawn and $50.0 million available at the Lenders' discretion lapsed upon refinancing of the debt (discussed below).

In September 2024, we entered into an amendment to the Existing Loan Agreement (the "Amendment" and the Existing Loan Agreement, as amended by the Amendment, the "Loan Agreement") increasing the maximum aggregate principal amount in delayed-draw term loans to $150.0 million (the "Term Loan") from $100.0 million. The Loan Agreement consists of (i) a first tranche of $70.0 million, of which $35.0 million was funded at closing (including the refinancing of the existing $25.0 million principal balance outstanding) and of which an additional $35.0 million is available through June 30, 2025, (ii) a second tranche of $30.0 million available to be funded upon the achievement of a specific clinical development milestone through December 31, 2025, and (iii) a third tranche of up to $50.0 million upon our request, subject to review by the Lenders of certain information from us and discretionary approval by the Lenders.

Funding Requirements

Our primary use of cash is to fund operating expenses, which consist primarily of research and development expenditures related to our lead product candidate, pegozafermin, as well as the funding of a portion of the construction of the Production Facility. We plan to increase our research and development expenses for the foreseeable future as we continue the clinical development of our current and future product candidates. At this time, due to the inherently unpredictable nature of clinical development, we cannot reasonably estimate the costs we will incur and the timelines that will be required to complete development, obtain marketing approval, and commercialize our current product candidate or any future product candidates. For the same reasons, we are also unable to predict when, if ever, we will generate revenue from product sales or our current or any future license agreements which we may enter into or whether, or when, if ever, we may achieve profitability. Clinical and preclinical development timelines, the probability of success, and development costs can differ materially from expectations. In addition, we cannot forecast the timing and amounts of milestone, royalty and other revenue from licensing activities, which future product candidates may be subject to future collaborations, when such arrangements will be secured, if at all, and to what degree such arrangements would affect our development plans and capital requirements.

Based on our current operating plan, we expect our existing cash, cash equivalents and marketable securities of $423.8 million as of September 30, 2024 will be sufficient to fund our operations for a period of at least one year from the date this Quarterly Report on Form 10-Q is filed with the SEC. However, our operating plans and other demands on our cash resources may change as a result of many factors, and we may seek additional funds sooner than planned. There can be no assurance that we will be successful in acquiring additional funding at levels sufficient to fund our operations or on terms favorable to us.

Our future funding requirements will depend on many factors, including the following:

- the progress, timing, scope, results and costs of our clinical trials of pegozafermin and preclinical studies or clinical trials of other potential product candidates we may choose to pursue in the future, including the ability to enroll patients in a timely manner for our clinical trials;
- the costs and timing of obtaining clinical and commercial supplies and validating the commercial manufacturing process for pegozafermin and any other product candidates we may identify and develop;
- the cost, timing and outcomes of regulatory approvals;
- the timing and amount of any milestone, royalty or other payments we are required to make pursuant to current or any future collaboration or license agreements;
- costs of acquiring or in-licensing other product candidates and technologies;
- the terms and timing of establishing and maintaining collaborations, licenses and other similar arrangements;
- the costs associated with attracting, hiring and retaining additional qualified personnel as our business grows;
- our efforts to enhance operational systems and hire additional personnel to satisfy our obligations as a public company, including enhanced internal controls over financial reporting; and
- the cost of preparing, filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights.

We expect to continue to generate substantial operating losses for the foreseeable future as we expand our research and development activities. We will continue to fund our operations primarily through utilization of our current financial resources and through additional raises of capital to advance our current product candidate through clinical development, to develop, acquire or in-license other potential product candidates and to fund operations for the foreseeable future. However, there is no assurance that such funding will be available to us or that it will be obtained on terms favorable to us or will provide us with sufficient funds to meet our objectives. Any failure to raise capital as and when needed could have a negative impact on our financial condition and on our ability to pursue our business plans and strategies.

To the extent that we raise additional capital through partnerships or licensing arrangements with third parties, we may have to relinquish valuable rights to our product candidates, future revenue streams or research programs or to grant licenses on terms that may not be favorable to us. If we raise additional capital through public or private equity offerings, the ownership interest of our then-existing stockholders will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect our stockholders' rights. If we raise additional capital through debt financing, we may be subject to covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends. If we are unable to obtain adequate financing when needed, we may have to delay, reduce the scope of or suspend one or more of our clinical trials or preclinical studies, research and development programs or commercialization efforts or grant rights to develop and market our product candidates even if we would otherwise prefer to develop and market such product candidates ourselves.

Cash Flows

The following table summarizes our cash flows for the periods presented (in thousands):

	Nine months ended September 30,	
	2024	2023
Net cash (used in) provided by		
Operating activities	$ (246,243)	$ (94,893)
Investing activities	(60,688)	(59,376)
Financing activities	82,181	350,940
Net change in cash and cash equivalents	$ (224,750)	$ 196,671

Operating Activities

For the nine months ended September 30, 2024, net cash used in operating activities of $246.2 million reflects a net loss of $248.7 million and a net change of $7.6 million in operating assets and liabilities, partially offset by aggregate noncash charges of $10.1 million. The net loss was driven by milestone payments of $81.0 million (net of applicable value-added tax) made to our contract manufacturing partner, BiBo, under the Collaboration Agreement to secure manufacturing capacity to produce pegozafermin for our commercial needs. Noncash charges primarily included stock-based compensation expense of $15.4 million, a loss on extinguishment of debt of $1.5 million related to the refinancing of a term loan, noncash operating lease expense of $0.5 million and amortization of debt discount and accretion of deferred debt costs of $0.5 million, offset in part by net accretion of discounts on investments in marketable securities of $7.9 million. The net change in operating assets and liabilities used cash of $7.6 million and was primarily due to an increase in prepaid and other assets of $17.2 million as we made prepayments related to the initiation of two Phase 3 clinical trials, ENLIGHTEN-Fibrosis and ENLIGHTEN-Cirrhosis, partially offset by a net increase in accounts payable and accrued expenses of $9.8 million driven by timing of payments made and an increase in services rendered by contract research organizations and contract manufacturing organizations in connection with the Phase 3 clinical trials.

For the nine months ended September 30, 2023, net cash used in operating activities of $94.9 million reflects a net loss of $102.0 million and a net change of $2.8 million in operating assets and liabilities, partially offset by aggregate noncash charges of $9.8 million. Noncash charges primarily included stock-based compensation expense of $12.1 million, a loss on extinguishment of debt of $1.2 million related to the repayment of a term loan, amortization of debt discount and accretion of the final payment fee related to our term loan facility of $0.7 million, offset in part by net accretion of discounts on investments in marketable securities of $4.3 million. The change in our operating assets and liabilities was primarily attributable to a $3.2 million increase in prepaid and other assets due to higher contract manufacturing costs related to manufacturing and scale-up related spend, partially offset by a net increase of $0.6 million in accounts payable and accrued expenses due to the timing of payments.

Investing Activities

For the nine months ended September 30, 2024, net cash used in investing activities was $60.7 million, which consisted of $313.1 million in purchases of marketable securities, offset by $252.4 million in proceeds from sales and maturities of marketable securities.

For the nine months ended September 30, 2023, net cash used in investing activities was $59.4 million, which consisted of $216.8 million in purchases of marketable securities, offset by $157.4 million in proceeds from sales and maturities of marketable securities.

Financing Activities

For the nine months ended September 30, 2024, net cash provided by financing activities was $82.2 million, which primarily consisted of proceeds of $54.2 million from the exercise of common stock warrants, net proceeds of $21.0 million pursuant to the sale of our common stock under our 2023 ATM Facility, and net proceeds of $9.3 million from borrowings under the Loan Agreement. This was offset in part by payments for employee withholding taxes of $2.6 million related to net share settlement upon vesting of restricted stock units.

For the nine months ended September 30, 2023, net cash provided by financing activities was $350.9 million, which primarily consisted of net proceeds of $296.8 million from the sale of common stock in public offerings, net proceeds of $37.1 million pursuant to the sale of common stock under our 2021 ATM Facility and 2023 ATM Facility, net proceeds of $24.4 million from borrowings under the Existing Loan Agreement, and proceeds of $15.6 million from the exercise of common stock warrants. This was offset in part by the repayment in full of $21.4 million on a term loan, including prepayment and end of term fees and payments for employee withholding taxes of $2.3 million related to net share settlement upon vesting of restricted stock units.

Contractual Obligations and Commitments

Debt Obligations

As of September 30, 2024, the outstanding principal amount of $35.0 million under our Loan Agreement is scheduled to mature on October 1, 2028 and provides for interest-only payments until January 1, 2027, which can be extended to January 1, 2028 upon achievement of a clinical milestone. For additional information regarding the terms of the debt and interest payable, see Note 6 to our unaudited condensed consolidated financial statements under Part I, Item 1 of this Quarterly Report on Form 10-Q.

Asset Transfer and License Agreement with Teva Pharmaceutical Industries Ltd

In April 2018, we concurrently entered into two Asset Transfer and License Agreements (the "Teva Agreements") with Teva Pharmaceutical Industries Ltd ("Teva") under which we acquired certain patents and intellectual property relating to two programs: (1) Teva's glycoPEGylated FGF21 program including the compound TEV-47948 (pegozafermin), a glycoPEGylated long-acting FGF21 and (2) Teva's development program of small molecule inhibitors of Fatty Acid Synthase, under which we did not develop product candidates, and all rights associated with the program are being returned to Teva. Pursuant to the Teva Agreements, we paid Teva an initial nonrefundable upfront payment of $6.0 million. Under each license agreement, we are required to pay Teva $2.5 million upon the achievement of a specified clinical development milestone, and additional payments totaling up to $65.0 million upon achievement of certain commercial milestones. Each milestone payment shall be payable once, upon the first occurrence of the applicable milestone. We are also obligated to pay Teva tiered royalties at percentages in the low-to-mid single-digits on worldwide net sales on all products containing the Teva compounds.

The Teva Agreements can be terminated (i) by us without cause upon 120 days' written notice to Teva, (ii) by either party, if the other party materially breaches any of its obligations under the Teva Agreements and fails to cure such breach within 60 days after receiving notice thereof, or (iii) by either party, if a bankruptcy petition is filed against the other party and is not dismissed within 60 days. In addition, Teva can also terminate the agreement related to their glycoPEGylated FGF21 program in the event we, or any of our affiliates or sublicensees, challenges any of the Teva patents licensed to us, and the challenge is not withdrawn within 30 days of written notice from Teva.

In the fourth quarter of 2023, we made a $2.5 million milestone payment to Teva following the achievement of a clinical development milestone under the FGF21 program in SHTG. As of September 30, 2024, the timing and likelihood of achieving any remaining milestones are uncertain. Milestone payment obligations will be recognized when payment becomes probable and reasonably estimable, which is generally upon achievement of the applicable milestone.

Production Facility Funding Commitments

On April 4, 2024, we entered into the Collaboration Agreement. Pursuant to the Collaboration Agreement, BiBo will build the Production Facility at BiBo's facility in the Lin-gang Special Area of China (Shanghai) Pilot Free Trade Zone to manufacture the Drug Substance required to produce pegozafermin for commercial supply. The platform is expected to provide us with manufacturing capacity to meet our commercial needs. Under the Collaboration Agreement, we are required to pay BiBo an aggregate of $135.0 million (exclusive of applicable value-added tax) toward the construction of the Production Facility (collectively, the "Payment"), of which $81.0 million (net of applicable value-added tax) in milestone payments were paid during the three months ended September 30, 2024 and recorded in "Research and Development" in the consolidated statements of operations and comprehensive loss. The remainder of the Payment will become payable upon achievement of certain specified milestones, of which up to an additional $40.5 million of the Payment could become payable by the end of 2024. If the actual costs of the Production Facility are substantially greater than the estimated budget, the parties will negotiate a means of allocating such cost overruns.

Critical Accounting Estimates

There have been no significant changes in our critical accounting estimates as compared to the critical accounting estimates disclosed in our Annual Report on Form 10-K for the year ended December 31, 2023.

Recent Accounting Pronouncements

See Note 2 to our unaudited condensed consolidated financial statements for more information.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

There have been no material changes in market risk from the information provided in Part II, Item 7A "Quantitative and Qualitative Disclosures About Market Risk," in our Annual Report on Form 10-K for the year ended December 31, 2023.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

As of September 30, 2024, our management, with the participation and supervision of our principal executive officer and our principal financial officer, evaluated our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act")). The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to our management, including our principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost benefit relationship of possible controls and procedures. Based on this evaluation, our principal executive officer and our principal financial officer concluded that our disclosure controls and procedures were effective as of September 30, 2024 to provide reasonable assurance that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in SEC rules and forms, and that such information is accumulated and communicated to our management, including our principal executive officer and our principal financial officer, as appropriate, to allow timely decisions regarding required disclosure.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the quarter ended September 30, 2024 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II—OTHER INFORMATION

Item 1. Legal Proceedings.

We are currently not a party to any material legal proceedings. From time to time, we may become involved in legal proceedings arising in the ordinary course of our business. Regardless of outcome, litigation can have an adverse impact on us due to defense and settlement costs, diversion of management resources, negative publicity, reputational harm and other factors, and there can be no assurances that favorable outcomes will be obtained.

Item 1A. Risk Factors.

An investment in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below before deciding whether to make an investment decision with respect to shares of our common stock. You should also refer to the other information contained in this Quarterly Report on Form 10-Q, including "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our unaudited condensed consolidated financial statements and related notes. Our business, financial condition, results of operations and prospects could be materially and adversely affected by any of these risks or uncertainties. In any such case, the trading price of our common stock could decline, and you could lose all or part of your investment. We caution you that the risks, uncertainties and other factors referred to below and elsewhere in this Quarterly Report on Form 10-Q may not contain all of the risks, uncertainties and other factors that may affect our future results and operations. Moreover, new risks will emerge from time to time. It is not possible for our management to predict all risks.

Risk Factor Summary

Investing in our common stock involves significant risks. You should carefully consider the risks described below before making a decision to invest in our common stock. If we are unable to successfully address these risks and challenges, our business, financial condition, results of operations, or prospects could be materially adversely affected. In such case, the trading price of our common stock would likely decline, and you may lose all or part of your investment. Below is a summary of some of the risks we face.

- We are a clinical-stage biopharmaceutical company with a limited operating history and no products approved for commercial sale. We have incurred net losses since our inception, we expect to incur significant and increasing operating losses and we may never be profitable. Our stock is a highly speculative investment.
- Our business depends on the success of pegozafermin, our only product candidate under clinical development, which has not completed a pivotal trial. If we are unable to obtain regulatory approval for and successfully commercialize pegozafermin or other future product candidates, or we experience significant delays in doing so, our business will be materially harmed.
- Clinical drug development involves a lengthy and expensive process with uncertain timelines and uncertain outcomes, and the results of prior preclinical or clinical trials are not necessarily predictive of our future results.
- We will require substantial additional capital to finance our operations, which may not be available to us on acceptable terms, or at all. As a result, we may not complete the development and commercialization of pegozafermin or develop new product candidates.
- If we experience delays in clinical testing, our commercial prospects will be adversely affected, our costs may increase and our business may be harmed.
- If we encounter difficulties in enrolling patients in our clinical trials, our clinical development activities could be delayed or otherwise adversely affected.
- We have relied on, and expect to continue to rely on, third-party manufacturers and vendors to produce and release pegozafermin or any future product candidates. Any failure by a third-party to produce and release acceptable product candidates for us pursuant to our specifications and regulatory standards may delay or impair our ability to initiate or complete our clinical trials, obtain and maintain regulatory approvals or commercialize approved products.
- Pegozafermin and any future product candidates may cause undesirable side effects or have other properties that could delay or prevent their regulatory approval or limit the commercial profile of an approved label.
- We are developing pegozafermin for the treatment of MASH and the treatment of SHTG. The requirements for approval of pegozafermin by the FDA and comparable foreign regulatory authorities may be difficult to predict and may change over time, which makes it difficult to predict the timing and costs of the clinical development.

- Lack of efficacy, adverse events or undesirable side effects may emerge in clinical trials conducted by third parties developing FGF product candidates, which could adversely affect our stock price, our ability to attract additional capital and our development program.
- Interim, topline and preliminary data from our clinical trials that we announce or publish from time to time may change as more patient data become available and are subject to audit and verification procedures that could result in material changes in the final data.
- The manufacture of biologic products is complex and we are subject to many manufacturing risks, any of which could substantially increase our costs and limit supply of our products.
- We face substantial competition, which may result in others discovering, developing or commercializing competing products before or more successfully than we do.
- Unstable market and economic conditions, inflation, fluctuations in interest rates, natural disasters, public health crises, political crises, geopolitical events, such as the crisis in Ukraine and Israel, or other macroeconomic conditions, may have serious adverse consequences on our business and financial condition.
- Our Loan Agreement contains certain covenants that could adversely affect our operations and, if an event of default were to occur, we could be forced to repay any outstanding indebtedness sooner than planned and possibly at a time when we do not have sufficient capital to meet this obligation.
- Pegozafermin has not received regulatory approval. If we are unable to obtain regulatory approvals to market pegozafermin or any future product candidates, our business will be adversely affected.
- Our success depends upon our ability to obtain and maintain intellectual property protection for our products and technologies.
- We rely on a license from Teva and a sublicense from ratiopharm to patents and know-how related to glycoPEGylation technology that are used in the development, manufacture and commercialization of pegozafermin. Any termination or loss of significant rights, including the right to glycoPEGylation technology, or breach, under these agreements or any future license agreement related to our product candidates, would materially and adversely affect our ability to continue the development and commercialization of the related product candidates.

Risks Related to Our Business and Industry

We are a clinical-stage biopharmaceutical company with a limited operating history and no products approved for commercial sale. We have incurred net losses since our inception, we expect to incur significant and increasing operating losses and we may never be profitable. Our stock is a highly speculative investment.

We are a clinical-stage biopharmaceutical company with a limited operating history that may make it difficult to evaluate the success of our business to date and to assess our future viability. We commenced operations in 2018, and to date, our operations have been focused on organizing and staffing our company, raising capital, acquiring our initial product candidate, pegozafermin and licensing certain related technology, conducting research and development activities, including preclinical studies and clinical trials, and providing general and administrative support for these operations. Investment in biopharmaceutical product development is highly speculative because it entails substantial upfront capital expenditures and significant risk that any potential product candidate will fail to demonstrate adequate effect and/or an acceptable safety profile, gain regulatory approval and become commercially viable. We have no products approved for commercial sale, we have not generated any revenue from product sales to date and we continue to incur significant research and development and other expenses related to our ongoing operations. We have limited experience as a company conducting clinical trials and no experience as a company commercializing any products.

Pegozafermin is in development and, to date, we have not generated any revenue from the licensing or commercialization of pegozafermin. We will not be able to generate product revenue unless and until pegozafermin or any future product candidate, alone or with future partners, successfully completes clinical trials, receives regulatory approval and is successfully commercialized. As pegozafermin is in development, we do not expect to receive revenue from it for a number of years, if ever. Although we may seek to obtain revenue from collaboration or licensing agreements with third parties, we currently have no such agreements that could provide us with material, ongoing future revenue and we may never enter into any such agreements.

We are not profitable and have incurred net losses since our inception. Consequently, predictions about our future success or viability may not be as accurate as they would be if we had a longer operating history or a history of successfully developing and commercializing pharmaceutical products. We have spent, and expect to continue to spend, significant resources to fund research and development of, and seek regulatory approvals for, pegozafermin and any future product candidates. We expect to incur substantial and increasing operating losses over the next several years as our research and development, clinical trials and manufacturing activities increase. In addition, because of the numerous risks and uncertainties associated with pharmaceutical product development, including that our product candidates may not advance or may take longer than expected to advance through development or may not achieve the endpoints of applicable clinical trials, we are unable to predict the timing or amount of increased expenses, or if or when

we will achieve or maintain profitability. The size of our future net losses will depend, in part, on the rate of future growth of our expenses and our ability to generate revenue. The net losses we incur may fluctuate significantly from quarter-to-quarter such that a period-to-period comparison of our results of operations may not be a good indication of our future performance. Even if we eventually generate product revenue, we may never be profitable and, if we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis.

Our business depends on the success of pegozafermin, our only product candidate under clinical development, which has not completed a pivotal trial. If we are unable to obtain regulatory approval for and successfully commercialize pegozafermin or other future product candidates, or we experience significant delays in doing so, our business will be materially harmed.

The primary focus of our product development is pegozafermin for the treatment of patients with MASH and the treatment of patients with SHTG. Currently, pegozafermin is our only product candidate under clinical development. This may make an investment in our company riskier than similar companies that have multiple product candidates in active development and that therefore may be able to better sustain a failure of a lead candidate. Successful continued development and ultimate regulatory approval of pegozafermin for the treatment of MASH or SHTG is critical to the future success of our business. We have invested, and will continue to invest, a significant portion of our time and financial resources in the clinical development of pegozafermin. If we cannot successfully develop, obtain regulatory approval for and commercialize pegozafermin, we may not be able to continue our operations. The future regulatory and commercial success of pegozafermin is subject to a number of risks, including that, if approved for MASH or SHTG, pegozafermin will likely compete with products that may reach approval for the treatment of MASH prior to pegozafermin, products that are currently approved for the treatment of SHTG and the off-label use of currently marketed products for MASH and SHTG.

Clinical drug development involves a lengthy and expensive process with uncertain timelines and uncertain outcomes, and the results of prior preclinical or clinical trials are not necessarily predictive of our future results.

Pegozafermin and any future product candidates will be subject to rigorous and extensive clinical trials and extensive regulatory approval processes implemented by the FDA and comparable foreign regulatory authorities before obtaining marketing approval from these regulatory authorities. The drug development and approval process is lengthy and expensive, and approval is never certain. Investigational new drugs, such as pegozafermin, may not prove to be safe and effective in clinical trials. We have limited direct experience as a company in conducting pivotal trials required to obtain regulatory approval and we expect that the Phase 3 trials we are conducting will be more expansive and complex than the trials we have conducted to date. We may be unable to conduct clinical trials at preferred sites, enlist clinical investigators, enroll sufficient numbers of participants, procure sufficient drug supply or begin or successfully complete clinical trials in a timely fashion, if at all. In addition, the design of a clinical trial can determine whether its results will support approval of a product, and flaws in the design of a clinical trial may not become apparent until the clinical trial is well advanced. We may be unable to design and execute a clinical trial to support regulatory approval. Even if an ongoing clinical trial is successful, it may be insufficient to demonstrate that pegozafermin is safe or effective for registration purposes.

There is a high failure rate for drugs and biologic products proceeding through clinical trials. Failure can occur at any time during the clinical trial process. The results of preclinical studies and early clinical trials of pegozafermin or any future product candidate may not be predictive of the results of later-stage clinical studies or trials and the results of studies or trials in one set of patients or line of treatment may not be predictive of those obtained in another. In fact, many companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in late-stage clinical trials even after achieving promising results in preclinical studies and earlier stage clinical trials. In addition, data obtained from preclinical and clinical activities is subject to varying interpretations, which may delay, limit or prevent regulatory approval. It is impossible to predict when or if pegozafermin or any future product candidate will prove effective or safe in humans or will receive regulatory approval. Owing in part to the complexity of biological pathways, pegozafermin or any future product candidate may not demonstrate in patients the biochemical and pharmacological properties we anticipate based on laboratory studies or earlier stage clinical trials, and they may interact with human biological systems or other drugs in unforeseen, ineffective or harmful ways. The number of patients exposed to product candidates and the average exposure time in the clinical development programs may be inadequate to detect rare adverse events or findings that may only be detected once a product candidate is administered to more patients and for greater periods of time. To date, our Phase 1a, Phase 1b/2a and Phase 2 clinical trials have involved small patient populations and, because of the small sample size in such trials, the results of those clinical trials may be subject to substantial variability, including the inherent variability associated with biopsies in MASH patients, and may not be indicative of either future interim results or final results in future trials of patients with liver or cardio-metabolic diseases. If we are unable to successfully demonstrate the safety and efficacy of pegozafermin or other future product candidates and receive the necessary regulatory approvals, our business will be materially harmed.

We will require substantial additional capital to finance our operations, which may not be available to us on acceptable terms, or at all. As a result, we may not complete the development and commercialization of pegozafermin or develop new product candidates.

As a clinical-stage biopharmaceutical company, our operations have consumed significant amounts of cash since our inception. We expect our research and development expenses to increase in connection with our ongoing activities, particularly as we conduct Phase 3 clinical trials of, seek regulatory approval for pegozafermin and prepare for commercialization of pegozafermin. We believe our existing cash, cash equivalents and marketable securities will be sufficient to fund our projected operating requirements for a period of at least one year from the date this Quarterly Report on Form 10-Q is filed with the SEC.

We will require additional capital to discover, develop, obtain regulatory approval for and commercialize pegozafermin and any future product candidates. Our ability to complete new and ongoing clinical trials for pegozafermin may be subject to our ability to raise additional capital. We do not have any committed external source of funds other than as a result of any sales that we may make

pursuant to the Sales Agreement for our 2023 ATM Facility and proceeds from our Loan Agreement, which are subject to the achievement of certain milestones and/or consent of the lenders. We may also receive additional funds from the exercise of outstanding warrants. We expect to finance future cash needs through public or private equity or debt offerings or product collaborations. Additional capital may not be available in sufficient amounts or on reasonable terms, if at all. The current market environment for small biotechnology companies, like 89bio, and broader macroeconomic factors may preclude us from successfully raising additional capital.

If we do not raise additional capital, we may not be able to expand our operations or otherwise capitalize on our business opportunities, our business and financial condition will be negatively impacted and we may need to: significantly delay, scale back or discontinue research and discovery efforts and the development or commercialization of any product candidates or cease operations altogether; seek strategic alliances for research and development programs when we otherwise would not, or at an earlier stage than we would otherwise desire or on terms less favorable than might otherwise be available; or relinquish, or license on unfavorable terms, our rights to technologies or any product candidates that we otherwise would seek to develop or commercialize ourselves.

In addition, if pegozafermin receives approval and is commercialized, we will be required to make milestone and royalty payments to Teva, from whom we acquired certain patents and intellectual property rights relating to pegozafermin, and from whom we licensed patents and know-how related to glycoPEGylation technology that is used in the manufacture of pegozafermin. For additional information regarding this license agreement, please see Note 5 to accompanying unaudited condensed consolidated financial statements.

If we experience delays in clinical testing, our commercial prospects will be adversely affected, our costs may increase and our business may be harmed.

We cannot guarantee that we will be able to initiate and complete clinical trials and successfully accomplish all required regulatory activities or other activities necessary to gain approval and commercialize pegozafermin or any future product candidates. We currently have two active investigational new drug ("IND") applications with the FDA in the United States for pegozafermin. In the future, we may file an additional IND with another division for any future indications or future product candidates. If any such future IND is not approved by the FDA, our clinical development timeline may be negatively impacted and any future clinical programs may be delayed or terminated. As a result, we may be unable to obtain regulatory approvals or successfully commercialize our products. We do not know whether any other clinical trials will begin as planned, will need to be restructured or will be completed on schedule, or at all. Our product development costs will increase if we experience delays in clinical testing. Significant clinical trial delays also could shorten any periods during which we may have the exclusive right to commercialize pegozafermin and any future product candidates or allow our competitors to bring products to market before we do, which would impair our ability to successfully commercialize pegozafermin or any future product candidates and may harm our business, results of operations and prospects. Our or our future collaborators' inability to timely complete clinical development could result in additional costs to us as well as impair our ability to generate product revenue, continue development, commercialize pegozafermin and any future product candidates, reach sales milestone payments and receive royalties on product sales. In addition, if we make changes to a product candidate including, for example, a new formulation, we may need to conduct additional nonclinical studies or clinical trials to bridge or demonstrate the comparability of our modified product candidate to earlier versions, which could delay our clinical development plan or marketing approval for pegozafermin and any future product candidates.

If we encounter difficulties in enrolling patients in our clinical trials, our clinical development activities could be delayed or otherwise adversely affected.

The timely completion of clinical trials largely depends on patient enrollment. We may encounter delays in enrolling, or be unable to enroll, a sufficient number of patients to complete any of our future clinical trials, and even once enrolled, we may be unable to retain a sufficient number of patients to complete any of our trials. Furthermore, there are inherent difficulties in diagnosing MASH, which can currently only be definitively diagnosed through a liver biopsy, and identifying SHTG patients. Specifically, identifying patients most likely to meet MASH enrollment criteria on biopsy is an ongoing challenge, with existing clinical indicators lacking both sensitivity and specificity. As a result, MASH trials often suffer from high levels of screen failure following central review of the baseline liver biopsy, which can lead to lower enrollment. In addition, we do not have experience enrolling patients with cirrhosis and such enrollment make take longer than we expect. As a result of such difficulties and the significant competition for recruiting MASH and SHTG patients in clinical trials, we or our future collaborators may be unable to enroll the patients we need to complete clinical trials on a timely basis, or at all. In addition, our competitors, some of whom have significantly greater resources than we do, are conducting clinical trials for the same indications and seek to enroll patients in their studies that may otherwise be eligible for our clinical studies or trials. Since the number of qualified clinical investigators is limited, we expect to conduct some of our clinical trials at the same clinical trial sites that some of our competitors use, which could further reduce the number of patients who are available for our clinical trials in these sites. Further, in the event one of our competitors receives regulatory approval for their product candidate before we do, we may have difficulty enrolling patients if they choose to take an approved drug, rather than enroll in a clinical trial. Our inability to enroll a sufficient number of patients for our clinical trials would result in significant delays or may require us to abandon one or more clinical trials altogether. Even if we are able to enroll a sufficient number of patients in our clinical studies or trials, delays in patient enrollment may result in increased costs or may affect the timing or outcome of our clinical trials, which could prevent completion of these trials and adversely affect our ability to advance the development of pegozafermin and any future product candidates. We plan to leverage the safety database from the SHTG Phase 3 program across both the SHTG and MASH indications. If we are not able enroll enough patients in our trials sufficient to support the safety database, our ability to advance the development of pegozafermin may be adversely affected.

We have relied on, and expect to continue to rely on, third-party manufacturers and vendors to produce and release pegozafermin or any future product candidates. Any failure by a third-party to produce and release acceptable product candidates for us pursuant to our specifications and regulatory standards may delay or impair our ability to initiate or complete our clinical trials, obtain and maintain regulatory approvals or commercialize approved products.

We do not own or operate manufacturing facilities for the production of clinical or commercial quantities of our product candidates, and we lack the resources and the capabilities to do so. As a result, we currently rely, and expect to rely for the foreseeable future, on third-party manufacturers to supply us with pegozafermin and any future product candidates. We currently have contractual relationships with BTPH and BiBo pursuant to which they supply us with pegozafermin for our clinical trials. If there should be any disruption in our supply arrangement with BTPH or BiBo, including any adverse events affecting BTPH or BiBo, it could have a negative effect on the clinical development of pegozafermin and other operations while we work to identify and qualify an alternate supply source. In addition, we will require large quantities of pegozafermin for our large Phase 3 clinical trials and to commercialize pegozafermin. Accordingly, in April 2024, we entered into the Collaboration Agreement with BiBo, pursuant to which BiBo will construct the Production Facility in China specifically designed to produce pegozafermin for commercial supply, however, we cannot guarantee that BiBo will be able to complete construction of the Production Facility and scale up and produce the quantities we would require to commercialize pegozafermin.

Pursuant to the Collaboration Agreement, BiBo will build the Production Facility at BiBo's facility in the Lin-gang Special Area of China (Shanghai) Pilot Free Trade Zone to manufacture the Drug Substance required to produce pegozafermin for commercial supply. The platform is expected to provide us with manufacturing capacity to meet our commercial needs. Under the Collaboration Agreement, we are required to pay BiBo an aggregate of $135.0 million (exclusive of applicable value-added tax) toward the construction of the Production Facility, of which $81.0 million (net of applicable value-added tax) in milestone payments were paid during the three months ended September 30, 2024. The remainder of the Payment will become payable upon achievement of certain specified milestones, of which up to an additional $40.5 million of the Payment could become payable by the end of 2024. If the actual costs of the Production Facility are substantially greater than the estimated budget, the parties will negotiate a means of allocating such cost overruns. We may be ultimately responsible for a substantial portion of such overruns and it could negatively impact our financial condition and results of operations. We cannot guarantee that BiBo will complete or make operational the Production Facility in a timely manner or at all.

We expect to continue to rely on third-party manufacturers and suppliers, including BiBo, if we receive regulatory approval for pegozafermin or any other product candidates. The terms of our commercial supply of pegozafermin may not be favorable to us and could have a material impact on our results of operations.

Under the terms of the Collaboration Agreement, we may be ultimately responsible for a substantial portion of cost overruns and it could negatively impact our financial condition and results of operations. See further discussion in Part I, Item 2 "Management's Discussion and Analysis of Financial Condition and Results of Operations—Contractual Obligations and Commitments." We cannot guarantee that BiBo will complete or make operational the Production Facility in a timely manner or at all.

There is no guarantee that our third-party manufacturers will be able to fulfill our supply needs. Reliance on third-party manufacturers entails risks to which we would not be subject if we manufacture product candidates or products ourselves. For example, if any of our third-party manufacturers or vendors, including our fill-finish vendor, are not able to fulfill their supply or manufacturing obligations in a timely manner, our clinical trials may be delayed. In addition, if we do not maintain our key manufacturing relationships, we may fail to find replacement manufacturers or develop our own manufacturing capabilities in a timely manner or at all, which could delay or impair our ability to obtain regulatory approval for our products and substantially increase our costs or deplete profit margins, if any. If we do find replacement manufacturers, we may not be able to enter into agreements with them on terms and conditions favorable to us, and there could be a substantial delay before new facilities could be qualified and registered with the FDA and other comparable foreign regulatory authorities.

We have begun producing certain of the reagents required for the glycoPEGylation at BTPH using the know-how transferred to us from Teva under our Reagent Supply and Technology Transfer Agreement. We have not completed the manufacturing process for all these reagents and cannot guarantee that we will be able to produce them successfully, or scale up our production for the quantities needed for commercialization.

Any significant delay in the acquisition or decrease in the availability of these raw materials from suppliers could considerably delay the manufacture of pegozafermin, which could adversely impact the timing of any planned trials or the regulatory approvals of pegozafermin.

We rely on third-party vendors for our assay development and testing. If such third-party vendors are unable to successfully produce or test such assays, it may substantially increase our cost or could adversely impact the timing of any planned trials or the regulatory approvals of pegozafermin.

The FDA and other comparable foreign regulatory authorities require manufacturers to register manufacturing facilities. The FDA and other comparable foreign regulatory authorities also inspect these facilities to confirm compliance with current good manufacturing practices ("cGMP"). We have little to no control regarding the occurrence of third-party manufacturer incidents. Any failure to comply with cGMP requirements or other FDA or comparable foreign regulatory requirements could adversely affect our clinical research activities and our ability to develop pegozafermin or any future product candidates and market our products following approval. Our sole source supplier, BTPH, has not yet manufactured a commercial product, and as a result, has not been subject to inspection by the FDA and other comparable foreign regulatory authorities.

Our current and anticipated future dependence upon others for the manufacture of our product candidates may adversely affect our future profit margins and our ability to develop our product candidates and commercialize any products that receive regulatory approval on a timely basis. Supply chain issues, including those resulting from the ongoing war in Ukraine and the acts of piracy and military unrest in the Red Sea, may affect our third-party vendors and cause delays. Furthermore, since we have engaged a manufacturer located in China, we are exposed to the possibility of product supply disruption and increased costs in the event of changes in the legislation or policies of the United States, including the proposed BIOSECURE bill, or Chinese governments, political unrest or unstable economic conditions in China. For example, WuXi Biologics is identified in the proposed U.S. legislation known as the BIOSECURE Act as a biotechnology "company of concern." The current version of the BIOSECURE Act introduced in the House of Representatives would prohibit federal agencies from entering into procurement contracts with, as well as providing grants and loans to, an entity that uses biotechnology equipment or services from a biotechnology company of concern, and includes a grandfathering provision allowing biotechnology equipment and services provided or produced by named "biotechnology companies of concern" under a contract or agreement entered into before the effective date until January 1, 2032. The pathway and timing for the BIOSECURE Act or its provisions to become law are uncertain, although the bill was passed in the House of Representatives on September 9, 2024. Foreign CMOs may be subject to U.S. legislation, including the proposed BIOSECURE bill, trade restrictions and other foreign regulatory requirements which could increase the cost or reduce the supply of material available to us, delay the procurement or supply of such material or have an adverse effect on our ability to secure significant commitments from governments to purchase our potential therapies. These and other risks associated with our collaboration with BiBo, based in China, may materially adversely affect our ability to attain or maintain quantities of pegozafermin needed for commercialization, if approved. In addition, we have agreed to arbitrate claims related to the Collaboration Agreement with BiBo in Shanghai under the laws of the People's Republic of China, which may limit our ability to enforce our contractual rights against BiBo. Changes to Chinese regulations or government policies affecting biopharmaceutical companies are unpredictable and may have a material adverse effect on our collaborators in China which could have an adverse effect on our business, financial condition, results of operations and prospects. Evolving changes in China's public health, economic, political, and social conditions and the uncertainty around China's relationship with other governments, such as the United States and the UK, could also negatively impact our ability to manufacture our product candidates for our planned clinical trials or have an adverse effect on our ability to secure government funding, which could adversely affect our financial condition and cause it to delay our clinical development programs. Furthermore, if the BIOSECURE bill is passed and one or more of our collaborators in China is deemed to be a biotechnology company of concern, our operations and financial condition may be negatively impacted as a result of any delays or increased costs arising from the trade restrictions and other foreign regulatory requirements affecting such collaborators. If we are required to change manufacturers for any reason, we will be required to verify that the new manufacturer maintains facilities and procedures that comply with quality standards and with all applicable regulations and guidelines. For example, in the event that we need to switch our third-party manufacturer of pegozafermin from BTPH or BiBo, which are our primary manufacturing sources for pegozafermin, we anticipate that the complexity of the glycoPEGylation manufacturing process may materially impact the amount of time it may take to secure a replacement manufacturer. The delays associated with the verification of a new manufacturer, if we are able to identify an alternative source, could negatively affect our ability to develop product candidates in a timely manner or within budget.

Pegozafermin and any future product candidates may cause undesirable side effects or have other properties that could delay or prevent their regulatory approval or limit the commercial profile of an approved label.

Undesirable side effects caused by pegozafermin or any future product candidates could cause us or regulatory authorities to interrupt, delay or halt clinical trials and could result in a more restrictive label or the delay or denial of regulatory approval by the FDA or other comparable foreign regulatory authorities. Additional clinical studies may be required to evaluate the safety profile of pegozafermin or any future product candidates. As with other drugs, we have seen evidence of adverse effects in animal and human studies and it is possible that other adverse effects will become apparent in ongoing or future animal or human studies. It may be difficult to discern whether certain events or symptoms observed during our clinical trials or by patients using our approved products are related to pegozafermin or any future product candidates or approved products or some other factor. As a result, we and our development programs may be negatively affected even if such events or symptoms are ultimately determined to be unlikely related to pegozafermin or any future product candidates or approved products. Further, we expect that pegozafermin will require multiple administrations via subcutaneous injection in the course of a clinical trial. This chronic administration increases the risk that rare adverse events or chance findings are discovered in the commercial setting, where pegozafermin would be administered to more patients or for greater periods of time, that were not uncovered by our clinical drug development programs.

We are developing pegozafermin for the treatment of MASH and the treatment of SHTG. The requirements for approval of pegozafermin by the FDA and comparable foreign regulatory authorities may be difficult to predict and may change over time, which makes it difficult to predict the timing and costs of the clinical development.

We are developing pegozafermin for the treatment of MASH. Although there are guidelines issued by the FDA and comparable foreign regulatory authorities for the development of drugs for the treatment of MASH, the development of a novel product candidates such as pegozafermin may be more expensive and take longer than for other, better known or extensively studied product candidates. As other companies are in later stages of clinical trials for their potential MASH therapies, we expect that the path for regulatory approval for MASH therapies may continue to evolve in the near term as these other companies refine their regulatory approval strategies and interact with regulatory authorities. Such evolution may impact our future clinical trial designs, including trial size and endpoints, in ways that we cannot predict today. In particular, regulatory authority expectations about liver biopsy data may evolve especially as more information is published about the inherent variability in liver biopsy data. Certain of our competitors have experienced regulatory setbacks for MASH therapies following communications from the FDA and comparable foreign regulatory authorities. We currently do not know the impact, if any, that these setbacks could have on the path for regulatory approval for MASH

therapies generally or for pegozafermin. In addition, if one of the other companies receives regulatory approval for its MASH therapy before we do, such approval could impact our development of pegozafermin. We may have difficulty enrolling patients in our Phase 3 program for patients with MASH if patients choose to take an approved drug, rather than enroll in a clinical trial. In addition, we expect that the first therapy that is approved for the treatment of MASH will establish initial pricing and labelling expectations, which could impact our pricing and labelling if pegozafermin receives marketing approval.

We are also developing pegozafermin for the treatment of SHTG. Clinical trials for the treatment of SHTG may be relatively costly and time-consuming. In addition, the requirements for approval by the FDA and comparable foreign regulatory authorities may change over time. If the FDA or comparable foreign regulatory authorities require additional evidence in addition to our ongoing Phase 3 program in SHTG to support a successful submission for approval, we may be required to make changes to our program design that could impact timelines and cost.

Our anticipated development costs would likely increase if development of pegozafermin or any future product candidate is delayed because we are required by the FDA and comparable foreign regulatory authorities to perform studies or trials in addition to, or different from, those that we currently anticipate, or make changes to ongoing or future clinical trial designs. In addition, if we are unable to leverage our safety database for both SHTG and MASH indications, we may be required to perform additional trials, which would result in increased costs and may affect the timing or outcome of our clinical trials.

Lack of efficacy, adverse events or undesirable side effects may emerge in clinical trials conducted by third parties developing FGF product candidates, which could adversely affect our stock price, our ability to attract additional capital and our development program.

Lack of efficacy, adverse events or undesirable side effects may emerge in clinical trials conducted by third parties developing FGF product candidates like ours. For example, Novo Nordisk, Akero Therapeutics, Inc. and Boston Pharmaceuticals are also developing FGF21 product candidates for the treatment of MASH. We have no control over their clinical trials or development program, and lack of efficacy, adverse events or undesirable side effects experienced by subjects in their clinical trials could adversely affect our stock price, our ability to attract additional capital and our clinical development plans for pegozafermin or even the viability or prospects of pegozafermin as a product candidate, including by creating a negative perception of FGF therapeutics by healthcare providers or patients.

Interim, topline and preliminary data from our clinical trials that we announce or publish from time to time may change as more patient data become available and are subject to audit and verification procedures that could result in material changes in the final data.

From time to time, we may publicly disclose preliminary or topline data from our clinical trials, which are based on a preliminary analysis of then-available data, and the results and related findings and conclusions are subject to change following a more comprehensive review of the data related to the particular study or trial. We also make assumptions, estimations, calculations and conclusions as part of our analyses of data, and we may not have received or had the opportunity to fully and carefully evaluate all data. As a result, the topline results that we report may differ from future results of the same studies, or different conclusions or considerations may qualify such results, once additional data have been received and fully evaluated. Topline data also remain subject to audit and verification procedures that may result in the final data being materially different from the preliminary data we previously published. As a result, topline data should be viewed with caution until the final data are available. From time to time, we may also disclose interim data from our clinical trials. In addition, we may report interim analyses of only certain endpoints rather than all endpoints. Interim data from clinical trials that we may complete are subject to the risk that one or more of the clinical outcomes may materially change as patient enrollment continues and more patient data become available.

The manufacture of biologic products is complex and we are subject to many manufacturing risks, any of which could substantially increase our costs and limit supply of our products.

To date, pegozafermin has been manufactured by third-party manufacturers for preclinical studies and clinical trials. The process of manufacturing pegozafermin, and in particular, the glycoPEGylation process, is complex, highly regulated and subject to several risks and requires significant expertise and capital investment, including for the development of advanced manufacturing techniques and process controls. Manufacturers of biologic products often encounter difficulties in production, including difficulties with production costs and yields, quality control, including stability of the product, quality assurance testing, operator error and shortages of qualified personnel, as well as compliance with strictly enforced federal, state and foreign regulations. We cannot assure you that any stability or other issues relating to the manufacture of pegozafermin will not occur in the future. We have limited process development capabilities and have access only to external manufacturing capabilities. We do not have and we do not currently plan to acquire or develop the facilities or capabilities to manufacture bulk drug substance or filled drug product for use in human clinical trials or commercialization.

We face substantial competition, which may result in others discovering, developing or commercializing competing products before or more successfully than we do.

The biopharmaceutical industry is intensely competitive and subject to rapid innovation and significant technological advancements. Our competitors include multinational pharmaceutical companies, specialized biotechnology companies, universities and other research institutions. A number of biotechnology and pharmaceutical companies are pursuing the development or marketing of pharmaceuticals that target the same diseases that we are targeting. Certain of these companies have published positive data regarding their clinical trials, which may further increase the competition we face. Smaller or earlier-stage companies may also prove to be

significant competitors, particularly through collaborative arrangements with large, established companies. Given the high incidence of MASH and SHTG, it is likely that the number of companies seeking to develop products and therapies for the treatment of liver and cardio-metabolic diseases, such as MASH and SHTG, will increase. We may also face competition indirectly from companies developing therapies like the incretins to treat obesity and/or Type 2 diabetes. Some incretin-based therapies are also being developed for the treatment of MASH.

There are numerous currently approved therapies for treating diseases other than MASH and some of these currently approved therapies may exert effects that could be similar to pegozafermin in MASH. Many of these approved drugs are well-established therapies or products and are widely accepted by physicians, patients and third-party payors. Some of these drugs are branded and subject to patent protection, and others are available on a generic basis. This may make it difficult for us to differentiate our products from currently approved therapies, which may adversely impact our business strategy. We expect that if pegozafermin or any future product candidates are approved, they will be priced at a significant premium over competitive generic products, including branded generic products. Insurers and other third-party payors may also encourage the use of generic products or specific branded products prior to utilization of pegozafermin. In addition, many companies are developing new therapeutics, and we cannot predict what the standard of care will be as pegozafermin or any future product candidates progress through clinical development. In addition, to the extent pegozafermin or any future product candidates are approved for liver or cardio-metabolic indications, such as SHTG, the commercial success of our products will also depend on our ability to demonstrate benefits over the then-prevailing standard of care, including diet, exercise and lifestyle modifications.

Further, if pegozafermin or any future product candidates are approved for the treatment of SHTG, we will compete with currently approved therapies and therapies further along in development. Our competitors both in the United States and abroad include large, well-established pharmaceutical and generic companies with significantly greater name recognition. Our competitors may be able to charge lower prices than we can, which may adversely affect our market acceptance. Many of these competitors have greater resources than we do, including financial, product development, marketing, personnel and other resources.

If our competitors market products that are more effective, safer or cheaper than our products or that reach the market sooner than our products, we may not achieve commercial success. Many of our competitors have substantially greater financial, technical, human and other resources than we do and may be better equipped to develop, manufacture and market technologically superior products. As a result, our competitors may obtain regulatory approval of their products more rapidly than we do or may obtain patent protection or other intellectual property rights that limit our ability to develop or commercialize our product candidate or any future product candidates. Our competitors may also develop and succeed in obtaining approval for drugs that are more effective, more convenient, more widely used and less costly or have a better safety profile than our products and these competitors may also be more successful than we are in manufacturing and marketing their products.

Unstable market and economic conditions, inflation, fluctuation in interest rates, natural disasters, public health crises, political crises, geopolitical events, such as the crisis in Ukraine and Israel, or other macroeconomic conditions, may have serious adverse consequences on our business and financial condition.

The global economy, including credit and financial markets, have experienced extreme volatility and disruptions at various points over the last few decades, including, among other things, diminished liquidity and credit availability, declines in consumer confidence, declines in economic growth, supply chain shortages, increases in inflation rates, fluctuating interest rates, and uncertainty about economic stability. For example, public health crises have resulted in widespread unemployment, economic slowdown and extreme volatility in the capital markets. In addition, the Federal Reserve has previously raised interest rates multiple times in response to concerns about inflation and it may raise them again. Fluctuation in interest rates, coupled with reduced government spending and volatility in financial markets, may increase economic uncertainty and affect consumer spending. Similarly, the ongoing military conflicts between Russia and Ukraine and between Israel and surrounding areas and the rising tensions between China and Taiwan have created extreme volatility in the global capital markets and may have further global economic consequences, including disruptions of the global supply chain. Any such volatility and disruptions may adversely affect our business or the third parties on whom we rely. If the equity and credit markets deteriorate, including as a result of political unrest or war, it may make any necessary debt or equity financing more difficult to complete, more costly, and more dilutive. Failure to secure any necessary financing in a timely manner and on favorable terms could have a material adverse effect on our growth strategy, financial performance and share price and could require us to delay or abandon development or commercialization plans. In addition, there is a risk that one or more of our service providers, manufacturers or other partners would not survive or be able to meet their commitments to us under such circumstances, which could directly affect our ability to attain our operating goals on schedule and on budget.

We have experienced and may in the future experience disruptions as a result of such macroeconomic conditions, including delays or difficulties in initiating or expanding clinical trials and manufacturing sufficient quantities of materials. Any one or a combination of these events could have a material and adverse effect on our results of operations and financial condition.

The Loan Agreement contains certain covenants that could adversely affect our operations and, if an event of default were to occur, we could be forced to repay any outstanding indebtedness sooner than planned and possibly at a time when we do not have sufficient capital to meet this obligation.

Pursuant to the Loan Agreement, we have pledged substantially all of our assets, other than our intellectual property rights, and have agreed that we may not sell or assign rights to our patents and other intellectual property without the prior consent of our lenders. Additionally, the Loan Agreement contains certain affirmative and negative covenants that could prevent us from taking certain actions without the consent of our lenders. These covenants may limit our flexibility in operating our business and our ability to take actions that might be advantageous to us and our stockholders. The Loan Agreement also includes customary events of default,

including, among other things, an event of default upon a change of control. Upon the occurrence and continuation of an event of default, all amounts due under the Loan Agreement become automatically (in the case of a bankruptcy event of default) or may become (in the case of all other events of default and at the option of the administrative agent), immediately due and payable. If an event of default under the Loan Agreement should occur and be continuing, we could be required to immediately repay any outstanding indebtedness. If we are unable to repay such debt, the lenders would be able to foreclose on the secured collateral, including our cash accounts, and take other remedies permitted under the Loan Agreement. Even if we are able to repay such accelerated debt amount under the Loan Agreement upon an event of default, the repayment of these sums may significantly reduce our working capital and impair our ability to operate as planned.

We may encounter difficulties in managing our growth, which could adversely affect our operations.

We are in the early stages of building the full team that we anticipate we will need to complete the development pegozafermin and other future product candidates. As we advance our preclinical and clinical development programs for product candidates, seek regulatory approval in the United States and elsewhere and increase the number of ongoing product development programs, we anticipate that we will need to increase our product development, scientific and administrative headcount. We will also need to establish commercial capabilities in order to commercialize any product candidates that may be approved. Such an evolution may impact our strategic focus and our deployment and allocation of resources. Our ability to manage our operations and growth effectively depends upon the continual improvement of our procedures, reporting systems and operational, financial and management controls. We may not be able to implement administrative and operational improvements in an efficient or timely manner and may discover deficiencies in existing systems and controls. In addition, in order to continue to meet our obligations as a public company and to support our anticipated long-term growth, we will need to increase our general and administrative capabilities. Our management, personnel and systems may experience difficulty in adjusting to our growth and strategic focus.

We must attract and retain highly skilled employees in order to succeed. If we are not able to retain our current senior management team and our scientific advisors or continue to attract and retain qualified scientific, technical and business personnel, our business will suffer.

We may not be able to attract or retain qualified personnel and consultants due to the intense competition for such individuals in the biotechnology and pharmaceutical industries. If we are not able to attract and retain necessary personnel and consultants to accomplish our business objectives, it may significantly impede the achievement of our development and commercial objectives and our ability to implement our business strategy. In addition, we are highly dependent on the development, regulatory, manufacturing, commercialization and financial expertise of the members of our executive team, as well as other key employees and consultants. If we lose one or more of our executive officers or other key employees or consultants, our ability to implement our business strategy successfully could be seriously harmed.

We rely on third parties for certain aspects of our product candidate development process and we may not be able to obtain and maintain the third-party relationships that are necessary to develop, commercialize and manufacture some or all of our product candidates. If these third parties do not successfully perform and comply with regulatory requirements, we may not be able to successfully complete clinical development, obtain regulatory approval, or commercialize our product candidates and our business could be substantially harmed.

We depend on collaborators, partners, licensees, clinical investigators, contract research organizations, manufacturers and other third parties to support our discovery efforts, to formulate product candidates, to conduct clinical trials for some or all of our product candidates and to manufacture clinical and commercial scale quantities of our drug substance and drug product and expect to depend on these third parties to market, sell and distribute any products we successfully develop. Any of these third parties may terminate their engagements with us at any time. If we need to enter into alternative arrangements, it would delay our product development activities and such alternative arrangements may not be available on terms acceptable to us. We also expect to rely on other third parties to store and distribute drug supplies for our clinical trials. Any performance failure on the part of our distributors could delay clinical development, marketing approval and/or commercialization of pegozafermin or any future product candidates, producing additional losses and depriving us of potential revenue.

In addition, we have relied upon and plan to continue to rely upon third party contract research organizations ("CROs") to conduct, monitor, and manage preclinical and clinical programs. We rely on these parties for execution of clinical trials, and we manage and control only some aspects of their activities. We remain responsible for ensuring that each of our trials is conducted in accordance with the applicable protocol, legal, regulatory, and scientific standards, and our reliance on the CROs does not relieve us of our regulatory responsibilities. We and our CROs and other vendors are required to comply with all applicable laws, regulations, and guidelines, including those required by the FDA, EMA and comparable foreign regulatory authorities for all of our product candidates in clinical development. If we or any of our CROs or vendors fail to comply with applicable and evolving laws, regulations, and guidelines, the results generated in our clinical trials may be deemed insufficient or unreliable, and the FDA, EMA or comparable foreign regulatory authorities may require us to perform additional clinical trials before approving our marketing applications.

Business disruptions could seriously harm our future revenue and financial condition and increase our costs and expenses.

Our operations, and those of our contract research organizations, CMO, suppliers, and other contractors and consultants, could be subject to earthquakes, power shortages, telecommunications failures, water shortages, floods, hurricanes, typhoons, fires, extreme weather conditions, acts of war, medical pandemics or epidemics, such as the novel coronavirus, and other natural or man-made

disasters or business interruptions. The occurrence of any of these business disruptions could seriously harm our operations and financial condition and increase our costs and expenses.

If we fail to develop and commercialize additional product candidates, we may be unable to grow our business.

Although the development and commercialization of pegozafermin is currently our primary focus, as part of our longer-term growth strategy, we plan to evaluate the development and commercialization of other therapies related to MASH and other liver and cardio-metabolic diseases. The success of this strategy depends primarily upon our ability to identify and validate new therapeutic candidates, and to identify, develop and commercialize new drugs and biologics. Our research efforts may initially show promise in discovering potential new drugs and biologics yet fail to yield product candidates for clinical development for a number of reasons.

We may use our limited financial and human resources to pursue a particular research program or product candidate that is ultimately unsuccessful or less successful than other programs or product candidates that we may have forgone or delayed.

Because we have limited personnel and financial resources, we may forego or delay the development of certain programs or product candidates that later prove to have greater commercial potential than the programs or product candidates that we do pursue. Our resource allocation decisions may cause us to fail to capitalize on viable commercial products or profitable market opportunities. Our spending on current and future research and development programs for product candidates may not yield any commercially viable products. Similarly, our decisions to delay or terminate drug development programs may also be incorrect and could cause us to miss valuable opportunities.

We may seek to establish commercial collaborations for our product candidates, and, if we are not able to establish them on commercially reasonable terms, we may have to alter our development and commercialization plans.

Our drug development programs and the potential commercialization of our product candidates will require substantial additional cash to fund expenses. We may decide to collaborate with other pharmaceutical and biotechnology companies for the development and potential commercialization of our product candidates. Collaborations are complex and time-consuming to negotiate and document. We may not be able to negotiate collaborations on a timely basis, on acceptable terms, or at all. If we are unable to do so, we may have to curtail the development of the product candidate for which we are seeking to collaborate, reduce or delay its development program or one or more of our other development programs, delay its potential commercialization or reduce the scope of any sales or marketing activities or increase our expenditures and undertake development or commercialization activities at our own expense.

We may not be successful in our efforts to identify, in-license or acquire, discover, develop or commercialize additional product candidates.

We may seek to identify, in-license or acquire, discover, develop and commercialize additional product candidates. We cannot assure you that our effort to in-license or acquire additional product candidates will be successful. Even if we are successful in in-licensing or acquiring additional product candidates, their requisite development activities may require substantial resources, and we cannot assure you that these development activities will result in regulatory approvals.

Our international operations may expose us to business, regulatory, political, operational, financial, pricing and reimbursement risks associated with doing business outside of the United States.

Our use of our international facilities subjects us to U.S. and foreign governmental trade, import and export, and customs regulations and laws including various economic and trade sanctions regulations administered by the U.S. Treasury Department's Office of Foreign Assets Controls and the U.S. Export Administration Regulations. Compliance with these regulations and laws is costly and exposes us to penalties for non-compliance. Doing business internationally potentially involves a number of risks, any of which could harm our ongoing international clinical operations and supply chain, as well as any future international expansion and operations and, consequently, our business, financial condition, prospects and results of operations.

Product liability lawsuits against us could cause us to incur substantial liabilities and to limit commercialization of any products that we may develop.

We face an inherent risk of product liability exposure related to the testing of our product candidates in human clinical trials and will face an even greater risk if we commercialize any resulting products. Product liability claims may be brought against us by subjects enrolled in our clinical trials, patients, or others using our products. Our clinical trial liability insurance coverage may not adequately cover all liabilities that we may incur.

Our employees, contractors, vendors, principal investigators, consultants and future partners may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements and insider trading.

We are exposed to the risk of fraud or other misconduct by our employees, contractors, vendors, principal investigators, consultants or future partners. Misconduct by these parties could include failures to comply with FDA regulations, to provide accurate information to the FDA, to comply with federal and state healthcare fraud and abuse laws and regulations, to report financial information or data timely, completely or accurately, or to disclose unauthorized activities to us. Most states also have statutes or regulations similar to these federal laws, which may apply to items such as pharmaceutical products and services reimbursed by private insurers. We and/or our future partners may be subject to administrative, civil and criminal sanctions for violations of any of these laws.

We depend on our information technology systems and those of our third-party collaborators, service providers, contractors or consultants. Our internal computer systems, or those of our third-party collaborators, service providers, contractors or consultants, may fail or suffer security breaches, disruptions, or incidents, which could result in a material disruption of our development programs or loss of data or compromise the privacy, security, integrity or confidentiality of sensitive information related to our business and have a material adverse effect on our reputation, business, financial condition or results of operations.

In the ordinary course of our business, we collect, store and transmit large amounts of confidential information, including intellectual property, proprietary business information and personal information. Our internal technology systems and infrastructure, and those of our current or future third-party collaborators, service providers, contractors and consultants are vulnerable to damage from computer viruses, unauthorized access or use resulting from malware, natural disasters, terrorism, war and information technology, telecommunication and electrical failures, denial-of-service attacks, cyber-attacks or cyber-intrusions over the Internet, hacking, phishing and other social engineering attacks, persons inside our organizations (including employees or contractors), loss or theft, or persons with access to systems inside our organization. From time to time, we are subject to periodic phishing attempts. In the third quarter of 2021, we discovered a business email compromise caused by phishing. The phishing attack did not result in the misappropriation of any funds and we do not believe that it had a material adverse effect on our business. We implemented remedial measures promptly following this incident, however, we cannot guarantee that our implemented remedial measures will prevent additional related, as well as unrelated, incidents. If a material system failure, accident or security breach were to occur and cause interruptions in our operations or the operations of third-party collaborators, service providers, contractors and consultants, it could result in a material disruption of our development programs and significant reputational, financial, legal, regulatory, business or operational harm.

To the extent that any real or perceived security breach affects our systems (or those of our third-party collaborators, service providers, contractors or consultants), or results in the loss of or accidental, unlawful or unauthorized access to, use of, release of, or other processing of personally identifiable information or damage to our data or applications or other data or applications relating to our technology or product candidates, or inappropriate disclosure of confidential or proprietary information, we could incur liabilities and the further development of our product candidates could be delayed. Any failure or perceived failure by us or any third-party collaborators, service providers, contractors or consultants to comply with our privacy, confidentiality, data security or similar obligations, or any data security incidents or other security breaches that result in the accidental, unlawful or unauthorized access to, use of, release of, processing of, or transfer of sensitive information, including personally identifiable information, may result in negative publicity, harm to our reputation, governmental investigations, enforcement actions, regulatory fines, litigation or public statements against us, could cause third parties to lose trust in us or could result in claims by third parties, including those that assert that we have breached our privacy, confidentiality, data security or similar obligations, any of which could have a material adverse effect on our reputation, business, financial condition or results of operations.

Risks Related to Regulatory Approvals

Pegozafermin has not received regulatory approval. If we are unable to obtain regulatory approvals to market pegozafermin or any future product candidates, our business will be adversely affected.

We do not expect pegozafermin or any future product candidate to be commercially available for several years, if at all. Pegozafermin is and any future product candidate will be subject to strict regulation by regulatory authorities in the United States and in other countries. We cannot market any product candidate until we have completed all necessary preclinical studies and clinical trials and have obtained the necessary regulatory approvals. We do not know whether regulatory agencies will grant approval for pegozafermin or any future product candidate. Even if we complete preclinical studies and clinical trials successfully, we may not be able to obtain regulatory approvals or we may not receive approvals to make claims about our products that we believe to be necessary to effectively market our products. Data obtained from preclinical studies and clinical trials is subject to varying interpretations that could delay, limit or prevent regulatory approval, and failure to comply with regulatory requirements or inadequate manufacturing processes are examples of other problems that could prevent approval.

The regulatory authorities in the United States and the EU have not approved any products for the treatment of MASH, and while there are guidelines issued by the FDA for the development of drugs for the treatment of MASH, it is unclear whether the requirements for approval will change in the future or whether the FDA will rely on regulatory precedent for future regulatory approvals. Any such changes may require us to conduct new trials that could delay our timeframe and increase the costs of our programs related to pegozafermin or any future product candidate for the treatment of MASH or SHTG.

Even if we are able to obtain regulatory approvals for pegozafermin or any future product candidate, if they exhibit harmful side effects after approval, our regulatory approvals could be revoked or otherwise negatively impacted, and we could be subject to costly and damaging product liability claims.

Even if we receive regulatory approval for pegozafermin or any future product candidates, we will have tested them in only a small number of patients during our clinical trials. If our applications for marketing are approved and more patients begin to use our product, new risks and side effects associated with our products may be discovered. As a result, regulatory authorities may revoke their approvals. Based on guidelines issued by the FDA for the development of drugs for the treatment of MASH, if pegozafermin is approved by the FDA based on a surrogate endpoint pursuant to section 506(c) of the Federal Food, Drug, and Cosmetic Act and the accelerated approval regulations (21 C.F.R. part 314, subpart H; 21 C.F.R. part 601, subpart E), consistent with FDA guidance, we will be required to conduct additional clinical trials establishing clinical benefit on the ultimate outcome of MASH. Under the Food and Drug Omnibus Reform Act of 2022, the FDA may require, as appropriate, that such studies be underway prior to approval or

within a specific time period after the date of approval for a product granted accelerated approval. If pegozafermin is approved by the FDA for the treatment of SHTG based on an endpoint of the reduction of triglycerides, the FDA may still require a cardiovascular outcomes study as part of a post-marketing authorization commitment. Such a study would be time consuming and costly and we cannot guarantee that we will see positive results, which could result in the revocation of the approval. Additionally, we may be required to conduct additional clinical trials, make changes in labeling of our product, reformulate our product or make changes and obtain new approvals for our and our suppliers' manufacturing facilities for pegozafermin and any future product candidates. We might have to withdraw or recall our products from the marketplace. We may also experience a significant drop in the potential sales of our product if and when regulatory approvals for such product are revoked. As a result, we may experience harm to our reputation in the marketplace or become subject to lawsuits, including class actions. Any of these results could decrease or prevent any sales of our approved product or substantially increase the costs and expenses of commercializing and marketing our product.

The regulatory approval processes of the FDA and comparable foreign regulatory authorities are lengthy, time-consuming and inherently unpredictable. Our inability to obtain regulatory approval for pegozafermin or any future product candidates would substantially harm our business.

Currently, we do not have any product candidates that have received regulatory approval. The time required to obtain approval from the FDA and comparable foreign regulatory authorities is unpredictable but typically takes many years following the commencement of preclinical studies and clinical trials and depends upon numerous factors, including the substantial discretion of the regulatory authorities. In addition, approval policies, regulations or the type and amount of clinical data necessary to gain approval may change during the course of a product candidate's development and may vary among jurisdictions. It is possible that none of pegozafermin or any future product candidates will ever obtain regulatory approval. Pegozafermin or any future product candidate could fail to receive regulatory approval from the FDA or comparable foreign regulatory authorities for many reasons, including those referenced in Part I, Item 1. "Business–Government Regulation and Product Approval" in our Annual Report on Form 10-K. If we were to obtain approval, regulatory authorities may approve any of our product candidates for fewer or more limited indications than we request, may grant approval contingent on the performance of costly post-marketing clinical trials or may approve a product candidate with a label that does not include the labeling claims necessary or desirable for the successful commercialization of the product candidate.

We have received Breakthrough Therapy designation for pegozafermin in MASH from the FDA and PRIME designation for pegozafermin in MASH from the EMA, but such designation may not actually lead to a faster development or regulatory review or approval process, and does not increase the likelihood that pegozafermin will receive marketing approval. In addition, we may seek Breakthrough Therapy, Fast Track or PRIME designation for other indications or future product candidates, but we might not receive such designation.

In September 2023, we received Breakthrough Therapy designation for pegozafermin in MASH from the FDA. However, the receipt of Breakthrough Therapy designation for pegozafermin in MASH may not result in a faster development process, review or approval compared to drugs considered for approval under conventional FDA procedures and does not assure ultimate approval by the FDA.

In March 2024, the EMA granted PRIME status to pegozafermin in patients with MASH, and, in the future, we may seek Fast Track designation or PRIME designation for our other product candidates. If a drug or biologic is intended for the treatment of a serious or life-threatening condition and the drug or biologic demonstrates the potential to address unmet medical needs for this condition, the sponsor may apply for Fast Track designation. The sponsor of a Fast Track product candidate has opportunities for more frequent interactions with the applicable FDA review team during product development and, once a BLA is submitted, the application may be eligible for priority review. A Fast Track product candidate may also be eligible for rolling review, where the FDA may consider for review sections of the BLA on a rolling basis before the complete application is submitted, if the sponsor provides a schedule for the submission of the sections of the BLA, the FDA agrees to accept sections of the BLA and determines that the schedule is acceptable, and the sponsor pays any required user fees upon submission of the first section of the BLA. The FDA has broad discretion whether or not to grant this designation.

PRIME is a program launched by the EMA to enhance support for research on and development of medicines that have demonstrated preliminary safety and efficacy and thus the potential to target a significant unmet medical need and bring a major therapeutic advantage to patients. This regulatory program offers developers of promising medicines enhanced interaction and early dialogue with the EMA and is designed to optimize development plans and speed evaluation ensuring these medicines reach patients as early as possible. The EMA has broad discretion whether or not to grant this designation.

In addition, we may seek Breakthrough Therapy designation, Fast Track designation or PRIME designation for other indications or future product candidates. Even if we believe a particular product candidate is eligible for these designations, we cannot assure you that the FDA, EMA or similar regulatory agency would decide to grant them. Breakthrough Therapy, Fast Track and PRIME designations may not result in a faster development process, review or approval compared to conventional FDA or EMA procedures, respectively. In addition, even though pegozafermin is designated as a Breakthrough Therapy in MASH, the FDA may later decide that the product candidate no longer meets the conditions for designation and the designation may be rescinded. The Breakthrough Therapy, Fast Track and PRIME designations do not assure ultimate regulatory approval by the FDA or the EMA. Many drugs and biologics that have received Breakthrough Therapy, Fast Track or PRIME designation have failed to obtain approval. See Part I, Item 1. "Business—Expedited Programs for Serious Conditions" in our Annual Report on Form 10-K.

We plan to conduct clinical trials for pegozafermin at sites outside the United States, and the FDA may not accept data from trials conducted in such locations.

We have conducted and expect in the future to conduct one or more of our clinical trials outside the United States. Although the FDA may accept data from clinical trials conducted outside the United States, acceptance of this data is subject to conditions imposed by the FDA. For example, the clinical trial must be well designed and conducted and performed by qualified investigators in accordance with ethical principles. The trial population must also adequately represent the U.S. population, and the data must be applicable to the U.S. population and U.S. medical practice in ways that the FDA deems clinically meaningful. In addition, while these clinical trials are subject to the applicable local laws, FDA acceptance of the data will depend on its determination that the trials also complied with all applicable U.S. laws and regulations. If the FDA does not accept the data from any trial that we conduct outside the United States, it would likely result in the need for additional trials, which would be costly and time-consuming and would delay or permanently halt our development of the applicable product candidates. Even if the FDA accepted such data, it could require us to modify our planned clinical trials to receive clearance to initiate such trials in the United States or to continue such trials once initiated.

Further, conducting international clinical trials presents additional risks that may delay completion of our clinical trials. These risks include the failure of enrolled patients in foreign countries to adhere to clinical protocol as a result of differences in healthcare services or cultural customs that could restrict or limit our ability to conduct our clinical trials, the administrative burdens of conducting clinical trials under multiple sets of foreign regulations, foreign exchange fluctuations, diminished protection of intellectual property in some countries, as well as political and economic risks relevant to foreign countries.

Even if pegozafermin or any future product candidate receives regulatory approval, it may still face future development and regulatory difficulties.

Even if we obtained regulatory approval for a product candidate, it would be subject to ongoing requirements by the FDA and comparable foreign regulatory authorities governing the manufacture, quality control, further development, labeling, packaging, storage, distribution, safety surveillance, import, export, advertising, promotion, recordkeeping and reporting of safety and other post-market information. In addition, manufacturers of drug products and their facilities are subject to continual review and periodic inspections by the FDA and other regulatory authorities for compliance with cGMP, regulations and standards. If we or a regulatory agency discover previously unknown problems with a product, such as adverse events of unanticipated severity or frequency, or problems with the facility where the product is manufactured, a regulatory agency may impose restrictions on that product, the manufacturing facility or us, including requiring recall or withdrawal of the product from the market or suspension of manufacturing. If we, our product candidates or the manufacturing facilities for our product candidates fail to comply with applicable regulatory requirements, or undesirable side effects caused by such products are identified, a regulatory agency may: issue safety alerts, Dear Healthcare Provider letters, press releases or other communications containing warnings about such product; mandate modifications to promotional materials or require us to provide corrective information to healthcare practitioners; require that we conduct post-marketing studies; require us to enter into a consent decree, which can include imposition of various fines, reimbursements for inspection costs, required due dates for specific actions and penalties for noncompliance; seek an injunction or impose civil or criminal penalties or monetary fines; suspend marketing of, withdraw regulatory approval of or recall such product; suspend any ongoing clinical studies; refuse to approve pending applications or supplements to applications filed by us; suspend or impose restrictions on operations, including costly new manufacturing requirements; or seize or detain products, refuse to permit the import or export of products or require us to initiate a product recall. The occurrence of any event or penalty described above may inhibit our ability to commercialize our products and generate product revenue.

We expect the product candidates we develop will be regulated as biologics, and therefore they may be subject to competition sooner than anticipated.

The BPCIA was enacted as part of the Affordable Care Act to establish an abbreviated pathway for the approval of biosimilar and interchangeable biological products. The regulatory pathway establishes legal authority for the FDA to review and approve biosimilar biologics, including the possible designation of a biosimilar as "interchangeable" based on its similarity to an approved biologic. Under the BPCIA, an application for a biosimilar product cannot be approved by the FDA until 12 years after the reference product was approved under a BLA. The law is complex and is still being interpreted and implemented by the FDA. As a result, its ultimate impact, implementation, and meaning are subject to uncertainty. While it is uncertain when processes intended to implement BPCIA may be fully adopted by the FDA, any of these processes could have a material adverse effect on the future commercial prospects for our biological products.

We believe that any of the product candidates we develop that is approved in the United States as a biological product under a BLA should qualify for the 12-year period of exclusivity. However, there is a risk that this exclusivity could be shortened due to congressional action or otherwise, or that the FDA will not consider the subject product candidates to be reference products for competing products, potentially creating the opportunity for generic competition sooner than anticipated. Moreover, the extent to which a biosimilar, once approved, will be substituted for any one of the reference products in a way that is similar to traditional generic substitution for non-biological products is not yet clear, and will depend on a number of marketplace and regulatory factors that are still developing.

In addition, the first biologic product submitted under the abbreviated approval pathway that is determined to be interchangeable with the reference product has exclusivity against other biologics submitted under the abbreviated approval pathway for the lesser of (i) one year after the first commercial marketing, (ii) 18 months after approval if there is no legal challenge, (iii) 18 months after the resolution in the applicant's favor of a lawsuit challenging the biologics' patents if an application has been submitted, or (iv) 42 months after the application has been approved if a lawsuit is ongoing within the 42-month period. The approval of a biologic product

biosimilar to one of our product candidates could have a material adverse impact on our business as it may be significantly less costly to bring to market and may be priced significantly lower than our product candidates.

Current and future legislation may increase the difficulty and cost for us, and any collaborators, to obtain marketing approval of and commercialize our drug candidates and affect the prices we, or they, may obtain.

Heightened governmental scrutiny over the manner in which manufacturers set prices for their marketed products has resulted in several recent Congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for products. We expect that additional state and federal healthcare reform measures will be adopted in the future, any of which could limit the amounts that federal and state governments will pay for healthcare therapies, which could result in reduced demand for our product candidates or additional pricing pressures. On August 16, 2022, President Biden signed into law the Inflation Reduction Act of 2022 ("IRA"), which, among other provisions, included several measures intended to lower the cost of prescription drugs and related healthcare reforms. We cannot be sure whether additional legislation or rulemaking related to the IRA will be issued or enacted, or what impact, if any, such changes will have on the profitability of any of our drug candidates, if approved for commercial use, in the future.

Healthcare insurance coverage and reimbursement may be limited or unavailable for our product candidate, if approved, which could make it difficult for us to sell our product candidate or other therapies profitably.

The success of pegozafermin, if approved, depends on the availability of coverage and adequate reimbursement from third-party payors including governmental healthcare programs, such as Medicare and Medicaid, commercial payors, and health maintenance organizations. We cannot be sure that coverage and reimbursement will be available for, or accurately estimate the potential revenue from, our product candidates or assure that coverage and reimbursement will be available for any product that we may develop.

Governments outside the United States tend to impose strict price controls, which may adversely affect our revenue, if any.

In some countries, particularly the countries of the European Union, the pricing of prescription pharmaceuticals is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take considerable time after the receipt of marketing approval for a drug. In addition, there can be considerable pressure by governments and other stakeholders on prices and reimbursement levels, including as part of cost containment measures. Political, economic and regulatory developments may further complicate pricing negotiations. To obtain coverage and reimbursement or pricing approval in some countries, we may be required to conduct a clinical trial that compares the cost-effectiveness of our drug candidate to other available procedures. If reimbursement of our drugs is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, our business could be harmed, possibly materially.

Risks Related to Intellectual Property

Our success depends upon our ability to obtain and maintain intellectual property protection for our products and technologies.

Our success will depend in significant part on our current or future licensors', licensees' or collaborators' ability to establish and maintain adequate protection of our owned and licensed intellectual property covering the product candidates we plan to develop, and the ability to develop these product candidates and commercialize the products resulting therefrom, without infringing the intellectual property rights of others. In addition to taking other steps to protect our intellectual property, we hold issued patents, we have applied for patents, and we intend to continue to apply for patents with claims covering our technologies, processes and product candidates when and where we deem it appropriate to do so. We have filed numerous patent applications both in the United States and in certain foreign jurisdictions to obtain patent rights to inventions we have discovered, with claims directed to compositions of matter, methods of use and other technologies relating to our programs. There can be no assurance that any of these patent applications will issue as patents or, for those applications that do mature into patents, that the claims of the patents will exclude others from making, using or selling our product candidates or products that compete with or are similar to our product candidates. In countries where we have not sought and do not seek patent protection, third parties may be able to manufacture and sell our product candidates without our permission, and we may not be able to stop them from doing so.

With respect to patent rights, we do not know whether any of the pending patent applications for any of our product candidates will result in the issuance of patents that effectively protect our technologies, processes and product candidates, or if any of our issued patents or our current or future licensors', licensees' or collaborators' issued patents will effectively prevent others from commercializing competitive technologies, processes and products. We cannot be certain that we or our current or future licensors, licensees or collaborators were the first to make the inventions claimed in our owned or licensed patents or pending patent applications, or that we or our current or future licensors, licensees or collaborators were the first to file for patent protection of such inventions.

Any changes we make to our pegozafermin or any future product candidates to cause them to have what we view as more advantageous properties may not be covered by our existing patents and patent applications, and we may be required to file new applications and/or seek other forms of protection for any such altered product candidates. The patent landscape surrounding the technology underlying our product candidates is crowded, and there can be no assurance that we would be able to secure patent protection that would adequately cover an alternative to pegozafermin or any future product candidates.

We and our current or future licensors, licensees or collaborators may not be able to prepare, file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner. It is also possible that we or our current or future licensors, licensees or collaborators will fail to identify patentable aspects of inventions made in the course of development and commercialization activities before it is too late to obtain patent protection for them. Moreover, in some circumstances, we may not have the right to control the preparation, filing and prosecution of patent applications, or to maintain or enforce the patents, covering technology that we license from or license to third parties and may be reliant on our current or future licensors, licensees or collaborators to perform these activities, which means that these patent applications may not be prosecuted, and these patents enforced, in a manner consistent with the best interests of our business. If our current or future licensors, licensees or collaborators fail to establish, maintain, protect or enforce such patents and other intellectual property rights, such rights may be reduced or eliminated. If our current or future licensors, licensees or collaborators are not fully cooperative or disagree with us as to the prosecution, maintenance or enforcement of any patent rights, such patent rights could be compromised.

Similar to the patent rights of other biotechnology companies, the scope, validity and enforceability of our owned and licensed patent rights generally are highly uncertain and involve complex legal and factual questions. The issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability, and our patents may be challenged in the courts or patent offices in the United States and abroad. In recent years, these areas have been the subject of much litigation in the industry. As a result, the issuance, scope, validity, enforceability and commercial value of our and our current or future licensors', licensees' or collaborators' patent rights are highly uncertain. Our and our current or future licensors', licensees' or collaborators' pending and future patent applications may not result in patents being issued that protect our technology or product candidates, or products resulting therefrom, in whole or in part, or that effectively prevent others from commercializing competitive technologies and products. The patent examination process may require us or our current or future licensors, licensees or collaborators to narrow the scope of the claims of pending and future patent applications, which would limit the scope of patent protection that is obtained, if any. Our and our current or future licensors', licensees' or collaborators' patent applications cannot be enforced against third parties practicing the technology that is currently claimed in such applications unless and until a patent issues from such applications, and then only to the extent the claims that issue are broad enough to cover the technology being practiced by those third parties.

Furthermore, given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting such candidates might expire before or shortly after the resulting products are commercialized. As a result, our owned and in-licensed patents may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours. We expect to seek extensions of patent terms for our issued patents, where available. The applicable authorities, including the FDA in the United States, and any comparable foreign regulatory authorities, may not agree with our assessment of whether such extensions are available, and may refuse to grant extensions to our patents, or may grant more limited extensions than we request. In addition, we may not be granted an extension because of, for example, failing to apply within applicable deadlines, failing to apply prior to the expiration of relevant patents or otherwise failing to satisfy applicable requirements.

We may not be able to protect our intellectual property rights throughout the world.

The legal protection afforded to inventors and owners of intellectual property in countries outside of the United States may not be as protective or effective as that in the United States and we may, therefore, be unable to acquire and enforce intellectual property rights outside the United States to the same extent as in the United States. Whether filed in the United States or abroad, our patent applications may be challenged or may fail to result in issued patents. Filing, prosecuting, enforcing and defending patents on product candidates in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States are less extensive than those in the United States. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as federal and certain state laws in the United States.

Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States, or from selling or importing products made using our inventions in and into the United States or other jurisdictions. Competitors may use technologies in jurisdictions where we have not obtained patent protection to develop their own products and, further, may export otherwise infringing products to territories where we have patent protection, but enforcement is not as strong as that in the United States. These products may compete with pegozafermin or any future product candidates and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

We rely on a license from Teva and a sublicense from ratiopharm to patents and know-how related to glycoPEGylation technology that are used in the development, manufacture and commercialization of pegozafermin. Any termination or loss of significant rights, including the right to glycoPEGylation technology, or breach, under these agreements or any future license agreement related to our product candidates, would materially and adversely affect our ability to continue the development and commercialization of the related product candidates.

In April 2018, we entered into the FGF21 Agreement with Teva under which we acquired certain patents, intellectual property and other assets relating to Teva's glycoPEGylated FGF21 program including pegozafermin. Under this agreement, we were granted a perpetual, non-exclusive (but exclusive as to pegozafermin), non-transferable, worldwide license to patents and know-how related to glycoPEGylation technology used in the development, manufacture and commercialization of pegozafermin and products containing pegozafermin. The FGF21 Agreement also contains numerous covenants with which we must comply, including the utilization of commercially reasonable efforts to develop and ultimately commercialize pegozafermin, as well as certain reporting covenants and the obligation to make royalty payments, if and when pegozafermin is approved for commercialization. Our failure to satisfy any of these covenants could result in the termination of the FGF21 Agreement. In addition, we entered into a Sublicense Agreement with ratiopharm (the "ratiopharm Sublicense"), under which we were granted a perpetual, exclusive, worldwide sublicense to patents and know-how related to glycoPEGylation technology used in the development, manufacture and commercialization of pegozafermin and products containing pegozafermin. Termination of the FGF21 Agreement or the ratiopharm Sublicense will impact our rights under

the intellectual property licensed to us by Teva and ratiopharm, respectively, including our license to glycoPEGylation technology, but will not affect our rights under the assets assigned to us.

Beyond this agreement, our commercial success will also depend upon our ability, and the ability of our licensors, to develop, manufacture, market and sell our product candidates and use our proprietary technologies without infringing the proprietary rights of third parties. A third party may hold intellectual property rights, including patent rights, that are important or necessary to the development of our product candidates. As a result, we may enter into additional license agreements in the future. If we fail to comply with the obligations under these agreements, including payment and diligence obligations, our licensors may have the right to terminate these agreements, in which event we may not be able to develop, manufacture, market or sell any product that is covered by these agreements or to engage in any other activities necessary to our business that require the freedom to operate afforded by the agreements, or we may face other penalties under the agreements.

We may be unable to obtain intellectual property rights or technology necessary to develop and commercialize pegozafermin and any future product candidates.

The patent landscape around our programs is complex, and we are aware of several third-party patents and patent applications containing subject matter that might be relevant to pegozafermin. Depending on what claims ultimately issue from these patent applications, and how courts construe the issued patent claims, as well as depending on the ultimate formulation and method of use of pegozafermin or any future product candidates, we may need to obtain a license to practice the technology claimed in such patents. There can be no assurance that such licenses will be available on commercially reasonable terms, or at all.

We may become involved in lawsuits or other proceedings to protect or enforce our intellectual property, which could be expensive, time-consuming and unsuccessful and have a material adverse effect on the success of our business.

Third parties may infringe our patents or misappropriate or otherwise violate our intellectual property rights. In the future, we may initiate legal proceedings to enforce or defend our intellectual property rights, to protect our trade secrets or to determine the validity or scope of intellectual property rights we own or control. Also, third parties may initiate legal proceedings against us to challenge the validity or scope of intellectual property rights we own, control or to which we have rights. An adverse result in any litigation proceeding could put one or more of our patents at risk of being invalidated, narrowed, held unenforceable or interpreted in such a manner that would not preclude third parties from entering the market with competing products.

Third-party pre-issuance submission of prior art to the USPTO, or opposition, derivation, revocation, reexamination, inter partes review or interference proceedings, or other pre-issuance or post-grant proceedings or other patent office proceedings or litigation in the United States or other jurisdictions provoked by third parties or brought by us, may be necessary to determine the inventorship, priority, patentability or validity of inventions with respect to our patents or patent applications. An unfavorable outcome could leave our technology or product candidates without patent protection, allow third parties to commercialize our technology or product candidates and compete directly with us, without payment to us, or could require us to obtain license rights from the prevailing party in order to be able to manufacture or commercialize our product candidates without infringing third-party patent rights. Our business could be harmed if the prevailing party in such a case does not offer us a license on commercially reasonable terms, or at all. Even if we obtain a license, it may be non-exclusive, thereby giving our competitors access to the same technologies licensed to us. In addition, if the breadth or strength of protection provided by our patents and patent applications is threatened, it could dissuade companies from collaborating with us to license, develop or commercialize current or future product candidates. Even if we successfully defend such litigation or proceeding, we may incur substantial costs and our defense may distract our management and other employees.

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. In addition, many foreign jurisdictions have rules of discovery that are different than those in the United States and that may make defending or enforcing our patents extremely difficult. There could also be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have a material adverse effect on the price of shares of our common stock.

Third parties may initiate legal proceedings against us alleging that we infringe their intellectual property rights or we may initiate legal proceedings against third parties to challenge the validity or scope of intellectual property rights controlled by third parties.

Third parties may initiate legal proceedings against us alleging that we infringe their intellectual property rights or we may initiate legal proceedings against third parties to challenge the validity or scope of intellectual property rights controlled by third parties, including in oppositions, interferences, revocations, reexaminations, inter partes review or derivation proceedings before the USPTO or its counterparts in other jurisdictions. These proceedings can be expensive and time-consuming and many of our adversaries in these proceedings may have the ability to dedicate substantially greater resources to prosecuting these legal actions than we can. We could be found liable for monetary damages, including treble damages and attorneys' fees, if we are found to have willfully infringed a patent of a third party. A finding of infringement could prevent us from commercializing our pegozafermin or any future product candidates or force us to cease some of our business operations, which could materially harm our business.

Although we have reviewed certain third-party patents and patent filings that we believe may be relevant to our therapeutic candidates or products, we have not conducted a freedom-to-operate search or analysis for any of our therapeutic candidates or products, and we may not be aware of patents or pending or future patent applications that, if issued, would block us from commercializing our product candidates. Thus, we cannot guarantee that our product candidates, or our commercialization thereof, do not and will not infringe any third party's intellectual property.

Risks Related to Ownership of Our Common Stock

The price of our common stock may be volatile and fluctuate significantly and results announced by us and our collaborators or competitors could cause our stock price to decline, and you may lose all or part of your investment.

The market price of our common stock could fluctuate significantly, and you may not be able to resell your shares at or above the price you paid for your shares. Our stock price could fluctuate significantly due to various factors in addition to those otherwise described in this Quarterly Report on Form 10-Q, including those described in these "Risk Factors," including business developments announced by us and by our collaborators and competitors, or as a result of market trends and daily trading volume. The business developments that could affect our stock price include announcements or disclosures from competitors in the same class or category, new collaborations, clinical advancement, commercial launch or discontinuation of product candidates in the same class or category and regulatory approvals for our product candidates or product candidates in the same class or category. Our stock price could also fluctuate significantly with the level of overall investment interest in small-cap biotechnology stocks or for other reasons unrelated to our business. Any of these factors may result in large and sudden changes in the volume and trading price of our common stock. In the past, following periods of volatility in the market price of a company's securities, stockholders have often instituted securities class action litigation against that company.

Sales of our common stock, or the perception that such sales may occur, or issuance of shares of our common stock upon exercise of warrants could depress the price of our common stock.

Sales of a substantial number of shares of our common stock in the public market, or the perception that such sales may occur, could depress the market price of our common stock. In addition, we have filed a registration statement registering under the Securities Act the shares of our common stock reserved for issuance under our 2019 Plan and the Amended and Restated 2023 Inducement Plan, including shares issuable upon exercise of outstanding options. These shares can be freely sold in the public market upon issuance, subject to volume limitations applicable to affiliates. Further, as opportunities present themselves, we may enter into financing or similar arrangements in the future, including the issuance of debt or equity securities.

In addition, we must settle exercises of our outstanding warrants in shares of our common stock. The issuance of shares of our common stock upon exercise of the warrants will dilute the ownership interests of our stockholders, which could depress the trading price of our common stock. In addition, the market's expectation that exercises may occur could depress the trading price of our common stock even in the absence of actual exercises. Moreover, the expectation of exercises could encourage the short selling of our common stock, which could place further downward pressure on the trading price of our common stock.

Certain of our executive officers and directors have entered or may enter into Rule 10b5-1 plans providing for sales of shares of our common stock from time to time. Under a Rule 10b5-1 plan, a broker executes trades pursuant to parameters established by the executive officer or director when entering into the plan, without further direction from the executive officer or director. A Rule 10b5-1 plan may be amended or terminated in some circumstances. Our executive officers and directors also may buy or sell additional shares outside of a Rule 10b5-1 plan when they are not in possession of material nonpublic information.

Raising additional capital may cause dilution to existing stockholders, restrict our operations or require us to relinquish rights to our technologies.

Existing stockholders could suffer dilution or be negatively affected by fixed payment obligations we may incur if we raise additional funds through the issuance of additional equity securities, including under the ATM Facility (defined above), or debt. Furthermore, these securities may have rights senior to those of our common stock and could contain covenants or protective rights that would restrict our operations and potentially impair our competitiveness, such as limitations on our ability to incur additional debt, limitations on our ability to acquire, sell or license intellectual property rights and other operating restrictions that could adversely impact our ability to conduct our business.

Hedging activity by investors in the warrants could depress the trading price of our common stock.

We expect that many investors in our warrants will seek to employ an arbitrage strategy. Under this strategy, investors typically short sell a certain number of shares of our common stock and adjust their short position over time while they continue to hold the warrants. Investors may also implement this type of strategy by entering into swaps on our common stock in lieu of, or in addition to, short selling shares of our common stock. This market activity, or the market's perception that it will occur, could depress the trading price of our common stock.

General Risk Factors

Our directors, executive officers and current holders of 5% or more of our capital stock have substantial control over our company, which could limit your ability to influence the outcome of matters subject to stockholder approval, including a change of control.

As of September 30, 2024, our executive officers, directors and other holders of 5% or more of our common stock beneficially owned a majority of our outstanding common stock. As a result, our executive officers, directors and other holders of 5% or more of our

common stock, if they act, will be able to influence or control matters requiring approval by our stockholders, including the election of directors and the approval of mergers, acquisitions or other extraordinary transactions. In addition, our current directors, executive officers and other holders of 5% or more of our common stock, acting together, would have the ability to control the management and affairs of our company. They may also have interests that differ from yours and may vote in a way with which you disagree and that may be adverse to your interests. This concentration of ownership may have the effect of delaying, preventing or deterring a change of control of our company, could deprive our stockholders of an opportunity to receive a premium for their shares of our common stock as part of a sale of our company.

Our disclosure controls and procedures may not prevent or detect all errors or acts of fraud. If we are unable to maintain effective internal control over financial reporting, investors may lose confidence in the accuracy and completeness of our financial reports and the market price of our stock may decrease.

We designed our disclosure controls and procedures to reasonably assure that information we must disclose in reports we file or submit under the Exchange Act is accumulated and communicated to management, and recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC. We believe that any disclosure controls and procedures or internal controls and procedures, no matter how well-conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met.

These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people or by an unauthorized override of the controls. Accordingly, because of the inherent limitations in our control system, misstatements due to error or fraud may occur and not be detected.

The Sarbanes-Oxley Act of 2002 (the "Sarbanes-Oxley Act") requires, among other things, that we maintain effective internal controls for financial reporting and disclosure controls and procedures. In particular, we are required to perform system and process evaluation and testing of our internal controls over financial reporting to allow management to report on the effectiveness of our internal controls over financial reporting, as required by Section 404(a) of the Sarbanes-Oxley Act. Section 404(b) of the Sarbanes-Oxley Act ("Section 404") also requires our independent auditors to express an opinion on our internal control over financial reporting. Ensuring that we have adequate internal controls in place so that we can produce accurate financial statements on a timely basis is a costly and time-consuming effort that will need to be evaluated frequently. If we are unable to maintain effective internal control over financial reporting, we may not have adequate, accurate or timely financial information, our independent registered public accounting firm may issue a report that is adverse, and we may be unable to meet our reporting obligations as a public company or comply with the requirements of the SEC or Section 404. This could result in a restatement of our financial statements, the imposition of sanctions, including the inability of registered broker dealers to make a market in our common stock, or investigation by regulatory authorities. Any such action or other negative results caused by our inability to meet our reporting requirements or comply with legal and regulatory requirements or by disclosure of an accounting, reporting or control issue could adversely affect the trading price of our securities and our business. Material weaknesses in our internal control over financial reporting could also reduce our ability to obtain financing or could increase the cost of any financing we obtain. If we are not able to comply with the requirements of Section 404 or if we or our independent registered public accounting firm are unable to express an opinion as to the effectiveness of our internal control over financial reporting, investors may lose confidence in the accuracy and completeness of our financial reports, the market price of our stock could decline and we could be subject to sanctions or investigations by Nasdaq, the SEC, or other regulatory authorities, which would require additional financial and management resources.

Our amended and restated certificate of incorporation, amended and restated bylaws and Delaware law could prevent a third party from acquiring us (even if an acquisition would benefit our stockholders), may limit the ability of our stockholders to replace our management and limit the price that investors might be willing to pay for shares of our common stock.

Our amended and restated certificate of incorporation and our amended and restated bylaws could have the effect of making it more difficult for a third party to acquire, or of discouraging a third party from attempting to acquire, control of us. These provisions could delay or prevent a change in control of the Company and could limit the price that investors might be willing to pay in the future for shares of our common stock. In addition, as a Delaware corporation, we are subject to the anti-takeover provisions of Section 203 of the Delaware General Corporation Law, which prohibits a Delaware corporation from engaging in a business combination specified in the statute with an interested stockholder (as defined in the statute) for a period of three years after the date of the transaction in which the person first becomes an interested stockholder, unless the business combination is approved in advance by a majority of the independent directors or by the holders of at least two-thirds of the outstanding disinterested shares. The application of Section 203 of the Delaware General Corporation Law could also have the effect of delaying or preventing a change of control of us.

Our amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware and the federal district courts of the United States will be the exclusive forum for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware is the exclusive forum for certain actions or proceedings under Delaware statutory or common law. Our amended and restated certificate of incorporation provides further that the federal district courts of the United States will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act. These choice of forum provisions may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees. If a

court were to find the choice of forum provision contained in our amended and restated certificate of incorporation to be inapplicable or unenforceable, we may incur additional costs associated with resolving such action in other jurisdictions.

Our ability to use our net operating loss carryforwards and other tax attributes may be limited. If we are required to pay any tax assessment, it could impact our net operating loss carryforwards, as well as our results of operations and financial condition.

As of December 31, 2023, we had U.S. federal and state net operating loss ("NOL") carryforwards of $195.0 million and $302.8 million, respectively, which may be available to offset future taxable income. As of December 31, 2023, we also had gross federal tax credits of $7.5 million, which may be used to offset future tax liabilities. Certain NOLs and tax credit carryforwards will begin to expire in 2039. Use of our NOL carryforwards and tax credit carryforwards depends on many factors, including having current or future taxable income, which cannot be assured.

In addition, in December 2023, the Israeli Tax Authorities issued a tax assessment claiming our 2019 reorganization and intercompany transaction to license the intellectual property rights from our subsidiary in Israel should be treated as a sale of intellectual property rights. If this matter is litigated and the Israeli Tax Authorities are able to successfully sustain their position and we are required to pay a tax assessment, it could impact our NOL carryforwards and our results of operations and financial condition could be materially and adversely affected. See further discussion in Part II, Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations—Critical Accounting Estimates—Income Taxes" and in Note 9 to our consolidated financial statements appearing under Part II, Item 8 of our Annual Report on Form 10-K for the year ended December 31, 2023.

Litigation costs and the outcome of litigation could have a material adverse effect on our business.

From time to time we may be subject to litigation claims through the ordinary course of our business operations regarding, but not limited to, securities litigation, employment matters, security of patient and employee personal information, contractual relations with collaborators and licensors and intellectual property rights. Litigation to defend ourselves against claims by third parties, or to enforce any rights that we may have against third parties, could result in substantial costs and diversion of our resources, causing a material adverse effect on our business, financial condition, results of operations or cash flows.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds.

None.

Item 3. Defaults upon Senior Securities.

None.

Item 4. Mine Safety Disclosures.

Not applicable.

Item 5. Other Information.

Rule 10b5-1 Trading Plans

On July 1, 2024, Quoc Le-Nguyen, Chief Technical Operations Officer of the Company, entered into a Rule 10b5-1 trading arrangement (as defined in Item 408 of Regulation S-K). Mr. Le-Nguyen's plan provides for the sale of up to 64,708 shares of the Company's common stock. The trading arrangement terminates on July 15, 2025, or upon the earlier sale of all shares pursuant to the trading arrangement.

During the fiscal quarter ended September 30, 2024, no other director or Section 16 officer adopted or terminated any Rule 10b5-1 trading arrangement or non-Rule 10b5-1 trading arrangement (in each case as defined in Item 408(a) of Regulation S-K).

Item 6. Exhibits.

Exhibit Number	Description
2.1	Contribution and Exchange Agreement, dated as of September 17, 2019, by and among 89Bio Ltd., the Company and its shareholders (filed with the SEC as Exhibit 2.1 to the Company's Form S-1 filed on October 11, 2019).
3.1	Second Amended and Restated Certificate of Incorporation (filed with the SEC as Exhibit 3.1 to the Company's Form 8-K filed on November 15, 2019).
3.2	Certificate of Amendment to the Second Amended and Restated Certificate of Incorporation of 89bio, Inc. (filed with the SEC as Exhibit 3.1 to the Company's Form 8-K filed on June 9, 2023).
3.3	Third Amended and Restated Bylaws of the Company (filed with the SEC as Exhibit 3.1 to the Company's Current Report on Form 8-K filed on November 14, 2023).
4.1	Specimen common stock certificate of the registrant (filed with the SEC as Exhibit 4.1 to the Company's Form S-1/A filed on October 28, 2019).
4.2	Form of Warrant to Purchase Common Stock for Silicon Valley Bank (filed with SEC as Exhibit 4.1 to the Company's Form 8-K filed on April 13, 2020).
4.3	Form of Warrant to Purchase Common Stock for Silicon Valley Bank (filed with the SEC as Exhibit 4.1 to the Company's Current Report on Form 8-K filed on June 4, 2021).
4.4	Form of Warrant (filed with the SEC as Exhibit 4.1 to the Company's Form 8-K filed on July 1, 2022).
4.5	Form of Pre-Funded Warrant (filed with the SEC as Exhibit 4.2 to the Company's Form 8-K filed on July 1, 2022).
4.6	Form of Warrant to Purchase Common Stock for K2 HealthVentures LLC (filed with the SEC as Exhibit 4.1 to the Company's Form 8-K/A filed on February 2, 2023).
4.7	Form of Warrant to Purchase Common Stock for K2 HealthVentures LLC (filed with the SEC as Exhibit 4.1 to the Company's Form 8-K/A filed on October 3, 2024).
4.8	Form of Pre-Funded Warrant (filed with the SEC as Exhibit 4.1 to the Company's Current Report on Form 8-K filed on December 8, 2023).
10.1*†+	Executive Employment Offer Letter, dated July 31, 2024, by and between the Company and Francis Sarena.
10.2*	Office Sublease by and between 89bio, Inc. and Sender, Inc., dated as of October 20, 2023.
10.3*†	Amendment to Loan and Security Agreement, dated as of September 30, 2024, among the Company, 89bio Management, Inc., 89Bio Ltd., K2 HealthVentures LLC and Ankura Trust Company, LLC.
10.4*+	Amended and Restated 2023 Inducement Plan.
31.1*	Certification of Principal Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934.
31.2*	Certification of Principal Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934.
32#	Certification of Principal Executive Officer and Principal Financial Officer Pursuant to 18 U.S.C. Section 1350.
101.INS*	Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File as its XBRL tags are embedded within the Inline XBRL document
101.SCH*	Inline XBRL Taxonomy Extension Schema With Embedded Linkbase Documents
104	The cover page for the Company's Quarterly Report on Form 10-Q has been formatted in Inline XBRL and contained in Exhibit 101

* Filed herewith.
+ Indicates management contract or compensatory plan.
# Furnished herewith and not deemed to be "filed" for purposes of Section 18 of the Exchange Act, and shall not be deemed to be incorporated by reference into any filing under the Securities Act of 1933, as amended, or the Exchange Act.
† Certain portions of this exhibit were redacted by means of marking such portions with asterisks because the identified portions are (i) not material and (ii) treated as private or confidential by the Company.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

89bio, Inc.

Date: November 7, 2024

By: /s/ Rohan Palekar

Rohan Palekar

Chief Executive Officer

(principal executive officer)

Date: November 7, 2024

By: /s/ Ryan Martins

Ryan Martins

Chief Financial Officer

(principal financial and accounting officer)

Exhibit 10.1

[***] = CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY BRACKETS, HAS BEEN OMITTED BECAUSE THE INFORMATION (I) IS NOT MATERIAL AND (II) IS THE TYPE OF INFORMATION THAT THE REGISTRANT BOTH CUSTOMARILY AND ACTUALLY TREATS AS PRIVATE AND CONFIDENTIAL.

89bio, Inc.
655 Montgomery Street, 15th Floor
San Francisco, CA 94111
United States

July 31, 2024

Francis Sarena
[***]

Via Email

Dear Mr. Sarena,

We are pleased to offer you the position of Chief Operating Officer at 89bio Inc. (the "Company")!

This offer of employment is conditioned upon satisfactory completion of certain requirements, as more fully explained in this letter. Your employment is subject to the terms and conditions set forth herein.

Duties

In your capacity as Chief Operating Officer, you will perform duties and responsibilities that are commensurate with your position and such other duties as may be assigned to you from time to time. You will report directly to the Chief Executive Officer of the Company. You agree to devote your full business time, attention and best efforts to the performance of your duties and to the furtherance of the Company's interests.

Location

Your principal place of employment shall be our 655 Montgomery office in San Francisco, subject to business travel as needed to properly fulfill your employment duties and responsibilities.

Base Salary

In consideration of your services, you will be paid a base salary of $500,000 per year, subject to review by the Chief Executive Officer and Board of Directors of the Company (the "Board"), or a committee thereof, from time to time, payable in accordance with the standard payroll practices of the Company and subject to all withholdings and deductions as required by law.

Annual Bonus

Beginning with 2024, you will have an opportunity to earn a discretionary target bonus of up to 40% of your base salary (the "Target Bonus"). Your bonus for 2024 will be pro-rated based on your start date. Your actual bonus amount will be determined based on a combination of Company results and individual performance against the applicable performance goals established by the Chief Executive

Officer. Any annual bonus with respect to a particular calendar year will be paid within 2 1/2 months following the end of the year for which the annual bonus relates.

You must remain continuously employed through the bonus payment date to receive your bonus.

Equity Grant

Subject to approval by the Company's Compensation Committee of the Board of Directors, you will be granted the following equity awards: (i) a stock option to purchase 350,000 shares of common stock of the Company under the Company's 2023 Inducement Plan as an inducement material to the commencement of your employment, at a per share exercise price equal to the fair market value of such shares on the date of grant and (ii) restricted stock units relating to 25,000 Ordinary Shares of the Company. The stock option equity award will be subject to the terms of the Company's 2023 Inducement Plan and a stock option agreement to be entered into between the Company and you. All equity grants will also be governed by the Company's respective clawback and insider trading policies, to the extent applicable. The stock option agreements will provide, among other things, that, (i) subject to your continued employment with the Company or its subsidiary on each applicable vesting date, your options shall vest over a four-year period, 25% upon the one-year anniversary of the Start Date, and the remaining 75% in equal installments over a period of three years thereafter and (ii) the restricted stock unit agreement will provide, among other things, that your restricted stock units will vest annually over a 3-year period from time of grant with 33% vesting at one year and the balance over two years vesting every six months, subject to your continued employment with the Company or its subsidiary through such date.

Severance Outside of the Change in Control Protection Period

If (i) your employment with the Company is involuntarily terminated by the Company without Cause (as defined below) and not due to a breach by you of the terms and conditions of this letter (including, but not limited to, a breach of any of the representations contained herein, the Employee Proprietary Information and Invention Assignment Agreement and/or the Employee Arbitration Agreement or (ii) you resign your employment with the Company for Good Reason (as defined below), in each case, at any time outside of the Change in Control Protection Period (as defined below), subject to your execution of a release of claims in a form provided by the Company, you will be eligible to receive severance in an amount equal to: (i) nine (9) months of base salary at the rate then in effect and (ii) subject to your timely election under COBRA, payment or reimbursement of a portion of your COBRA premiums for nine (9) months following your termination or, if earlier, until such time as you become eligible for similar coverage through another employer, which benefits shall be paid for by the Company to the same extent that the Company paid for health insurance for you prior to termination, (such amounts described in clauses (i) through (ii) herein, collectively, the "Severance Benefits"). You will thereafter be responsible for the payment of COBRA premiums (including, without limitation, all administrative expenses) for any remaining COBRA period. Notwithstanding the foregoing, in the event that the Company determines, in its sole discretion, that the Company may be subject to a tax or penalty pursuant to Code Section 4980D as a result of providing some or all of the payments described in this paragraph, the Company may reduce or eliminate its obligations under this paragraph to the extent it

deems necessary, with no offset or other consideration required. The Severance Benefits will be provided in regular installments in accordance with the Company's normal payroll practices over a period of nine (9) months commencing on the first payroll date following the date on which the Release Condition is satisfied.

For purposes herein, the "Release Condition" means your execution, delivery, and non-revocation of the release within 30 days following your termination of employment. For purposes herein, "Cause" means a reasonable, good faith finding by the Board that you: (i) committed, have been convicted of, or entered a plea of guilty or nolo contendere or no contest with respect to, (x) any felony or (y) any misdemeanor involving dishonesty or moral turpitude; (ii) engaged in gross negligence, willful misconduct, or any bad-faith act that is, or could reasonably be expected to be, materially injurious to the business or reputation of the Company; (iii) committed an act of fraud, embezzlement, theft, or misappropriation against the Company or otherwise in the course of your employment with, or the performance of duties for, the Company; (iv) substantially failed to perform your duties in respect of your employment diligently and in a manner consistent with prudent business practice; (v) failed to execute and carry out any reasonable lawful directive of the Chief Executive Officer or the Board that is related to the business of the Company; or (vi) engaged in any act or omission that is materially injurious the business, financial condition, or operations of the Company.

For purposes herein, "Good Reason" means your resignation based on any of the following events without your written consent, (a) a material diminution in your authority, duties or responsibilities; (b) a material diminution in your annual base salary except if the base salaries of a significant number of other executives and members of senior management of the Company also are proportionately reduced, whether or not such reduction is voluntary on your part or on the part of such other executives and senior management; (c) the Company's relocation of your primary work location outside a 40-mile radius of San Francisco that increases your one-way driving distance by more than 40 miles; (d) any other action or inaction that constitutes a material breach of the terms of this agreement. To constitute a resignation for Good Reason: (i) you must provide written notice to the Company within thirty (30) days of the initial existence of the event constituting Good Reason, (ii) you may not terminate your employment unless the Company fails to remedy the event constituting Good Reason within fifteen (15) days after such notice has been deemed given pursuant to this offer letter, and (iii) you must terminate employment with the Company no later than fifteen (15) days after the end of the 15-day cure period in which the Company fails to remedy the event constituting Good Reason.

Severance During the Change in Control Protection Period

In the event you are terminated without Cause or resign for a Change in Control Good Reason (as defined below) within ninety (90) days prior to, or twelve (12) months following the consummation of a Change in Control (the "Change in Control Protection Period"), then, subject to the Release Condition described above, the amount of the Severance Benefits described above will be twelve (12) months instead of nine (9) months, will also include payment of 0.75 times your Target Bonus (such compensation and benefits, including the Target Bonus payment, the "Change in Control Severance Benefits") and all Change in Control Severance Benefits will be paid in a lump sum, plus any then outstanding equity then held by you that is unvested will vest in full. For purposes herein, "Change in

Control" shall have the meaning set forth in the Company's Equity Plan and "Change in Control Good Reason" shall have the same meaning as "Good Reason" except that the following additional prong will apply: a material diminution in your reporting relationship.

Section 409A

This letter is intended to comply with Section 409A of the Internal Revenue Code ("Section 409A") or an exemption thereunder and shall be construed and administered in accordance with Section 409A. Notwithstanding any other provision of this letter, payments provided under this letter may only be made upon an event and in a manner that complies with Section 409A or an applicable exemption. Any payments under this letter that may be excluded from Section 409A either as separation pay due to an involuntary separation from service or as a short-term deferral shall be excluded from Section 409A to the maximum extent possible. For purposes of Section 409A, each installment payment provided under this letter shall be treated as a separate payment. Any payments to be made under this letter upon a termination of employment shall only be made upon a "separation from service" under Section 409A. Notwithstanding the foregoing, the Company makes no representations that the payments and benefits provided under this letter comply with Section 409A and in no event shall the Company be liable for all or any portion of any taxes, penalties, interest or other expenses that may be incurred by you on account of noncompliance with Section 409A.

Notwithstanding any other provision of this letter, if any payment or benefit provided to you in connection with termination of employment is determined to constitute "nonqualified deferred compensation" within the meaning of Section 409A and you are determined to be a "specified employee" as defined in Section 409A(a)(2)(b)(i), then such payment or benefit shall not be paid until the first payroll date to occur following the six-month anniversary of your termination date (the "Specified Employee Payment Date") or, if earlier, on the date of your death. The aggregate of any payments that would otherwise have been paid before the Specified Employee Payment Date shall be paid to you in a lump sum on the Specified Employee Payment Date and thereafter, any remaining payments shall be paid without delay in accordance with their original schedule. Whenever in this letter a payment or benefit is conditioned on your execution of a release of claims, such release must be executed, and all revocation periods shall have expired, within 45-days after the date of your termination of employment, failing which such payment or benefit shall be forfeited. If such payment or benefit constitutes non-exempt deferred compensation for purposes of Section 409A, and if such 45-day period begins in one calendar year and ends in the next calendar year, the payment or benefit shall not be made or commence before the second such calendar year, even if the release becomes irrevocable in the first such calendar year.

Section 4999

Anything in this letter to the contrary notwithstanding, in the event it shall be determined that any payment, award, benefit or distribution (or any acceleration of any payment, award, benefit or distribution) by the Company (or any of its affiliated entities) or any entity which effectuates a Change in Control (or any of its affiliated entities) to or for the benefit of you (whether pursuant to the terms of this letter agreement or otherwise) (a "Payment") would be subject to the excise tax imposed by

Section 4999 of the Internal Revenue Code of 1986, as amended (the "Code"), or interest or penalties with respect to such excise tax (such excise tax, together with any such interest and penalties, are hereinafter collectively referred to as the "Excise Tax"), then such Payments shall either (a) be delivered in full, or (b) subject to, and in a manner consistent with the requirements of Section 409A of the Code, be reduced to the minimum extent necessary to ensure that no portion thereof will be subject to the Excise Tax, whichever of the foregoing amounts, taking into account the applicable federal, state or local income and employment taxes and the Excise Tax, results in receipt by you, on an after-tax basis, of the greatest amount of benefits, notwithstanding that all or some portion of such benefits may be subject to the Excise Tax. In the event that any Payments are to be reduced pursuant to this paragraph, then the reduction shall be applied as follows: (i) first, on a pro rata basis to your cash severance payments and your target cash incentive award payment, (ii) second, on a pro rata basis to your equity incentive awards, and (iii) third, to any outstanding awards under the Equity Plan. The determinations to be made with respect to this paragraph shall be made by a qualified accounting or legal professional firm (the "Tax Professional") jointly selected by the Company and you and paid by the Company. The Tax Professional shall be a nationally recognized United States public accounting or law firm that has not during the two years preceding the date of its selection acted in any way on behalf of the Company or any of its subsidiaries. If you and the Company cannot agree on the firm to serve as the Tax Professional, then you and the Company shall each select one such firm and those two firms shall jointly select such a different firm to serve as the Tax Professional. Absent manifest error, the determinations by the Tax Professional shall be binding upon you and the Company.

Benefits and Perquisites

The Company, through TriNet, offers a full range of benefits for you and your qualified dependents. Information about these benefits and additional information will be available online on the terms and conditions included in the Terms and Conditions Agreement (TCA) each new employee must accept in order to access TriNet's online self-service portal, TriNet passport. You will be entitled to paid vacation in accordance with the Company's or its US subsidiary's policies in effect from time to time. The Company and its subsidiaries reserve the right to amend, modify or terminate any of its benefit plans or programs at any time and for any reason.

Withholding

All forms of compensation paid to you as an employee of the Company shall be less all applicable withholdings.

Expenses

The Company will reimburse you only for out-of-pocket business-related expenses reasonably incurred in the performance of your duties, as approved by the Board in the annual budgeting process and in accordance with any expense claiming policies and guidelines promulgated by the Company from time to time.

At-will Employment

Your employment with the Company is for no specific period of time. Rather, your employment is at- will, meaning that any party may terminate the employment relationship at any time, with or without

cause, and with or without notice and for any reason or no particular reason. Although your compensation and benefits may change from time to time, the at-will nature of your employment may only be changed by an express written agreement signed by an authorized officer of the Company after approval by the Chief Executive Officer.

Governing Law

This letter shall be governed by the laws of California, without regard to conflict of law principles.

Contingencies

This offer is contingent upon:

(a) Verification of your right to work in the United States, as demonstrated by your completion of an I-9 form upon hire and your submission of acceptable documentation (as noted on the I-9 form) verifying your identity and work authorization within three days of your Start Date. For your convenience, a copy of the I-9 Form's List of Acceptable Documents is enclosed for your review.

(b) Your execution of the Company's enclosed (1) Employee Proprietary Information and Invention Assignment Agreement, and (2) Employee Arbitration Agreement.

(c) Satisfactory completion of references and background check. Representations and Warranties

By accepting this offer of continued employment, you represent that you are able to accept this job and carry out the work that it involves without breaching any legal restrictions on your activities, such as non-competition, non-solicitation or other work-related restrictions imposed by a current or former. You also represent that you will inform the Company about any such restrictions and provide the Company with as much information about them as possible, including any agreements between you and your current or former describing such restrictions on your activities. You further confirm that you will not and have not removed or taken any documents or proprietary data or materials of any kind, electronic or otherwise, with you from your current or former to the Company without written authorization from your current or former, nor will you use or disclose any such confidential information during the course and scope of your employment with the Company. If you have any questions about the ownership of particular documents or other information, you should discuss such questions with your former before removing or copying the documents or information.

By accepting this offer, you acknowledge and agree that, so long as you are employed by the Company, except upon the prior written consent of the Chief Executive Officer or the Board, you will not (i) accept any other employment, or (ii) engage, directly or indirectly , in any other business activity (whether or not pursued for pecuniary advantage) that is or may be in conflict with, or that might place you in a conflicting position to that of, the Company.

We are excited at the prospect of you joining our team. If you have any questions about the above details, please call Amanda Kurihara, VP, People & Culture, at [***] or Ina Sood of Heidrick & Struggles at [***]. If you wish to accept this position, please sign below and return this letter to Amanda. This

offer is open for you to accept through August 7, 2024, at which time it will be deemed to be withdrawn.

Francis, we look forward to having you join us at 89bio! Yours sincerely,
/s/ Rohan Palekar
Rohan Palekar
Chief Executive Officer

On behalf of 89bio, Inc. Acceptance of Offer
I have read, understood and accept all the terms of the offer of employment as set forth in the foregoing letter. I have not relied on any agreements or representations, express or implied, that are not set forth expressly in the foregoing letter, and this letter supersedes all prior and contemporaneous understandings, agreements, representations and warranties, both written and oral, with respect to the subject matter of this letter.

/s/ Francis Sarena July 31, 2024
Francis Sarena Date Signed

August 5, 2024
Start Date

Exhibit 10.2

SUBLEASE

BETWEEN

SENDER, INC.,
a Delaware corporation

AND

89BIO, INC.,
a Delaware corporation

655 MONTGOMERY STREET
SAN FRANCISCO, CALIFORNIA 94111

Suite 1500

SUBLEASE

THIS SUBLEASE ("**Sublease**") is entered into as of October 20, 2023 (the "**Effective Date**"), by and between **SENDER, INC.**, a Delaware corporation, d/b/a Sendoso ("**Sublandlord**"), and **89BIO, INC.**, a Delaware corporation ("**Subtenant**"), with reference to the following facts:

A. Pursuant to that certain Office Lease dated September 14, 2021 (the "**Master Lease**"), BCAL 655 MONTGOMERY PROPERTY LLC, a Delaware limited liability company ("**Landlord**"), as Landlord, leases to Sublandlord, as tenant, certain space (the "**Master Lease Premises**") consisting of approximately 35,005 rentable square feet ("**RSF**") in the building located at 655 Montgomery Street, San Francisco, California 94111 (the "**Building**").

B. Subtenant wishes to sublease from Sublandlord, and Sublandlord wishes to sublease to Subtenant, a portion of the Master Lease Premises containing approximately 17,616 RSF comprising all of the rentable area of the fifteenth (15) floor of the Building and commonly known as Suite 1500, said space being more particularly identified and described on the floor plan attached hereto as **Exhibit A** and incorporated herein by reference (and hereinafter referred to as the "**Subleased Premises**"). The Subleased Premises will not be subject to remeasurement during the Term (defined below).

NOW, THEREFORE, in consideration of the foregoing, and for other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged by the parties, Sublandlord and Subtenant hereby agree as follows:

1. Sublease. Sublandlord hereby subleases to Subtenant and Subtenant hereby subleases from Sublandlord for the term, at the rental, and upon all of the conditions set forth herein, the Subleased Premises.

2. Term.

(a) Generally. The term of this Sublease (the "**Term**") shall commence on the date (the "**Commencement Date**") that is the latest to occur of (i) December 1, 2023, (ii) the date that Sublandlord delivers possession of the Subleased Premises to Subtenant and (iii) the date upon which Sublandlord procures Landlord's consent to this Sublease (the "**Consent**", and the date upon which Sublandlord procures the Consent being the "**Consent Date**") and end on the last day of the calendar month in which occurs the forty (40)-month anniversary of the date immediately preceding the Commencement Date (the "**Expiration Date**"), unless sooner terminated pursuant to any provision hereof. Upon the determination of the Commencement Date, Sublandlord and Subtenant will enter into a letter agreement in the form of **Exhibit B** attached hereto ("**Confirmation of Sublease Commencement Date**").

(b) Adjustments. Notwithstanding the provisions of Section 2(a) above:

(i) if, as of the date that Sublandlord would otherwise deliver possession of the Subleased Premises in the condition required to Subtenant as described in clause (ii) of Section 2(a) above, Subtenant has not delivered to Sublandlord (A) the prepaid Base Rent pursuant to the provisions of Section 3(a)(i) below, (B) the Security Deposit pursuant to the provisions of Section 4 below and (C) evidence of Subtenant's procurement of all insurance

coverage required hereunder (the "**Delivery Requirements**"), then Sublandlord will have no obligation to so deliver possession of the Subleased Premises to Subtenant, but the failure on the part of Sublandlord to so deliver possession of the Subleased Premises to Subtenant in such event will not serve to delay the occurrence of the Commencement Date and the commencement of Subtenant's obligations to pay Rent (defined below) hereunder.

(ii) Early Access. Subtenant and Subtenant's representatives will have the right to enter the Subleased Premises from and after the later to occur of (A) the Consent Date and (B) the date upon which Subtenant satisfies the Delivery Requirements (the date upon which Subtenant first has such access to the Subleased Premises being referred to herein as the "**Early Access Date**") for the sole purpose of preparing the Subleased Premises for Subtenant's occupancy, including without limitation coordinating Subtenant's move into the Subleased Premises, installing Subtenant's personal property and fitting-up the FF&E (defined below) and voice and data cabling, all subject to the terms, conditions and requirements of the Master Lease. All of the rights and obligations of the parties under this Sublease (other than Subtenant's obligation to pay Base Rent, but expressly including without limitation Subtenant's obligation to pay excess utility charges pursuant to Section 6.2 of the Master Lease and carry insurance, as well as Subtenant's indemnification obligations) shall commence upon the Early Access Date. Subtenant shall coordinate any such entry with Sublandlord.

(iii) Failure to Obtain Consent. Promptly following the mutual execution and delivery of this Sublease, Sublandlord will request that Landlord issue the Consent, and Sublandlord and Subtenant each agree to use good faith efforts to cooperate with Landlord and each other in order to obtain the Consent on a timely basis. Notwithstanding the foregoing, if the Consent has not been obtained as of the date that is forty-five (45) days following the mutual execution and delivery of this Sublease on terms acceptable to the parties in each party's sole and absolute discretion, either party hereto may terminate this Sublease by written notice delivered to the other at any time thereafter, but before, Landlord grants such consent. Any legal fees, fees or other consideration charged by Landlord for its review of, and consent to, this Sublease shall be borne solely by Sublandlord (not to exceed $5,000.00 in the aggregate), and Subtenant shall be responsible for any fees to the extent in excess of such cap.

3. Rent.

(a) Rent Payments.

(i) Generally. Subtenant shall pay to Sublandlord as base rent for the Subleased Premises during the Term ("**Base Rent**") the following:

Period/ Months of Term*	Rate Per RSF Per Annum	Monthly Base Rent
December 1, 2023 - November 30, 2024	$50.00	$73,400.00
December 1, 2024 - November 30, 2025	$51.50	$75,602.00
December 1, 2025 - November 30, 2026	$53.05	$77,870.06

December 1, 2026 - March 31, 2027	$54.64	$80,206.16

*If the Commencement Date does not occur on December 1, 2023, as anticipated by the parties when entering into this Sublease, they will update this rent table in the Confirmation of Sublease Commencement Date.

It is the intention of the parties that this Sublease will, subject to its terms, generally be a so-called "full service" or "gross" sublease; as such, Base Rent is inclusive of all regularly recurring payments in respect of Direct Expenses (as defined in the Master Lease), and Subtenant shall not owe any separate or additional sums in respect of recurring Direct Expenses under this Sublease. Except as noted in the preceding sentence, in addition to the Base Rent, from and after the Commencement Date, Subtenant shall pay, as additional rent, any and all incidental or additional charges, fees or expenses that become payable by Sublandlord under the Master Lease as a result of Subtenant's use and occupancy of the Subleased Premises during the Term, including, without limitation, any use by Subtenant of additional services for which Landlord charges separate fees pursuant to the Master Lease (such as any excess utilities charges or After-Hours HVAC fees as defined and described in Section 6.2 of the Master Lease). Base Rent and additional rent are collectively referred to herein as "**Rent**".

Base Rent shall be paid in advance on the first day of each month of the Term, except that Subtenant shall pay one (1) month's Base Rent (i.e., $73,400.00)("**Pre-paid Base Rent**") to Sublandlord within three (3) business days following the mutual execution and delivery of this Sublease; said Pre-Paid Base Rent will be applied to the first (1st) month's Base Rent due and payable hereunder following the Abatement Period, defined below. In the event Subtenant fails to deliver the Prepaid Base Rent within such 3-business day period, such failure shall be deemed a Default hereunder without the application of any additional cure period and Sublandlord shall have the right to terminate this Sublease by written notice to Subtenant, and upon such termination, neither party shall have any further rights or obligations hereunder (except for any obligations or liabilities which expressly survive the expiration or earlier termination of this Sublease). If the Term does not begin on the first day of a calendar month or end on the last day of a month, the Base Rent for any partial month shall be prorated by multiplying the monthly Base Rent by a fraction, the numerator of which is the number of days of the partial month included in the Term and the denominator of which is the total number of days in the full calendar month. All Rent shall be payable in lawful money of the United States, by ACH wire transfer or by regular bank check of Subtenant, to Sublandlord at the following address:

AP at Sendoso
Attention: Daniel Kopelovich
Email: ap@sendoso.com and
daniel.kopelovich@sendoso.com

or to such other persons or at such other places as Sublandlord may designate in writing.

(ii) Abatement. Notwithstanding anything in Section 3(a)(i) above to the contrary, so long as Subtenant is not in Default, Subtenant shall be entitled to an abatement of Base Rent for the first four (4) full calendar months of the Term (the "**Abatement Period**"); the Abatement Period will not include any partial calendar month immediately following

the Commencement Date. The total amount of Base Rent abated during the Abatement Period, in the amount of $293,600.00, is referred to herein as the "**Abated Rent**". If Subtenant is in Default at any time during the Term, then (A) if such Default occurs prior to the expiration of the Abatement Period, there will be no further Abatement of Base Rent pursuant to this Section 3(a)(ii) unless and until Subtenant cures such Default and such cure is accepted by Sublandlord in lieu of seeking to terminate this Sublease due to such Default, and (B), if this Sublease is terminated due to Subtenant's Default, then, at Sublandlord's option, all then-unamortized Abated Rent (assuming amortization of the Abated Rent on a straight-line basis over the Term) shall immediately become due and payable by Subtenant. The payment by Subtenant of such Abated Rent in the event the Sublease terminates as a result of Subtenant's Default shall not limit or affect any of Sublandlord's other rights, pursuant to this Sublease or at law or in equity. During the Abatement Period, only Base Rent shall be abated, and all other costs and charges specified in this Sublease shall remain as due and payable pursuant to the provisions of this Sublease.

(b) Other Taxes Payable by Tenant. Subtenant shall pay before delinquency any and all taxes levied or assessed and which become payable by Subtenant (or directly or indirectly by Sublandlord) during the Term, whether or not now customary or within the contemplation of the parties hereto, which are based upon, measured by or otherwise calculated with respect to: (i) the gross or net rental income of Sublandlord under this Sublease, including, without limitation, any gross receipts tax levied by any taxing authority, or any other gross income tax or excise tax levied by any taxing authority with respect to the receipt of the rental payable hereunder, inclusive of the San Francisco Gross Receipts Tax and Business Registration Fees Ordinance (2012 Proposition E) and the Commercial Rent Tax for Childcare and Early Education (2018 Proposition C) ("**Early Care Tax**"); (ii) the value of Subtenant's equipment, furniture, fixtures or other personal property located in the Subleased Premises (including the FF&E during the Term); (iii) the possession, lease, operation, management, maintenance, alteration, repair, use or occupancy by Subtenant of the Subleased Premises or any portion thereof; or (iv) this transaction or any document to which Subtenant is a party creating or transferring an interest or an estate in the Subleased Premises. Notwithstanding any of the foregoing to the contrary, the Early Care Tax imposed on Landlord with respect to the rent payable under the Master Lease (as distinguished from the Rent payable under this Sublease) shall not be subject to payment or reimbursement by Subtenant as additional Rent hereunder or otherwise. For clarity, if any particular gross receipts tax is imposed by a taxing authority based upon the rent payable by Sublandlord under the Master Lease and upon the rent payable by Subtenant under this Sublease (i.e., such tax is imposed at both the "lease level" and the "sublease level"), then Subtenant shall be responsible for only the gross receipts tax based upon the rent payable under this Sublease (and Sublandlord shall remain solely responsible for such tax based upon the rent payable under the Master Lease without being permitted to pass the same through to Subtenant).

4. Security Deposit. Within three (3) business days following the mutual execution and delivery of this Sublease, Subtenant shall deposit with Sublandlord the sum of $160,412.32 (the "**Security Deposit**"). In the event Subtenant fails to deliver the Security Deposit within such 3-business day period, such failure shall be deemed a Default hereunder without the application of any additional cure period and Sublandlord shall have the right to terminate this Sublease by written notice to Subtenant, and upon such termination, neither party shall have any further rights or obligations hereunder (except for any obligations or liabilities which expressly survive the expiration or earlier termination of this Sublease). The Security Deposit shall be held

by Sublandlord as security for the faithful performance by Subtenant of all the provisions of this Sublease to be performed or observed by Subtenant. If Subtenant fails to pay rent or other sums due hereunder, or otherwise is in breach with respect to any provisions of this Sublease beyond the applicable notice and cure period (if any), or in the event of an uncured failure by Subtenant to perform one or more of its obligations under this Sublease and the existence of circumstances in which Sublandlord is enjoined or otherwise prevented by operation of law from giving to Subtenant a written notice which would be necessary for such failure of performance to constitute a default beyond the applicable notice and cure period, Sublandlord may use, apply or retain all or any portion of the Security Deposit for the payment of any past due sum or for the payment of any other sum to which Sublandlord may become obligated by reason of Subtenant's breach, or to compensate Sublandlord for any loss or damage which Sublandlord may suffer thereby. If Sublandlord so uses or applies all or any portion of the Security Deposit, Subtenant shall within ten (10) days after demand therefor deposit cash with Sublandlord in an amount sufficient to restore the Security Deposit to the full amount thereof and Subtenant's failure to do so shall be a material breach of this Sublease. If Subtenant performs all of Subtenant's obligations hereunder, the Security Deposit, or so much thereof as has not theretofore been applied by Sublandlord, shall be returned, without interest, to Subtenant (or, at Sublandlord's option, to the last assignee, if any, of Subtenant's interest hereunder) within forty-five (45) days following the later to occur of (a) the expiration of the Term, and (b) Subtenant's vacation from the Subleased Premises and completion of all removal, repair and restoration obligations of Subtenant. No trust relationship is created herein between Sublandlord and Subtenant with respect to the Security Deposit. Sublandlord shall not be required to keep the Security Deposit separate from its other accounts. Subtenant hereby waives any and all rights under and the benefits of Section 1950.7 of the California Civil Code (except for Section 1950.7(b)), and all other provisions of law now in force or that become in force after the date of execution of this Sublease, that provide that Sublandlord may claim from a security deposit only those sums reasonably necessary to remedy any failure to timely pay Rent, to repair damage caused by Subtenant, or to clean the Subleased Premises. Sublandlord and Subtenant agree that Sublandlord may, in addition, claim those sums reasonably necessary to compensate Sublandlord for any other loss or damage caused by Subtenant's Default.

5. Use and Occupancy.

(a) Use. The Subleased Premises shall be used and occupied only for general office use and ancillary uses consistent with a first-class building, and for no other use or purpose.

(b) Compliance with Master Lease. Subtenant will occupy the Subleased Premises in accordance with the terms of the Master Lease and will not suffer to be done, or omit to do, any act which may result in a violation of or a default under the Master Lease, or render Sublandlord liable for any damage, charge or expense thereunder. Except to the extent caused by the gross negligence or willful misconduct of Sublandlord, its agents, employees or contractors, Subtenant will indemnify, defend protect and hold Sublandlord harmless from and against any loss, cost, damage or liability (including reasonable attorneys' fees) of any kind or nature arising out of, by reason of, or resulting from, (i) Subtenant's failure to perform or observe any of the terms and conditions of (x) the Master Lease which are Subtenant's obligation to perform or observe pursuant to this Sublease, or (y) this Sublease, or (ii) any accident, damage or injury to any person or property occurring in, on or about the Subleased Premises after the Early

Access Date, or any work done in or to the Subleased Premises after the Early Access Date; or (iii) the negligent acts or omissions of Subtenant, its agents, employees, or contractors. Except to the extent caused by the negligence or willful misconduct of Subtenant, its agents, employees or contractors, Sublandlord will indemnify, protect and hold Subtenant harmless from and against any loss, cost, damage or liability (including reasonable attorneys' fees) of any kind or nature arising out of, by reason of, or resulting from, (i) Sublandlord's failure to perform or observe any of the terms and conditions of the Master Lease (unless caused by Subtenant's breach or default under this Sublease) or of this Sublease beyond any applicable notice and cure periods, or (ii) the gross negligence or willful misconduct of Sublandlord, its agents, employees or contractors. The indemnifications in this Section 5(b) will survive the expiration or sooner termination of this Sublease. Any other provision in this Sublease to the contrary notwithstanding, Subtenant shall pay to Sublandlord as Rent hereunder any and all sums which Sublandlord may be required to pay the Landlord arising out of a request by Subtenant for, or the use by Subtenant of, additional or over-standard Building services from Landlord (for example, but not by way of limitation, charges associated with after-hours HVAC usage and overstandard electrical charges).

(c) Landlord's Obligations. Subtenant agrees that Sublandlord shall not be required to perform any of the covenants, agreements and/or obligations of Landlord under the Master Lease, including, without limitation, the services provided in Article 7 of the Master Lease, and, insofar as any of the covenants, agreements and obligations of Sublandlord hereunder are required to be performed under the Master Lease by Landlord thereunder, Subtenant acknowledges and agrees that Sublandlord shall be entitled to look to Landlord for such performance. In addition, Sublandlord shall have no obligation to perform any repairs or any other obligation of Landlord under the Master Lease, nor shall any representations or warranties made by Landlord under the Master Lease be deemed to have been made by Sublandlord. Sublandlord shall not be responsible for any failure or interruption, for any reason whatsoever, of the services or facilities that may be appurtenant to or supplied at the Building by Landlord or otherwise, including, without limitation, heat, air conditioning, ventilation, life-safety, water, electricity, elevator service and cleaning service, if any; and no failure to furnish, or interruption of, any such services or facilities shall give rise to any (i) abatement, diminution or reduction of Subtenant's obligations under this Sublease, or (ii) liability on the part of Sublandlord. Notwithstanding the foregoing, (i) Sublandlord shall use commercially reasonable efforts, under the circumstances, to secure such performance upon Subtenant's request to Sublandlord to do so and shall thereafter diligently prosecute such performance on the part of Landlord, provided that in no event will this sentence or any other provision of this Sublease be construed to require Sublandlord to commence any litigation, arbitration, judicial reference, or other similar proceeding against Landlord; and (ii) in the event that Sublandlord actually receives an abatement of rent under the Master Lease with respect to the Subleased Premises as result of an interruption of services thereto, then Subtenant shall receive a corresponding abatement of Base Rent under this Sublease (not to exceed the corresponding amounts payable by Subtenant to Sublandlord pursuant to the terms hereof or the amount actually received by Sublandlord, whichever is less).

(d) Sublandlord's Covenants and Agreements.

(i) Sublandlord represents and warrants to Subtenant that, to Sublandlord's actual knowledge, as of the Effective Date, (a) Exhibit D to this Sublease is a true, correct and complete copy of the Master Lease, as may be redacted; (b) the Master Lease is in full

force and effect; and (c) Sublandlord is not in default or breach of any of the provisions of the Master Lease beyond any applicable notice and cure periods.

(ii) Sublandlord agrees that it will not amend or modify the Master Lease during the Term of this Sublease in any way that adversely affects Subtenant to any material extent; provided, however, that Sublandlord reserves the right to exercise any express termination rights it may have under the Master Lease.

(e) Subtenant's Obligations. Notwithstanding anything contained in this Sublease to the contrary, Subtenant shall have no obligation to remove any alterations, additions or improvements existing as of the Commencement Date (or, if applicable, the Early Access Date), nor to indemnify, defend or hold harmless Landlord or Sublandlord with respect to matters occurring prior to Subtenant first entering the Subleased Premises.

6. Master Lease and Sublease Terms.

(a) Subject to Master Lease. This Sublease is and shall be at all times subject and subordinate to the Master Lease. Subtenant acknowledges that Subtenant has reviewed and is familiar with all of the terms, agreements, covenants and conditions of the Master Lease. During any period of early access and the Term, and for all periods subsequent thereto with respect to obligations which have arisen prior to the termination of this Sublease, Subtenant agrees to perform and comply with, for the benefit of Sublandlord and Landlord, the obligations of Sublandlord under the Master Lease which pertain to the Subleased Premises and/or this Sublease to the extent incorporated herein, except for those provisions of the Master Lease which are inconsistent with, or directly contradicted by this Sublease, in which event the terms of this Sublease document shall control over the Master Lease. If any of the express provisions of this Sublease conflict with any portion of the Master Lease as incorporated herein, the express terms of this Sublease shall govern as between Sublandlord and Subtenant.

(b) Incorporation of Terms of Master Lease. The terms, conditions and respective obligations of Sublandlord and Subtenant to each other under this Sublease shall be the terms and conditions of the Master Lease to the extent incorporated herein, except for those provisions of the Master Lease which are inconsistent with or directly contradicted or modified by the express terms of this Sublease, in which event the terms of this Sublease shall control over the Master Lease. Therefore, for the purposes of this Sublease, wherever in the Master Lease the word "Landlord" is used it shall be deemed to mean Sublandlord and wherever in the Master Lease the word "Tenant" is used it shall be deemed to mean Subtenant. Additionally, wherever in the Master Lease the word "Premises" is used it shall be deemed to mean the Subleased Premises. Any non- liability, release, indemnity or hold harmless provision in the Master Lease for the benefit of Landlord that is incorporated herein by reference, shall be deemed to inure to the benefit of Sublandlord, Landlord, and any other person intended to be benefited by said provision, for the purpose of incorporation by reference in this Sublease. Any right of Landlord under the Master Lease (i) of access or inspection, (ii) to do work in the Master Lease Premises or in the Building, (iii) in respect of rules and regulations, which is incorporated herein by reference, shall be deemed to inure to the benefit of Sublandlord, Landlord, and any other person intended to be benefited by said provision, for the purpose of incorporation by reference in this Sublease.

(c) Modifications. For the purposes of incorporation herein, the terms of the Master Lease are subject to the following additional modifications:

(i) Approvals. In all provisions of the Master Lease (under the terms thereof and without regard to modifications thereof for purposes of incorporation into this Sublease) requiring the approval or consent of Landlord, Subtenant shall be required to obtain the approval or consent of both Sublandlord and Landlord. Sublandlord agrees to reasonably cooperate with Subtenant in obtaining the consent of Landlord where any such consent is required by this Sublease or the Master Lease, at no out-of-pocket cost to Sublandlord. If Subtenant shall submit to Sublandlord a request for Landlord's consent or approval with respect to any given matter requiring consent under this Sublease or the Master Lease, then Sublandlord shall promptly forward such request on to Landlord for its consent or approval.

(ii) Obligations Outside of Master Lease Premises. Sublandlord shall not be obligated to perform those obligations of Landlord which require access to areas outside of the Master Lease Premises or that are not permitted to be taken by Sublandlord pursuant to the terms of the Master Lease. For example, but not by way of limitation, Sublandlord shall not be obligated to perform Landlord's obligations under the Master Lease to maintain the roof, foundations, slabs, structural elements, subfloors, exterior walls, drainage systems, or any electrical, plumbing, mechanical or life-safety equipment or systems, any common area or any other repair or maintenance obligations which are Landlord's obligations under the Master Lease.

(iii) Deliveries. In all provisions of the Master Lease requiring Sublandlord, as tenant, to submit, exhibit to, supply or provide Landlord with evidence, certificates, or any other matter or thing, Subtenant shall be required to submit, exhibit to, supply or provide, as the case may be, the same to both Landlord and Sublandlord.

(iv) Damage; Condemnation. Sublandlord shall have no obligation to restore or rebuild any portion of the Subleased Premises after any destruction or taking by eminent domain. Any rights of Subtenant to abatement of Rent shall be conditioned upon Sublandlord's ability to abate rent for the Subleased Premises under the terms of the Master Lease.

(v) Insurance. In all provisions of the Master Lease requiring Sublandlord, as tenant, to designate Landlord as an additional or named insured on its insurance policy, Subtenant shall be required to so designate Landlord and Sublandlord on its insurance policy. Sublandlord shall have no obligation to maintain the insurance to be maintained by Landlord under the Master Lease. Subject to Landlord's consent, the waiver of subrogation contained in Section 10.5 of the Master Lease shall be deemed to be modified to constitute an agreement by and among and apply to Landlord, Sublandlord and Subtenant.

(vi) Representations and Warranties. Sublandlord shall not be deemed to have made or adopted as its own any representations or warranties made by Landlord in the Master Lease, except to the extent the relevant provision of the Master Lease is incorporated or as otherwise stated herein.

(vii) Construction. Sublandlord shall have no obligation to construct or pay for any improvements except to the extent expressly set forth herein.

(viii) Expansion/Extension Options. Whether or not set forth in the Master Lease, Subtenant shall have no rights to expand or reduce the RSF of the Subleased Premises, or any options to renew or extend the Term, or rights of first offer, rights of first refusal, or other preemptive rights under the Master Lease unless and to the extent expressly set forth herein.

(ix) Exclusions. Notwithstanding the terms of Section 6(b) above, Subtenant shall have no rights nor obligations under the following parts, Sections and Exhibits of the Master Lease: any redacted portions of the Master Lease, as shown in Exhibit D; Summary of Basic Lease Information (except for Number 2.1); Section 1.1.1 (Tender of Possession); Section 1.1.4 (Asbestos Containing Materials (fifth and sixth sentences only); Section 1.2 (Temporary Premises); Section 1.3 (Right of First Offer); Article 2 (Lease Term; Option Term); Article 3 (Base Rent; Rent Abatement); Article 4 (Additional Rent); Section 6.1.7 (Standard Tenant Services) (fifth and sixth sentences only); Article 16 (Holding Over) (superseded by Section 15 of this Sublease); Article 18 (Subordination) (solely with respect to subordination being conditioned upon receipt of a SNDA); Section 19.5.2 (Abatement of Rent) (unless Sublandlord actually receives an abatement of rent under this provision of the Master Lease attributable to the Subleased Premises, in which case Subtenant shall be entitled to receive a corresponding and proportionate abatement of Rent under this Sublease relative to its inability to use (and actual non-use of) the Subleased Premises or applicable portion thereof, not to exceed the abatement actually received by Sublandlord under the Master Lease on account of such Abatement Event with respect to the Subleased Premises or applicable portion thereof); Article 21 (Letter of Credit); Section 24.2 (CASp) (superseded by Section 24 of this Sublease); Section 29.5 (Transfer of Landlord's Interest) (this section remains incorporated provided that references to "Landlord" in this section shall only apply to Landlord and not to Sublandlord); Section 29.13 (Exculpation) (as with respect to Sublandlord's liability under this Sublease); Section 29.16 (Force Majeure) (subsection (iv) of the last sentence only); Section 29.18 (Notices) (superseded by Section 18 of this Sublease), except with respect to Landlord's notice address; Section 29.21 (Attorneys' Fees) (superseded by Section 13 of this Sublease); Section 29.24 (Brokers);); Section 29.29 (Building Renovations) (this section remains incorporated provided that references to "Landlord" in this section shall only apply to Landlord and not to Sublandlord); Section 29.33 (Parking), but only with respect to the allocation of parking permits which (subject to Landlord's consent) is hereby revised to be one (1) parking permit (terms and conditions of the use of parking facilities shall apply to this Sublease); Section 29.34 (Reasonableness and Good Faith) (to the extent that incorporation may be construed to override any standard of consent or discretion otherwise set forth in this Sublease); Exhibit A (Outline of Premises); Exhibit A-1 (Outline of Temporary Premises); Exhibit B (Tenant Work Letter); Exhibit C (Notice of Lease Term Dates); and Exhibit F (Form of Letter of Credit).

7. Assignment and Subletting. Subtenant shall not assign this Sublease or further sublet all or any part of the Subleased Premises except subject to and in compliance with all of the terms and conditions of the Master Lease, and Sublandlord (in addition to Landlord) shall have the same rights with respect to assignment and subleasing as Landlord has under the Master Lease. Subtenant shall pay all fees and costs payable to Landlord pursuant to the Master Lease in

as well as all of Sublandlord's reasonable, actual out-of-pocket costs paid to third parties relating to any proposed assignment, sub-sublease or transfer of the Subleased Premises regardless of whether any required consent is granted, and the effectiveness of any such consent shall be conditioned upon Landlord's and Sublandlord's receipt of all such fees and costs. Subject nevertheless to Landlord's consent, Subtenant shall be entitled to the "Permitted Transfer" rights set forth in Section 14.8 of the Master Lease, as incorporated herein, upon and subject to the terms and conditions thereof and hereof.

8. Default. It shall constitute a "**Default**" hereunder if Subtenant fails to perform any obligation hereunder (including, without limitation, the obligation to pay Rent), or any obligation under the Master Lease which has been incorporated herein by reference, and, in each instance, Subtenant has not remedied such failure (a) in the case of any monetary Default, three (3) business days after delivery of written notice, (b) in the case Subtenant's failure to observe or perform according to the provisions of Articles 5, 14, 17 or 18 of the Master Lease, in each instance, one (1) business day after delivery of written notice, and (c) in the case of any other Default (except where a specific time period is otherwise set forth for Subtenant's performance in this Sublease, in which event the failure to perform by Subtenant within such time period shall be a Default hereunder), twenty (20) calendar days after delivery of written notice; provided, however, that if the nature of such Default is such that the same cannot reasonably be cured within such twenty (20) day period, Subtenant shall not be deemed to be in Default if it diligently commences such cure within such period and thereafter diligently proceeds to rectify and cure the same; however, if at any time Sublandlord receives notice from Landlord that the Default will be treated as a "Default" under the Master Lease, Subtenant's cure period will immediately be deemed to expire ten (10) days before the date of expiration of Sublandlord's cure period as set forth in Landlord's notice of default to Sublandlord, provided that such cure period will be extended by one (1) day for each day after the third (3rd) business day following the date on which Sublandlord received Landlord's notice that Sublandlord fails to deliver a copy thereof to Subtenant.

9. Remedies. In the event of any Default hereunder by Subtenant, Sublandlord shall have all remedies provided to the "Landlord" in the Master Lease as if a default had occurred thereunder and all other rights and remedies otherwise available at law and in equity. Sublandlord may resort to its remedies cumulatively or in the alternative.

10. Right to Cure Defaults. If Subtenant is in Default hereunder due to its failure to perform any of its obligations under this Sublease after expiration of applicable grace or cure periods, then Sublandlord may, but shall not be obligated to, perform any such obligations for Subtenant's account. All reasonable, out-of-pocket costs and expenses incurred by Sublandlord in performing any such act for the account of Subtenant shall be deemed Rent payable by Subtenant to Sublandlord within thirty (30) days of demand (with reasonable backup documentation), together with interest thereon at the lesser of (a) twelve percent (12%) per annum or (b) the maximum rate allowable under law from the date of the expenditure until repaid. If Sublandlord undertakes to perform any of Subtenant's obligations for the account of Subtenant pursuant hereto, the taking of such action shall not constitute a waiver of any of Sublandlord's remedies. Subtenant hereby expressly waives its rights under any statute to make repairs at the expense of Sublandlord.

11. Consents, Approvals, and Notices. In any instance when Sublandlord's consent or approval is required under this Sublease, Sublandlord's refusal to consent to or approve

any matter or thing shall be deemed reasonable if, among other matters, such consent or approval is required under the provisions of the Master Lease incorporated herein by reference but has not been obtained from Landlord. Except as otherwise provided herein, Sublandlord shall not unreasonably withhold, condition or delay its consent to or approval of a matter if such consent or approval is required under the provisions of the Master Lease and Landlord has consented to or approved of such matter. In the event that Sublandlord delivers or receives a notice of default under the Master Lease which reasonably could be expected to impact Subtenant's occupancy, Sublandlord agrees to promptly deliver a copy thereof to Subtenant.

If, at any time during the Term, Sublandlord receives any notice or demand from Landlord under the Master Lease which applies specifically to the Subleased Premises (as opposed to the Master Lease Premises generally), Sublandlord shall promptly deliver a true and correct copy of same to Subtenant (unless it is clear from the notice that a simultaneous notice has been sent by Landlord to Subtenant).

12. Liability.

(a) Limitation of Liability. Notwithstanding any other term or provision of this Sublease, the liability of Sublandlord to Subtenant for any default in Sublandlord's obligations under this Sublease shall be limited to actual, direct damages, and under no circumstances shall Subtenant, its partners, members, shareholders, directors, agents, officers, employees, contractors, sublessees, successors and/or assigns be entitled to recover from Sublandlord (or otherwise be indemnified by Sublandlord) for (i) any losses, costs, claims, causes of action, damages or other liability incurred in connection with a failure of Landlord, its partners, members, shareholders, directors, agents, officers, employees, contractors, successors and /or assigns to perform or cause to be performed Landlord's obligations under the Master Lease, (ii) lost revenues, lost profit or other consequential, special or punitive damages arising in connection with this Sublease for any reason, or (iii) any damages or other liability arising from or incurred in connection with the condition of the Subleased Premises or suitability of the Subleased Premises for Subtenant's intended uses. Subtenant shall, however, have the right to seek any injunctive or other equitable remedies as may be available to Subtenant under applicable law. Additionally, except in connection with Subtenant's holding over under Section 15 of this Sublease, the liability of Subtenant to Sublandlord for any default of Subtenant's obligations under this Sublease shall expressly exclude consequential, special or punitive damages arising in connection with this Sublease. Notwithstanding any other term or provision of this Sublease, no personal liability shall at any time be asserted or enforceable against either party's shareholders, directors, officers, or partners on account of any of such party's obligations or actions under this Sublease. In the event of any assignment or transfer of the Sublandlord's interest under this Sublease, which assignment or transfer may occur at any time during the Term in Sublandlord's sole discretion, Sublandlord shall be and hereby is entirely relieved of all covenants and obligations of Sublandlord hereunder accruing subsequent to the date of the transfer and it shall be deemed and construed, without further agreement between the parties hereto, that any transferee has assumed and shall carry out all covenants and obligations thereafter to be performed by Sublandlord hereunder. Sublandlord will transfer and deliver any then-existing Security Deposit to the transferee of Sublandlord's interest under this Sublease, and thereupon Sublandlord shall be discharged from any further liability with respect thereto.

(b) Sublandlord Default. In the event of any default hereunder by Sublandlord, Subtenant shall have all rights as provided to the "Tenant" in the Master Lease as if a default by Landlord had occurred thereunder. In no event shall Subtenant have the right to terminate or rescind this Sublease as a result of Sublandlord's default as to any covenant or agreement contained in this Sublease. Subtenant hereby waives such remedies of termination and rescission and hereby agrees that Subtenant's remedies for default hereunder and for breach of any promise or inducement shall be limited to a suit for damages and/or injunction; provided, however, the foregoing shall not limit any right of Subtenant to terminate this Sublease as a result of a constructive eviction by Sublandlord as determined by a final nonappealable judgment of a court of competent jurisdiction.

13. Attorneys' Fees. If Sublandlord or Subtenant brings an action to enforce the terms hereof or to declare rights hereunder, the prevailing party who recovers substantially all of the damages, equitable relief or other remedy sought in any such action on trial and appeal shall be entitled to receive from the other party its costs associated therewith, including, without limitation, reasonable attorney's fees and costs from the other party. Without limiting the generality of the foregoing, if Sublandlord utilizes the services of an attorney for the purpose of collecting any Rent due and unpaid by Subtenant or in connection with any other breach of this Sublease by Subtenant, Subtenant agrees to pay Sublandlord reasonable actual attorneys' fees as determined by Sublandlord for such services, irrespective of whether any legal action may be commenced or filed by Sublandlord.

14. Delivery of Possession.

(a) Generally. Sublandlord shall deliver, and Subtenant shall accept, possession of the Subleased Premises in their "AS IS" condition, broom-clean and free of debris, as the Subleased Premises exists on the Effective Date. Sublandlord shall have no obligation to furnish, render or supply any work, labor, services, materials, furniture, fixtures, equipment other than the FF&E (defined below), decorations or other items to make the Subleased Premises ready or suitable for Subtenant's occupancy. In entering into this Sublease, Subtenant has relied solely on such investigations, examinations and inspections as Subtenant has chosen to make or has made and has not relied on any representation or warranty concerning the Subleased Premises or the Building, except as expressly set forth in this Sublease. To Sublandlord's actual knowledge as of the Effective Date: (1) Sublandlord has not received any written notice from Landlord or the City and County of San Francisco ("**City**") that the condition of the Subleased Premises is in violation of any applicable laws, including without limitation any codes, the Americans with Disabilities Act, or path of travel requirements, which has not been cured, (2) the systems of the Building serving the Subleased Premises are in good working order, (3) Sublandlord has not received any written notice from Landlord or the City that the Subleased Premises contains ACM or other Hazardous Materials in a state which violates any applicable laws, and (4) the lights, blinds and electrical outlets in or serving the Subleased Premises (the items in this clause (4), collectively, "**LBOs**") are and shall be on the Commencement Date in working order. Provided Subtenant notifies Sublandlord within thirty (30) days of the Commencement Date, (i) Sublandlord shall, at its sole cost and expense, repair or cause to be repaired any of the LBOs identified in Subtenant's notice as not being in working order and reasonably requiring repair (so long as the reason for repair is not due to any act of Subtenant or any of its employees, invitees, or agents), and (ii) in the event of any material deficiency in the Building systems serving the Subleased Premises on

the Commencement Date, then, following such written notice from Subtenant, Sublandlord shall use commercially reasonable efforts to enforce the terms of Article 7 of the Master Lease for the benefit of Subtenant. Subtenant acknowledges that Sublandlord has afforded Subtenant the opportunity for full and complete investigations, examinations and inspections of the Subleased Premises and the common areas of the Building. Subtenant acknowledges that it is not authorized to make or do any alterations or improvements in or to the Subleased Premises except as permitted by the provisions of this Sublease and the Master Lease and that upon termination of this Sublease, Subtenant shall deliver the Subleased Premises to Sublandlord in the same condition as the Subleased Premises were at the commencement of the Term, reasonable wear and tear excepted; Subtenant acknowledges that Subtenant shall, at either Sublandlord's or Landlord's election, remove from the Subleased Premises some or all of the Subtenant Improvements (defined below) constructed therein by Subtenant; additionally, at Subtenant's cost, Subtenant will remove all telecommunications and data cabling installed by or for the benefit of Subtenant.

(b) Subtenant Improvements.

(i) Generally. If Subtenant desires to construct improvements within the Subleased Premises ("**Subtenant Improvements**"), all Subtenant Improvements shall be carried out in accordance with the applicable provisions of the Master Lease. Sublandlord will have the right to approve the plans and specifications for any proposed Subtenant Improvements, as well as any contractors whom Subtenant proposes to retain to perform such work, which approval shall be granted or withheld in accordance with the approval terms of the Master Lease. Subtenant will submit all such information for Sublandlord's review and written approval prior to commencement of any such work; Sublandlord will similarly promptly submit such plans to Landlord for review and approval. Promptly following the completion of any Subtenant Improvements or subsequent alterations or additions by or on behalf of Subtenant, Subtenant will deliver to Sublandlord a reproducible copy of "as built" drawings of such work together with a CAD file of the "as-built" drawings in the then-current version of AutoCad. Notwithstanding the foregoing, but subject to obtaining Landlord's consent, Subtenant shall be permitted to make Subtenant Improvements following five (5) business days' prior notice to Sublandlord and Landlord, without Sublandlord's consent, to the extent that such Sublandlord Improvements are decorative only (e.g., installation of carpeting, painting of the Subleased Premises, etc.), and performed in accordance with all applicable provisions of the Master Lease.

(ii) Code-Required Work. If the performance of any Subtenant Improvements or other work by Subtenant within the Subleased Premises "triggers" a requirement for code-related upgrades to or improvements of any portion of the Building, Subtenant shall be responsible for the cost of such code-required upgrade or improvements.

(iii) Communications and Computer Lines. Subtenant, at its sole cost and expense, may install new communications or computer wires and cables serving the Subleased Premises (collectively, "**New Lines**"), provided that (A) Subtenant shall comply with the terms and conditions of Article 28 of the Master Lease, including, without limitation, obtaining Sublandlord's and Landlord's prior written consent, and (B) as a condition to permitting the installation of New Lines, Sublandlord may require that Subtenant remove such New Lines at the end of the Term and repair any damage in connection with such removal to Sublandlord's reasonable satisfaction.

15. Holding Over. If Subtenant fails to surrender the Subleased Premises at the expiration or earlier termination of this Sublease, occupancy of the Subleased Premises after the termination or expiration shall be that of a tenancy at sufferance. Subtenant's occupancy of the Subleased Premises during the holdover shall be subject to all the terms and provisions of this Sublease and Subtenant shall pay an amount (on a per month basis without reduction for partial months during the holdover) equal to 150% of the sum of the Base Rent due for the period immediately preceding the holdover during the two (2) months immediately following the expiration or earlier termination of this Sublease, and 200% thereafter. No holdover by Subtenant or payment by Subtenant after the expiration or early termination of this Sublease shall be construed to extend the Term or prevent Sublandlord from immediate recovery of possession of the Subleased Premises by summary proceedings or otherwise. In addition to the payment of the amounts provided above, if Sublandlord is unable to deliver possession of the Subleased Premises to a new subtenant or to Landlord, as the case may be, or to perform improvements for a new subtenant, as a result of Subtenant's holdover, Subtenant shall be liable to Sublandlord for all damages, including, without limitation, consequential damages, that Sublandlord suffers from the holdover; Subtenant expressly acknowledges that such damages may include all of the holdover rent charged by Landlord under the Master Lease as a result of Subtenant's holdover, which Master Lease holdover rent may apply to the entire Master Lease Premises.

16. Parking. Subject to Landlord's consent, during the Term Subtenant shall be permitted to use one (1) of the parking permits allocated to Sublandlord in the Master Lease at the prevailing market rate, the use of which shall be in accordance with the Master Lease.

17. Signage. Subject to Landlord's prior written approval, and provided all signs are in keeping with the quality, design and style as required under the Master Lease, if the Subleased Premises comprise an entire floor of the Building, Subtenant, at its sole cost and expense, may install identification signage anywhere in the Subleased Premises including in the elevator lobby of the Subleased Premises in accordance with the terms and conditions of the Master Lease, provided that such signs must not be visible from the exterior of the Building and Subtenant otherwise complies with the terms and conditions of Article 23 of the Master Lease. Subject to Landlord's consent, (i) Subtenant's signage may include Subtenant's standard typeface and logo, and (ii) Subtenant shall have the right, at no charge to Sublandlord, to have Subtenant's name entered into the electronic directory located in the lobby of the Building.

18. Notices: Any notice by either party to the other required, permitted or provided for herein shall be valid only if in writing and shall be deemed to be duly given only if (a) delivered personally, or (b) sent by means of FedEx, UPS Next Day Air or another reputable express mail delivery service guaranteeing next business day delivery, or (c) sent by United States certified or registered mail, return receipt requested, addressed: (i) if to Sublandlord, at the following addresses:

Sender, Inc.
655 Montgomery Street, Suite 1600
San Francisco, California 94111
Attention: General Counsel & COO

with a copy to:

Shartsis Friese LLP
One Maritime Plaza, 18th Floor
San Francisco, CA 94111
Attention: Scott Schneider/Jonathan M. Kennedy

and (ii) if to Subtenant, at the following address:

89Bio, Inc.
The Premises
Attn: Legal

with a facsimile or electronic mail copy to:

Valence LLP
Attn: Corinne Wessel
Facsimile: (415) 358-4570
Electronic Mail: Corinne@valencelaw.com; notices@valencelaw.com

or at such other address for either party as that party may designate by notice to the other. A notice shall be deemed given and effective, if delivered personally, upon hand delivery thereof (unless such delivery takes place after hours or on a holiday or weekend, in which event the notice shall be deemed given on the next succeeding business day), if sent via overnight courier, on the business day next succeeding delivery to the courier, and if mailed by United States certified or registered mail, three (3) business days following such mailing in accordance with this Section.

19. FF&E. During the Term, at no charge to Subtenant, Subtenant shall be permitted to use the existing modular and office furniture, fixtures and equipment (inclusive of monitors), including the technology infrastructure, located in the Subleased Premises and described in more particular detail in **Exhibit C** attached hereto, as well as all equipment and data cabling associated therewith (the "**FF&E**"). Notwithstanding anything to the contrary contained herein, in the event that an item of the FF&E identified on the inventory attached to **Exhibit C** is not in the Subleased Premises as of the Commencement Date, Sublandlord shall have no obligation to replace any such item (but with it being understood that this clause is intended to apply to minor discrepancies only, e.g., an inaccurate inventory count). Subtenant shall accept the FF&E in its current condition without any warranty of fitness from Sublandlord (Subtenant expressly acknowledges that no warranty is made by Sublandlord with respect to the condition of any cabling currently located in or serving the Subleased Premises). Notwithstanding the foregoing, Sublandlord hereby represents and warrants to Subtenant that (y) Sublandlord owns the FF&E free and clear of any liens and encumbrances, and (z) Sublandlord has full power and authority to permit Subtenant to use the FF&E. For purposes of documenting the current condition of the FF&E, Subtenant and Sublandlord shall, prior to the Commencement Date, conduct a joint walk- through of the Subleased Premises in order to inventory items of damage or disrepair. Subtenant shall use the FF&E only for the purposes for which such FF&E is intended and shall be responsible for the proper maintenance, insurance, care and repair of the FF&E, at Subtenant's sole cost and expense, using maintenance contractors reasonably acceptable to Sublandlord. Subtenant shall not modify, reconfigure or relocate any of the FF&E except with the advance written permission of Sublandlord, and any work of modifying any FF&E (including, without limitation, changing the

configuration of, "breaking down" or reassembly of cubicles or other modular FF&E) shall be performed at Subtenant's sole cost using Sublandlord's specified vendors or an alternate vendor approved in writing by Sublandlord (such approval to be granted or withheld on Sublandlord's good faith discretion, based upon Sublandlord's assessment of factors which include, without limitation, whether the performance by such vendor will void applicable warranties for such FF&E and whether such vendor is sufficiently experienced in the design of such FF&E). Upon the expiration or earlier termination of the Term, Subtenant shall surrender the FF&E to Sublandlord in as good condition and repair as on the Commencement Date, normal wear and tear excepted. Subtenant may, at Subtenant's sole cost and expense, remove items of the FF&E from the Subleased Premises during the Term, provided that Subtenant: (a) first provides Sublandlord with prior written notice ("**Subtenant's Notice**") thereof, which Subtenant's Notice shall include a description of those items of the FF&E which Subtenant wishes to remove; and (b) at its sole cost and expense, stores such FF&E in a secure, offsite location and returns the same to the Subleased Premises upon the expiration of the Term or earlier termination of this Sublease.

20. Security System. Subtenant acknowledges that Sublandlord currently has a security system monitoring access to the Subleased Premises. Notwithstanding the foregoing, Subtenant shall have the right to use such existing security system governing access to the Subleased Premises. To the fullest extent permitted under applicable law, Subtenant hereby acknowledges that except for making the system available for Subtenant's use and except for servicing and maintaining the system, Sublandlord shall not be responsible for providing security services to Subtenant, and that Subtenant shall be solely responsible for providing its own security service, if any.

21. Brokers. Subtenant represents that it has dealt directly with and only with Jones Lang LaSalle Brokerage, Inc. ("**Subtenant's Broker**"), as a broker in connection with this Sublease. Sublandlord represents that it has dealt directly with and only with Jones Lang LaSalle Brokerage, Inc. ("**Sublandlord's Broker**"), as a broker in connection with this Sublease. Sublandlord and Subtenant shall indemnify and hold each other harmless from all claims of any brokers other than Subtenant's Broker and Sublandlord's Broker claiming to have represented Sublandlord or Subtenant in connection with this Sublease. Subtenant and Sublandlord agree that Subtenant's Broker and Sublandlord's Broker shall be paid commissions by Sublandlord in connection with this Sublease pursuant to a separate agreement.

22. Complete Agreement. There are no representations, warranties, agreements, arrangements or understandings, oral or written, between the parties or their representatives relating to the subject matter of this Sublease which are not fully expressed in this Sublease. This Sublease cannot be changed or terminated nor may any of its provisions be waived orally or in any manner other than by a written agreement executed by both parties.

23. Interpretation. Irrespective of the place of execution or performance, this Sublease shall be governed by and construed in accordance with the laws of the State of California. If any provision of this Sublease or the application thereof to any person or circumstance shall, for any reason and to any extent, be invalid or unenforceable, the remainder of this Sublease and the application of that provision to other persons or circumstances shall not be affected but rather shall be enforced to the extent permitted by law. The table of contents, captions, headings and titles, if any, in this Sublease are solely for convenience of reference and shall not affect its interpretation.

This Sublease shall be construed without regard to any presumption or other rule requiring construction against the party causing this Sublease or any part thereof to be drafted. If any words or phrases in this Sublease shall have been stricken out or otherwise eliminated, whether or not any other words or phrases have been added, this Sublease shall be construed as if the words or phrases so stricken out or otherwise eliminated were never included in this Sublease and no implication or inference shall be drawn from the fact that said words or phrases were so stricken out or otherwise eliminated. Each covenant, agreement, obligation or other provision of this Sublease shall be deemed and construed as a separate and independent covenant of the party bound by, undertaking or making same, not dependent on any other provision of this Sublease unless otherwise expressly provided. All terms and words used in this Sublease, regardless of the number or gender in which they are used, shall be deemed to include any other number and any other gender as the context may require. The word "person" as used in this Sublease shall mean a natural person or persons, a partnership, a corporation or any other form of business or legal association or entity.

24. CASp. This notice is given pursuant to California Civil Code Section 1938. The Subleased Premises have not been issued a disability access inspection certificate. A Certified Access Specialist (CASp) can inspect the Subleased Premises and determine whether the Subleased Premises complies with all of the applicable construction-related accessibility standards under state law. Although state law does not require a CASp inspection, Sublandlord may not prohibit Subtenant from obtaining a CASp inspection for the occupancy or potential occupancy of Subtenant, if requested by Subtenant. If Subtenant elects to perform a CASp inspection, Subtenant will provide written notice to Sublandlord, and Sublandlord (or Landlord) may elect, in their sole discretion, to retain a CASp to perform the inspection. If neither Sublandlord nor Landlord so elects, the time and manner of the CASp inspection will be subject to the prior written approval of Sublandlord and Landlord. In either event, the payment of the fee for the CASp inspection shall be borne by Sublandlord. The cost of making any repairs necessary to correct violations of construction-related accessibility standards within the Subleased Premises shall be borne by Subtenant unless it is Landlord's obligation to repair in accordance with Article 24 of the Master Lease.

25. USA Patriot Act Disclosures. Sublandlord and Subtenant each is currently in compliance with and shall at all times during the Term remain in compliance with the regulations of the Office of Foreign Asset Control ("**OFAC**") of the Department of the Treasury (including those named on OFAC's Specially Designated and Blocked Persons List) and any statute, executive order (including the September 24, 2001, Executive Order Blocking Property and Prohibiting Transactions with Persons Who Commit, Threaten to Commit, or Support Terrorism), or other governmental action relating thereto.

26. Counterparts; Electronic Signature. This Sublease may be executed in multiple counterparts, each of which is deemed an original but which together constitute one and the same instrument. This Sublease shall be fully executed when each party whose signature is required has signed and delivered to each of the parties at least one counterpart, even though no single counterpart contains the signatures of all of the parties hereto. This Sublease may be executed in so-called "pdf" format and each party has the right to rely upon a pdf counterpart of this Sublease signed by the other party to the same extent as if such party had received an original counterpart. THE PARTIES HERETO CONSENT AND AGREE THAT THIS SUBLEASE

MAY BE SIGNED AND/OR TRANSMITTED USING ELECTRONIC SIGNATURE TECHNOLOGY (E.G., VIA DOCUSIGN OR SIMILAR ELECTRONIC SIGNATURE TECHNOLOGY), AND THAT SUCH SIGNED ELECTRONIC RECORD WILL BE VALID AND AS EFFECTIVE TO BIND THE PARTY SO SIGNING AS A PAPER COPY BEARING SUCH PARTY'S HAND-WRITTEN SIGNATURE. THE PARTIES FURTHER CONSENT AND AGREE THAT (1) TO THE EXTENT A PARTY SIGNS THIS SUBLEASE USING ELECTRONIC SIGNATURE TECHNOLOGY, BY CLICKING "SIGN," SUCH PARTY IS SIGNING THIS SUBLEASE ELECTRONICALLY, AND (2) THE ELECTRONIC SIGNATURES APPEARING ON THIS SUBLEASE WILL BE TREATED, FOR PURPOSES OF VALIDITY, ENFORCEABILITY AND ADMISSIBILITY, THE SAME AS HAND- WRITTEN SIGNATURES.

[Signatures appear on the following page.]

IN WITNESS WHEREOF, the parties hereto hereby execute this Sublease as of the Effective Date.

SUBLANDLORD: **SENDER, INC.**,
a Delaware corporation

By: /s/ Daniel Kopelovich
Print Name: Daniel Kopelovich
Title: SVP, Finance

SUBTENANT: **89BIO, INC.**,
a Delaware corporation

By: /s/ Quoc LeNguyen
Print Name: Quoc LeNguyen
Title: CTOO & Head of Quality

Exhibit 10.3

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FIRST AMENDMENT TO LOAN AND SECURITY AGREEMENT

This FIRST AMENDMENT TO LOAN AND SECURITY AGREEMENT (this "**Amendment**") is entered into as of September 30, 2024 (the "**First Restatement Effective Date**"), by and among **89BIO, INC.**, a Delaware corporation ("**Parent**", and in its capacity as representative of any Borrowers hereunder from time to time, "**Borrower Representative**", each other Person party hereto as a borrower from time to time (together with Borrower Representative, collectively, "**Borrowers**", and each, a "**Borrower**"), each Person party hereto as a guarantor from time to time (together with each other guarantor with respect to the Obligations, collectively "**Guarantors**", and each a "**Guarantor**", and together with Borrowers, collectively "**Loan Parties**" and each, a "**Loan Party**"; the lenders from time to time party hereto (collectively, "**Lenders**", and each, a "**Lender**"), **K2 HEALTHVENTURES LLC**, as administrative agent for Lenders (in such capacity, together with its successors, "**Administrative Agent**"), and as collateral agent pursuant to the ISR Collateral Documents and with respect to the Shares of ISR Guarantor (in such capacity, together with its successors, "**ISR Collateral Agent**"), and **ANKURA TRUST COMPANY, LLC**, as collateral agent for Lenders (in such capacity, together with its successors, "**Collateral Trustee**").

RECITALS

WHEREAS, the parties previously entered into that certain Loan and Security Agreement, dated as of January 4, 2023 (as amended, restated, supplemented or otherwise modified and in effect immediately prior to this Amendment, the "**Existing Agreement**"; the Existing Agreement, as amended by this Amendment and as otherwise amended, restated, supplemented or otherwise modified from time to time, the "**Agreement**") by and among Borrower, Guarantors, Lenders, Administrative Agent and ISR Collateral Agent, and Collateral Trustee. in accordance with this Amendment to, among other things, refinance, expand and extend the Term Loan facility thereunder.

WHEREAS, the parties desire to amend the terms of the Existing Agreement as set forth in this Amendment.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing recitals and other good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, and intending to be legally bound, the parties hereto agree as follows:

1. Definitions. Capitalized terms used but not defined in this Amendment shall have the respective meanings given to them in the Agreement.

2. Amendment. The Existing Agreement is hereby amended as set forth in Exhibit A hereto, including to delete the stricken text (indicated textually in the same manner as the following example: ~~stricken text~~) and to add the double-underlined text (indicated textually in the same manner as the following example: double-underlined text).

3. Limitation of Amendments. The amendments set forth in Section 2 above, are effective for the purposes set forth herein and shall be limited precisely as written and shall not be deemed to (a) establish a course of dealing with respect to any other amendment, modification or waiver of any term or condition of any Loan Document or otherwise obligate any Secured Party to waive any future Event of Default, or (b) otherwise prejudice any right or remedy any Secured Party may now have or may have in the future under or in connection with any Loan Document.

4. Representations. To induce Administrative Agent and Required Lenders to enter into this Amendment, each Loan Party hereby represent and warrant as follows:

4.1 The representations and warranties contained in the Agreement and in other Loan Documents are true and correct in all material respects as of the date of this Amendment (except for such

representations and warranties referring to another date, which representations and warranties are true and correct in all material respects as of such date).

4.2 The Perfection Certificate delivered as of the date hereof is true, accurate and correct in all material respects.

4.3 Prior to and upon execution and delivery of this Amendment, no Event of Default has occurred and is continuing.

4.4 The execution and delivery by each Loan Party of this Amendment and the performance by each Loan Party of their respective obligations under the Agreement and the other Loan Documents to which it is a party, in each case, as amended by this Amendment (as applicable), (a) have been duly authorized by all necessary action on the part of such Loan Party, and (b) do not and will not contravene (i) any material Requirement of Law, (ii) any material contractual restriction in any material agreement with a Person binding on such Loan Party, (iii) any order, judgment or decree of any Governmental Authority binding on such Loan Party, or (iv) the Operating Documents operating of such Loan Party.

4.5 The execution and delivery by each Loan Party of this Amendment and the performance by each Loan Party of their respective obligations under the Agreement and the other Loan Documents to which it is a party, in each case, as amended by this Amendment (as applicable), do not require any order, consent, approval, license, authorization or validation of, or filing, recording or registration with, or exemption by, Governmental Authority, except as already has been obtained or made.

4.6 This Amendment has been duly executed and delivered by each Loan Party and is the binding obligation of each Loan Party, enforceable against such Loan Party in accordance with its terms, except as such enforceability may be limited by bankruptcy, insolvency, reorganization, liquidation, moratorium or other similar laws of general application relating to or affecting creditors' rights and by general equitable principles.

5. Conditions. As a condition to the effectiveness of this Amendment, Administrative Agent shall have received, in form and substance satisfactory to Administrative Agent in its sole discretion, the following:

(a) this Amendment and the other documents and certificates set forth on Schedule 1 hereto;, in each case, duly executed by the applicable Loan Parties party thereto;

(b) payment of all fees and Lender Expenses due on the First Restatement Effective Date in accordance with the Amended and Restated Fee Letter and the Agreement, as amended.

6. Post-Closing delivery. Within two (2) Business Days of the Restatement Effective Date (or such later date as Administrative Agent may agree in its sole discretion), certificate of 89Bio Ltd, duly executed by a Responsible Officer, certifying and attaching (i) the Operating Documents (certified by the Secretary of State (or equivalent agency) on a date that is no earlier than thirty (30) days prior to the date hereof), (ii) resolutions duly approved by the Board, (iii) any resolutions, consent or waiver duly approved by the requisite holders of 89Bio Ltd's Equity Interests, if applicable (or certifying that no such resolutions, consent or waiver is required), and (iv) a schedule of incumbency, shall be delivered. Within thirty (30) days of the Restatement Effective Date, any Account Control Agreements not yet delivered to the extent required under Section 6.6 of the Agreement shall be delivered and Loan Parties shall comply with Section 6.12 of the Agreement with respect to any new locations not yet subject to Collateral Access Agreements.

7. Affirmations.

7.1 The Existing Agreement, as amended hereby, and the other Loan Documents are each reaffirmed by the Loan Parties and the Loan Parties agree and acknowledge that the Agreement, as modified by this Amendment, remains in full force and effect and that the same is hereby ratified and confirmed in all respects.

7.2 The Loan Parties agree and acknowledge that the security interest as granted pursuant to the Agreement and other applicable Loan Documents continues to secure the Obligations from the Closing Date without novation, and this Amendment is not intended to be, and shall not constitute, a novation.

7.3 Each Guarantor agrees and acknowledges the terms of this Amendment and confirm that the guaranty pursuant to Section 13 of the Agreement remains in full force and effect as of the date hereof with respect to the Obligations (as modified this Amendment).

8. Governing Law. Section 11 of the Agreement is incorporated herein, provided that references to the "Agreement" shall be understood to refer to this Amendment.

9. General Provisions.

9.1 This Amendment and the Loan Documents represent the entire agreement with respect to this subject matter and supersede prior negotiations or agreements. All prior agreements, understandings, representations, warranties, and negotiations between the parties about the subject matter of this Amendment and the Loan Documents merge into this Amendment and the Loan Documents.

9.2 This Amendment may be executed in any number of counterparts and by different parties on separate counterparts, each of which, when executed and delivered, is an original, and all taken together, constitute one agreement. The words "execution," "signed," "signature" and words of like import herein shall be deemed to include electronic signatures or the keeping of records in electronic form, each of which shall be of the same legal effect, validity and enforceability as a manually executed signature or the use of a paper-based recordkeeping systems, as the case may be, to the extent and as provided for in any applicable law, including, without limitation, any state law based on the Uniform Electronic Transactions Act. Delivery of an executed counterpart of a signature page of this Amendment or any document delivered in connection therewith by electronic means including by email delivery of a ".pdf" format data file shall be effective as delivery of an original executed counterpart thereof.

9.3 This Amendment shall constitute a Loan Document.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

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[SIGNATURE PAGE TO FIRST AMENDMENT TO LOAN AND SECURITY AGREEMENT]

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be duly executed and delivered as of the date first set forth above.

BORROWER:

89BIO, INC.

By /s/ Rohan Palekar
Name: Rohan Palekar
Title: Chief Executive Officer

GUARANTORS:

89BIO MANAGEMENT, INC.

By /s/ Rohan Palekar
Name: Rohan Palekar
Title: Chief Executive Officer

89BIO LTD

By /s/ Rohan Palekar
Name: Rohan Palekar
Title: Chief Executive Officer

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[SIGNATURE PAGE TO FIRST AMENDMENT TO LOAN AND SECURITY AGREEMENT]

ADMINISTRATIVE AGENT:

K2 HEALTHVENTURES LLC

By /s/ Anup Arora
Name: Anup Arora
Title: Managing Director and Chief Investment Officer

LENDER:

K2 HEALTHVENTURES LLC

By /s/ Anup Arora
Name: Anup Arora
Title: Managing Director and Chief Investment Officer

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EXHIBIT A

CONFORMED LOAN AND SECURITY AGREEMENT

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LOAN AND SECURITY AGREEMENT

(as amended pursuant to the First Amendment to Loan and Security Agreement)

This LOAN AND SECURITY AGREEMENT (as amended, restated, supplemented or otherwise modified from time to time, this "**Agreement**") dated as of January 4, 2023 (the "**Closing Date**") is entered into among **89BIO, INC.**, a Delaware corporation ("**Parent**", and in its capacity as representative of any Borrowers hereunder from time to time, "**Borrower Representative**"), each other Person party hereto as a borrower from time to time (together with Borrower Representative, collectively, "**Borrowers**", and each, a "**Borrower**"), each Person party hereto as a guarantor from time to time (together with each other guarantor with respect to the Obligations, collectively "**Guarantors**", and each a "**Guarantor**", and together with Borrowers, collectively "**Loan Parties**" and each, a "**Loan Party**"; the Loan Parties as of the Closing Date are set forth on Schedule 1A hereto), the lenders from time to time party hereto (collectively, "**Lenders**", and each, a "**Lender**"), **K2 HEALTHVENTURES LLC**, as administrative agent for Lenders (in such capacity, together with its successors, "**Administrative Agent**"), and as collateral agent pursuant to the ISR Collateral Documents and with respect to the Shares of ISR Guarantor (in such capacity, together with its successors, "**ISR Collateral Agent**"), and **ANKURA TRUST COMPANY, LLC**, as collateral agent for Lenders (in such capacity, together with its successors, "**Collateral Trustee**").

AGREEMENT

Borrower Representative, each other Loan Party from time to time party hereto and each Secured Party hereby agree as follows:

1. ACCOUNTING AND OTHER TERMS

Accounting terms not defined in this Agreement shall be construed in accordance with GAAP, and calculations and determinations shall be made following GAAP, consistently applied. Capitalized terms not otherwise defined in this Agreement shall have the meanings set forth on Exhibit A. All other terms contained in this Agreement, unless otherwise indicated, shall have the meaning provided by the Code to the extent such terms are defined therein. As used in the Loan Documents, the word "shall" is mandatory, the word "may" is permissive, the word "or" is not exclusive, the words "includes" and "including" are not limiting, the singular includes the plural, and numbers denoting amounts that are set off in brackets are negative. Unless otherwise specified, all references in this Agreement or any Annex or Schedule hereto to a "Section," "subsection," "Exhibit," "Annex," or "Schedule" shall refer to the corresponding Section, subsection, Exhibit, Annex, or Schedule in or to this Agreement. For purposes of the Loan Documents, whenever a representation or warranty is made to a Person's knowledge or awareness, knowledge or awareness means the actual knowledge, after reasonable investigation, of any Responsible Officer of such Person.

2. LOAN AND TERMS OF PAYMENT

2.1 Promise to Pay. Each Borrower hereby unconditionally promises to pay each Lender, ratably, the outstanding principal amount of all Loans, accrued and unpaid interest, fees and charges thereon and to pay all Obligations as and when due in accordance with this Agreement.

2.2 Availability and Repayment or Conversion of the Loans.

(a) Availability.

(i) Subject to the terms and conditions of this Agreement, each Lender agrees, severally and not jointly, to make to Borrowers (A) on the Restatement Effective Date, an advance ~~on the Closing Date~~ in principal amount equal to its Restatement First Tranche Term Loan Commitment ~~(such Loans,~~ – Part A, Restatement First Tranche Term Loan Commitment – Part B and Restatement First Tranche Term Loan Commitment – Part C, and (B) thereafter, upon written request by Borrower Representative through the Restatement First Tranche Availability Period, one or more advances in minimum increments of $5,000,000, and in an aggregate principal amount equal to its Restatement First Tranche Term Loan Commitment – Part D (such Loans, "**Restatement**

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First Tranche Term Loan – Part A", "**Restatement First Tranche Term Loan – Part B**", "**Restatement First Tranche Term Loan – Part C**" and "**Restatement First Tranche Term Loan – Part D**", respectively, and collectively, the "**Restatement First Tranche Term Loans**"). Lenders' commitments to make the Restatement First Tranche Term Loans shall terminate upon the funding of the Restatement First Tranche Term Loans on the ~~Closing~~ Restatement Effective Date (with respect to Parts A, B and C), and on the date such Restatement First Tranche Term Loans are funded (with respect to Part D). The proceeds of the Restatement First Tranche Term Loans – Part A, the Restatement First Tranche Term Loans – Part B, and a portion of the Restatement First Tranche Term Loans – Part C shall be applied to refinance the Term Loans outstanding as of the Restatement Effective Date, provided that with respect to Restatement First Tranche Term Loan – Part A, such principal amount shall be deemed to continue to remain outstanding on terms amended to reflect the terms as set forth in this Agreement and subject to the Fee Letter, dated as of the Restatement Effective Date.

(ii) ~~Subject to achievement of the Second Tranche Milestone and the terms and conditions of this Agreement, each Lender agrees, severally and not jointly, to make to Borrowers an advance during the Second Tranche Availability Period in principal amount equal to its Second Tranche Term Loan Commitment (such Loans, collectively, the "**Second Tranche Term Loans**"). Lenders' commitments to make the Second Tranche Term Loans shall terminate upon the earlier of (i) the end of the Second Tranche Availability Period, and (ii) the date the Second Tranche Term Loans have been funded.~~Subject to achievement of the ~~Third~~Restatement Second Tranche Milestone and the terms and conditions of this Agreement, each Lender agrees, severally and not jointly, to make to Borrowers an advance during the ~~Third~~Restatement Second Tranche Availability Period in principal amount equal to its ~~Third~~Restatement Second Tranche Term Loan Commitment (such Loans, collectively, the "**~~Third~~Restatement Second Tranche Term Loans**"). Lenders' ~~commitment~~commitments to make the ~~Third~~Restatement Second Tranche Term Loans shall terminate upon the earlier of (~~i~~A) the end of the ~~Third~~Restatement Second Tranche Availability Period, and (~~ii~~B) the date ~~that Third~~Restatement Second Tranche Term Loans have been funded.

(iii) Subject to Lenders' review of Borrowers' financial/operating plan at the time of a requested funding of a Loan under this subsection (each a "**~~Fourth~~Restatement Third Tranche Term Loan**", and collectively the "**~~Fourth~~Restatement Third Tranche Term Loans**", and together with the Restatement First ~~Tranche Term Loans, the Second~~ Tranche Term Loans and the ~~Third~~Restatement Second Tranche Term Loans, collectively, the "**Restatement Term Loans**", and each, a "**Restatement Term Loan**"), each Lender may, severally and not jointly, make to Borrowers an advance at any time prior to the Restatement Amortization Date in an aggregate principal amount up to its respective ~~Fourth~~Restatement Third Tranche Term Loan Amount. Lenders have no commitment to make any ~~Fourth~~Restatement Third Tranche Term Loans, which may be made in their sole and absolute discretion. The proceeds of ~~Fourth~~Restatement Third Tranche Term Loans shall be used to further support commercial activities, acquisitions, and/or business development opportunities.

Except as set forth above, Borrowers shall use the proceeds of the Restatement Term Loans (i) to ~~repay existing~~refinance Term Loans under this Agreement outstanding ~~Indebtedness of Borrower Representative owing to Silicon Valley Bank~~immediately prior to the Restatement Effective Date, and (ii) for working capital and other general corporate purposes. Once repaid, the Restatement Term Loans may not be reborrowed.

(b) Repayment. Commencing on the Restatement Amortization Date, and continuing thereafter on each Payment Date through the Restatement Term Loan Maturity Date, Borrowers shall make consecutive monthly payments of equal principal and interest, in an amount which would fully amortize the principal amount of the Term Loans and accrued interest thereon by the Restatement Term Loan Maturity Date, provided that if the Applicable Rate is adjusted or the Restatement Amortization Date or the Restatement Term Loan Maturity Date are extended, in each case, in accordance with its terms, the amortization schedule and the required monthly installment shall be recalculated based on the adjusted Applicable Rate and/or the adjusted number of Payment Dates through the Restatement Term Loan Maturity Date. Any and all unpaid Obligations, including principal and accrued and unpaid interest in respect of the Term Loans the fees pursuant to the Fee Letter and any other fees and other sums due hereunder, if any, shall be due and payable in full on the Restatement Term Loan Maturity Date. The Restatement Term Loans may only be prepaid in accordance with Sections 2.2(c) or (d).

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(c) Mandatory Prepayment Upon an Acceleration. If the Loans are accelerated following the occurrence and during the continuation of an Event of Default by Administrative Agent in accordance with Section 9.1, Borrowers shall immediately pay to Administrative Agent, for the benefit of Secured Parties, an amount equal to the sum of:

(i) all outstanding principal plus accrued and unpaid interest thereon, plus

(ii) all amounts then due in accordance with the Fee Letter, plus

(iii) all other sums, if any, that shall have become due and payable hereunder, including interest at the Default Rate with respect to any past due amounts.

(d) Permitted Prepayment of Loans. Borrowers shall have the option to prepay all, but not less than all, of the Loans, provided Borrowers provide written notice (which may be conditional upon the consummation of an acquisition of Borrowers or similar transaction or a refinancing of the Obligations) to Administrative Agent of its election to prepay the Loans at least thirty (30) days prior to such prepayment (or such shorter period as Administrative Agent may approve in its sole discretion), and pay, on the date of such prepayment, to Lenders, ratably, an amount equal to the sum of:

(i) all outstanding principal plus accrued and unpaid interest thereon, plus

(ii) all amounts then due in accordance with the Fee Letter, plus

(iii) all other sums, if any, that shall have become due and payable, including interest at the Default Rate with respect to any past due amounts.

(e) Conversion at Lenders' Election.

(i) Conversion Election. Lenders may jointly elect at any time and from time to time after the Closing Date or the Restatement Effective Date, as applicable, prior to the payment in full of the Loans to convert any portion of the principal amount of the ~~Loans~~Restatement First Tranche Term Loan – Part A or the Restatement First Tranche Term Loan – Part B then outstanding (such converted amount, the "Conversion Amount") into shares of Common Stock ("Conversion Shares") at the applicable Conversion Price pursuant to a Conversion Election Notice, to be delivered at the direction of Lenders by the Administrative Agent to Issuer~~, provided that the aggregate principal amount converted to Common Stock in accordance with this Section 2.2(e) shall not exceed $7,500,000~~ (any such conversion, a "**Lender Conversion**"). A Conversion Election Notice, once delivered, shall be irrevocable unless otherwise agreed in writing by Issuer and subject to subsection (ii) below, provided that if transfer agent for Issuer's Common Stock is participating in the Depository Trust Company ("DTC") Fast Automated Securities Transfer Program and provided that the applicable Designated Holder is eligible to receive Conversion Shares through DTC and the restrictive legend has been removed from such Conversion Shares in accordance with Section 2.2(e)(x), credit such aggregate number of Conversion Shares to which the Holder shall be entitled to the Holder's or its designee's balance account with DTC through its Deposit Withdrawal Agent Commission system. On the third trading day after a Conversion Election Notice has been duly delivered in accordance with the foregoing, Issuer shall credit to each Designated Holder a number of Conversion Shares equal to (x) the Conversion Amount indicated in the applicable Conversion Election Notice divided by (y) applicable Conversion Price.

(ii) Reservation of Shares. Issuer shall reserve from its duly authorized and unreserved capital stock not less than the number of shares of Common Stock that may be issuable pursuant to a conversion pursuant to this Section 2.2(e), provided that if at any time Issuer no longer has sufficient number of authorized and unreserved shares of Conversion Shares not less than the number of Conversion Shares then issuable upon conversion of the then outstanding principal amount that may be converted pursuant to this Section 2.2(e) (without regard to any applicable cap on conversion pursuant to subsection (vi) and (vii) below), then Issuer shall immediately take all action necessary to increase its authorized and unreserved shares to an amount sufficient to cure

such shortfall. In the event that upon any delivery of a Conversion Election Notice there are insufficient authorized and unreserved Conversion Shares to deliver in satisfaction of such Conversion Election Notice, then the applicable Lender may elect to void such Conversion Election Notice. Upon issuance of Conversion Shares pursuant to Section 2.2(e), such shares shall be validly issued, fully paid and non-assessable and free from all preemptive or similar rights, taxes, liens and charges with respect to the issue thereof, and shall be free of any restrictions on transfer, except for any restrictions under Federal or state securities laws.

(iii) Rule 144. With a view to making available to Designated Holders the benefits of Rule 144 (or its successor rule) and any other rule or regulation of the Securities and Exchange Commission (the "**SEC**") that may at any time permit Designated Holders to sell shares of Common Stock issued pursuant to a Conversion Election Notice to the public without registration, Issuer shall use its commercially reasonable efforts to: (A) make and keep public information available, as those terms are understood and defined in Rule 144, until six (6) months after such date as all of Conversion Shares issued may be sold without restriction by Designated Holders pursuant to Rule 144 or any other rule of similar effect; (B) file with the SEC in a timely manner (or obtain extensions in respect thereof and file within the applicable grace period) all reports and other documents required of Issuer under the 1934 Act; and (C) furnish to Designated Holders, upon request, as long as Designated Holders own any shares of Common Stock issued pursuant to a Conversion Election Notice, such information as may be reasonably requested in order to avail Designated Holders of any rule or regulation of the SEC that permits the selling of any Conversion Shares issued without registration.

(iv) Registration Rights. In connection with the option to convert in accordance with this Section 2.2(e), Issuer hereby agrees that each Designated Holder shall be deemed to be a "Holder" (as defined in the Company's Investors' Rights Agreement dated September 17, 2019, as amended, restated, supplemented or otherwise modified from time to time (the "**IRA**")) and shall have the piggyback registration rights with respect to the shares of Common Stock issued and issuable under this Section 2.2(e) pursuant to Section 2 of the IRA, on a *pari passu* basis with the other Holders (as defined therein).

(v) Authorization. For so long as Designated Holders hold any shares of Common Stock issued pursuant to this Section 2.2(e), Issuer shall use its commercially reasonable efforts to maintain the Common Stock's authorization for listing on a Trading Market. and Issuer shall not take any action which could reasonably be expected to result in the delisting or suspension of the Common Stock on such national securities exchange on which the Common Stock is listed.

(vi) Limitations on Conversion.

(1) Beneficial Ownership. Notwithstanding anything herein to the contrary, Issuer shall not issue a number of Conversion Shares pursuant to this Section 2.2(e) to the extent that, upon such issuance, the number of shares of Common Stock then beneficially owned by each Designated Holder and its Affiliates and any other persons or entities whose beneficial ownership of Common Stock would be aggregated with such Designated Holders for purposes of Section 13(d) of the Exchange Act would exceed 9.985% of the total number of shares of Common Stock then issued and outstanding (the "**9.985% Cap**"); provided that the 9.985% Cap shall only apply to the extent that the Common Stock is deemed to constitute an "equity security" pursuant to Rule 13d-1(i) promulgated under the Exchange Act, provided further that Lenders shall have the right, upon 61 days' prior written notice to Issuer, to waive the 9.985% Cap.

(2) Principal Market Regulation. Issuer shall not issue a number of Conversion Shares pursuant to this Section 2.2(e), if the issuance of such shares together with any previously issued Conversion Shares, would result in (A) the issuance of more than 19.99% of the Common Stock outstanding as of the Closing Date or (B) Designated Holders, together with their Affiliates and any other persons or entities whose beneficial ownership of Common Stock would be aggregated with such Designated Holder's for purposes of Section 13(d) of the Exchange Act, beneficially owning in excess of 19.99% of the then outstanding Common Stock.

(3) Beneficial Ownership Determination. For purposes of this Section 2.2(e), "group" has the meaning set forth in Section 13(d) of the Exchange Act and applicable regulations of the SEC, and the percentage held by each Designated Holder shall be determined in a manner consistent with the provisions of Section 13(d) of the Exchange Act. Upon the written request of Administrative Agent, Issuer shall, within two (2) trading days, confirm to the Administrative Agent the number of Shares then outstanding. As used herein, beneficial ownership shall be determined in accordance with Section 13(d) of the Exchange Act.

(vii) Certain Adjustments. If Issuer declares or pays a dividend or distribution on the outstanding shares of Common Stock payable in Common Stock or other securities or property (other than cash), then upon exercise of any conversion option in accordance with this Section 2.2(e), for each Conversion Share acquired, Designated Holder shall receive, without additional cost to Designated Holder, the total number and kind of securities and property which Designated Holder would have received had Designated Holder owned the Conversion Shares of record as of the date the dividend or distribution occurred. Upon any event whereby all of the outstanding shares of the Common Stock are reclassified, converted, exchanged, combined, divided, substituted, or replaced for, into, with or by securities of a different class and/or series, then from and after the consummation of such event, the Conversion Shares issuable will be the number, class and series of securities that Designated Holder would have received had the Conversion Shares been outstanding on and as of the consummation of such event, and the applicable Conversion Price shall be adjusted accordingly (as applicable). The provisions of this Section 2.2(e)(vii) shall similarly apply to successive reclassifications, exchanges, combinations substitutions, replacements or other similar events. Issuer shall promptly notify Lenders of any event causing an adjustment pursuant to this Section 2.2(e)(vii), and at Lenders' request, shall deliver a certificate of adjustment, setting forth the adjustment and attaching calculations supporting the same, certified by a Responsible Officer.

(viii) No Fractional Shares. Upon conversion of the Conversion Amount into Conversion Shares, any fraction of a share will be rounded down to the next whole share of the Conversion Shares, and in lieu of such fractional shares to which the Designated Holder would otherwise be entitled, the Issuer shall, at its option, either pay the Designated Holder cash equal to such fraction multiplied by the applicable Conversion Price, or return such amount to principal under the Loan.

(ix) Exemption from Registration. Assuming the accuracy of representations and warranties made by Lenders in this Agreement and the accuracy of representations and warranties of Designated Holders in the Conversion Election Notice, the Loans and the associated right to Lender Conversion are exempt from registration under the Securities Act (pursuant to Section 4(a)(2) thereof and Rule 506 of Regulation D thereunder) and applicable state securities laws. Issuer is not disqualified from reliance upon Rule 506 of Regulation D for purposes of the Loan and any Lender Conversion, including due to any "Bad Act" disqualification.

(x) Restrictive Legends. Any Note and any certificate evidencing the Conversion Shares may contain a securities legend restricting the transfer thereof, in substantially the following form as long as none of the Unrestricted Conditions have been met:

> THIS LOAN AND RELATED RIGHT TO CONVERSION, AND THE SECURITIES ISSUABLE UPON CONVERSION HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OR 1933, AS AMENDED, OR APPLICABLE STATE SECURITIES LAWS. THE SECURITIES MAY NOT BE SOLD, TRANSFERRED OR ASSIGNED IN THE ABSENCE OF AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT, EXCEPT PURSUANT TO AN EXEMPTION FROM REGISTRATION, INCLUDING PURSUANT TO RULE 144 OF THE SECURITIES ACT OR PURSUANT TO A PRIVATE SALE EFFECTED UNDER SECTION 4(A)7) OF THE SECURITIES ACT.

Upon the satisfaction of any of the following conditions (the "**Unrestricted Conditions**"): (A) while a registration statement covering the sale or resale of such security is effective under the Securities Act, or (B) following any sale of such Conversion Shares, pursuant to Rule 144, or (C) if such Conversion Shares are eligible for sale under Rule 144(b)(1), or (D) at any time on or after the date hereof that the Lender certifies that neither it nor Designated Holder is an "affiliate" of Issuer (as such term is used under Rule 144 pursuant to the Securities Act) if the holding period for

purposes of Rule 144 and subsection (d)(3)(iii) thereof with respect to such Conversion Shares is at least six (6) months, or (E) if such legend is not required under applicable requirements of the Securities Act (including judicial interpretations and pronouncements issued by the staff of the SEC), then any Note issued, the related right to conversion, and any Conversion Shares issued thereunder, shall not contain or be subject to (and Designated Holder shall be entitled to removal of) any legend restricting the transfer thereof (including any legend as set forth above) and shall not be subject to any stop-transfer instructions. Issuer shall cause its counsel to issue a legal opinion to the transfer agent prior to the required delivery date of the Conversion Shares, or at such other time as any of the Unrestricted Conditions has been met, if required by the transfer agent to effect the issuance of the Conversion Shares without a restrictive legend or removal of the legend hereunder to the extent required or requested as set forth in the immediately following two sentences. Issuer agrees that, following the Closing Date or at such time as any of the Unrestricted Conditions is met or such legend is otherwise no longer required under this Section 2.2(e), it will, no later than two (2) trading days, issued with a restrictive legend, deliver or cause to be delivered to the applicable Designated Holder, the Conversion Shares, free from all restrictive and other legends (or similar notations). Each Lender hereby agrees that the removal of restrictive legends from the Conversion Shares is predicated upon reliance by Issuer that the Designated Holder will sell any Conversion Shares, pursuant to the registration requirements of the Securities Act or an exemption therefrom, and that if such securities are sold pursuant to a registration statement, they will be sold in compliance with the plan of distribution set forth therein.

(xi) Designated Holder as intended third party beneficiary. Each Designated Holder is an intended third party beneficiary of the provisions of this Section 2.2(e).

(f) ~~Confirmation of initial Conversion Price. The initial Conversion Price shall be confirmed in writing between Issuer and Administrative Agent promptly following the 15th VWAP Trading Day after the Closing Date, in the form attached hereto as Schedule 6.~~ Representations of Lenders and Designated Holders. In connection with the making of the Loans and the related right to Lender Conversion, each Lender hereby represents and warrants, with respect to such Lender and related Designated Holder only:

(i) Investment for Own Account. The Loans and the right to Lender Conversion and any Note evidencing the same with respect thereto will be acquired by each Lender for such Lender's own account, and not with a view to the resale or distribution of any part thereof in violation of the Securities Act, except pursuant to sales registered or in a transaction exempted under the Securities Act, and such Lender and related Designated Holder have no present intention of selling, granting any participation in, or otherwise distributing the same in violation of the Securities Act without prejudice, however, to such Lender's or Designated Holder's right at all times to sell or otherwise dispose of all or any part of such Conversion Shares in compliance with applicable federal and state securities laws. Nothing contained herein shall be deemed a representation or warranty by such Lender to hold the Loans and the right to Lender Conversion and any Note evidencing the same for any period of time and such Lender reserves the right to transfer the same at any time in accordance with or pursuant to a registration statement or an exemption under the Securities Act.

(ii) Disclosure of Information. Each Lender and Designated Holder is aware of the business affairs and financial condition of Borrower Representative and has received or has had full access to all information it considers necessary or appropriate to make an informed investment decision with respect to the making of the Loans, and the related right to Lender Conversion. Each Lender represents that it and each Designated Holder has had an opportunity to ask questions and receive answers from Borrower Representative regarding the terms and conditions thereof and to obtain additional information (to the extent Borrower Representative possessed such information or could acquire it without unreasonable effort or expense) necessary to verify any information furnished to such Lender or Designated Holder or to which such Lender or Designated Holder has access.

(iii) Investment Experience. Such Lender and related Designated Holder understand that the Conversion Shares involve substantial risk. Such Lender and related Designated Holder have experience as an investor in securities of companies in the development stage and acknowledges that such Lender and Designated Holder can bear the economic risk and complete loss of its investment in the Loan and the right to Lender

Conversion (and any Note) and has such knowledge and experience in financial or business matters that it is capable of evaluating the merits and risks of the investment contemplated hereby.'

(iv) Restricted Securities. Such Lender and Designated Holder understand that the Loan and the right to Lender Conversion (and any Note) are characterized as "restricted securities" under the U.S. federal securities laws inasmuch as they are being acquired from Borrower Representative in a transaction not involving a public offering and that under such laws and applicable regulations such securities may not be resold except pursuant to an effective registration statement under the Securities Act (including a registration statement filed pursuant to Section 2.2(e)(iv)) or pursuant to an applicable exemption from the registration requirements under the Securities Act.

(v) Accredited Investor. Such Lender and Designated Holder is an "accredited investor" as such term is defined in Regulation D promulgated under the Securities Act.

2.3 Payment of Interest.

(a) Interest Rate. Subject to Section 2.3(b), the outstanding principal amount of the Loans shall accrue interest from and after its Funding Date, at the Applicable Rate, and Borrowers shall pay such interest monthly in arrears on each Payment Date commencing on ~~February~~October 1, ~~2023~~2024.

(b) Default Rate. Immediately upon the occurrence and during the continuation of an Event of Default, Obligations shall bear interest at a rate per annum which is five percentage points (5.0%) above the rate that is otherwise applicable thereto (the "**Default Rate**"). Fees and expenses which are required to be paid by Borrowers pursuant to the Loan Documents (including, without limitation, Secured Party Expenses) but are not paid when due shall bear interest until paid at a rate equal to the highest interest rate applicable to the Obligations. Payment or acceptance of the increased interest rate provided in this Section 2.3(b) is not a permitted alternative to timely payment and shall not constitute a waiver of any Event of Default or otherwise prejudice or limit any rights or remedies pursuant to the Loan Documents. Each Borrower agrees that interest at the Default Rate is a reasonable calculation of Lenders' lost profits in view of the difficulties and impracticality of determining actual damages resulting from an Event of Default.

(c) Payment; Interest Computation. Interest is payable monthly in arrears on the Payment Date of the following month and shall be computed on the basis of a 360-day year for the actual number of days elapsed. In computing interest, (i) all payments received after 3:00 p.m. Eastern Time on any day shall be deemed received at the opening of business on the next Business Day, and (ii) the date of the making of any Loan shall be included and the date of payment shall be excluded. Changes to the Applicable Rate based on changes to the Prime Rate, shall be effective as of the date, and to the extent, of such change.

(d) Maximum Interest. Notwithstanding any provision in this Agreement or any other Loan Document, it is the parties' intent not to contract for, charge or receive interest at a rate that is greater than the maximum rate permissible by law that a court of competent jurisdiction shall deem applicable hereto (the "**Maximum Rate**"). If a court of competent jurisdiction shall finally determine that a Borrower has actually paid to or for the benefit of Lenders an amount of interest in excess of the amount that would have been payable if all of the Obligations had at all times borne interest at the Maximum Rate, then such excess interest actually paid by Borrowers shall be applied as follows: first, to the payment of principal outstanding in respect of the Loans; second, after all principal is repaid, to the payment of accrued interest, third, to the payment of Secured Party Expenses and any other Obligations; and fourth, after all Obligations are repaid, the excess (if any) shall be refunded to Borrowers or paid to whomsoever may be legally entitled thereto, provided that amounts payable to Lenders, shall be paid ratably.

2.4 Fees and Charges. Borrowers shall pay to Administrative Agent, for the ratable benefit of Lenders:

(a) Fees. The fees and charges as and when due in accordance with the Fee Letter; and

(b) Expenses. All Secured Party Expenses (including reasonable and documented outside attorneys' fees and expenses for documentation and negotiation of this Agreement and the other Loan Documents) incurred through and after the Closing Date, when due (or, if no stated due date, within two (2) Business Days after demand by Administrative Agent).

2.5 Payments; Application of Payments; Automatic Payment Authorization; Withholding.

(a) All payments to be made by Borrowers under any Loan Document, including payments of principal and interest and all fees, charges, expenses, indemnities and reimbursements, shall be made in immediately available funds in Dollars, without setoff, recoupment or counterclaim, before 3:00 p.m. Eastern Time on the date when due, subject to Schedule 3 with respect to Taxes. Payments of principal and/or interest received after 3:00 p.m. Eastern Time are considered received at the opening of business on the next Business Day. When a payment is due on a day that is not a Business Day, the payment shall be due the next Business Day, and additional fees or interest, as applicable, shall continue to accrue until paid.

(b) No Borrower shall have a right to specify the order or the loan accounts to which a Lender shall allocate or apply any payments made by a Borrower to or for the benefit of such Lender or otherwise received by such Lender under this Agreement when any such allocation or application is not expressly specified elsewhere in this Agreement. Without limitation of the foregoing, unless expressly so allocated by Administrative Agent, no payment or prepayment of principal shall be applied to the outstanding principal balance under any outstanding Restatement First Tranche Term Loans – Part A or Restatement First Tranche Term Loans – Part B unless all other outstanding Term Loans have been repaid in full.

(c) Administrative Agent, on behalf of Secured Parties, may initiate debit entries to any Deposit Accounts as authorized on the Automatic Payment Authorization for principal and interest payments or any other Obligations when due. These debits shall not constitute a set-off. If the ACH payment arrangement is terminated for any reason, Borrowers shall make all payments due hereunder at the applicable address specified in Section 10, or as otherwise notified by Administrative Agent in writing.

(d) Each Loan Party and Secured Party hereby agrees to the terms and conditions set forth on Schedule 3 hereto.

2.6 Promissory Notes. Borrowers agree that: (a) upon written notice by or on behalf of any Lender to Borrowers that a promissory note or other evidence of indebtedness is requested by such Lender to evidence the Loans and other Obligations owing or payable to, or to be made by, such Lender, Borrowers shall promptly (and in any event within three (3) Business Days of any such request) execute and deliver to such Lender an appropriate promissory note, in substantially the form attached hereto as Exhibit G, and (b) upon any Lender's written request, and in any event within three (3) Business Days of any such request, Borrowers shall execute and deliver to such Lender new notes and/or divide the notes in exchange for then existing notes in such smaller amounts or denominations as such Lender shall specify in its sole and absolute discretion; provided, that the aggregate principal amount of such new notes shall not exceed the aggregate principal amount of the applicable Loans made by such Lender; provided, further, that such promissory notes that are to be replaced shall then be deemed no longer outstanding hereunder and replaced by such new notes and returned to Borrowers within a reasonable period of time after such Lender's receipt of the replacement notes. Regardless of whether or not any such promissory notes are issued, this Agreement shall evidence the Loans and other Obligations owing or payable by Borrowers to each Lender.

3. CONDITIONS OF LOANS

3.1 Conditions Precedent to Initial Loan. Each Lender's obligation to make the initial Loan is subject to the condition precedent that Administrative Agent shall have received, in form and substance satisfactory to Administrative Agent, such documents, and completion of such other matters, as Administrative Agent may reasonably deem necessary or appropriate, including, without limitation:

(a) duly executed signatures to this Agreement;

(b) duly executed signatures to the Fee Letter;

(c) a certificate of each Loan Party, duly executed by a Responsible Officer, certifying and attaching (i) the Operating Documents, (ii) unanimous written consent duly approved by the Board, (iii) any resolutions, consent or waiver duly approved by the requisite holders of each Loan Party's Equity Interests, if applicable (or certifying that no such resolutions, consent or waiver is required), and (iv) a schedule of incumbency;

(d) a payoff letter with respect to Indebtedness outstanding as of the Closing Date to Silicon Valley Bank, together with all documents reasonably required in connection with the payoff and release of security interests, including with respect to the release of the liens registered with the Israeli Registrar of Companies;

(e) the Perfection Certificate of Borrower Representative, together with the duly executed signature thereto;

(f) evidence satisfactory to Administrative Agent, that the insurance policies required by Section 6.5 are in full force and effect;

(g) a legal opinion of US and Israeli counsel to the Loan Parties, each in forms reasonably acceptable to the Administrative Agent;

(h) delivery of the ISR Guarantor Documents; and

(i) payment of the fees in accordance with the Fee Letter and Secured Party Expenses then due as specified in Section 2.4(a), and subject to Section 2.4(c).

3.2 Conditions Precedent to all Loans. Each Lender's obligations to make each Loan is subject to the following conditions precedent:

(a) except for the Restatement Term Loan made on the ~~Closing~~Restatement Effective Date, timely receipt of an executed Loan Request by Administrative Agent;

(b) the representations and warranties in this Agreement and the other Loan Documents shall be true, accurate, and complete in all material respects on the date of the Loan Request and on the Funding Date of each Loan; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof; and provided, further that those representations and warranties expressly referring to a specific date shall be true, accurate and complete in all material respects as of such date;

(c) no Default or Event of Default shall have occurred and be continuing or result from the Loan; and

(d) there has not been any event or circumstance that has had or could reasonably be expected to have a Material Adverse Effect, or any material adverse deviation by Borrowers from the most recent business plan of Borrowers presented to and accepted by Administrative Agent, as determined by Administrative Agent in Administrative Agent's sole discretion.

3.3 Covenant to Deliver.

(a) Loan Parties agree to deliver each item required to be delivered under this Agreement as a condition precedent to any Loan. Loan Parties expressly agree that a Loan made prior to the receipt of any such item

shall not constitute a waiver by Administrative Agent of a Borrower's obligation to deliver such item, and the making of any Loan in the absence of a required item shall be in Administrative Agent's sole discretion.

(b) Loan Parties agree to deliver the items set forth on Schedule 2B hereto within the timeframe set forth therein (or by such other date as Administrative Agent may approve in writing), in each case, in form and substance reasonably acceptable to Administrative Agent.

3.4 Procedures for Borrowing. Except for any Loan to be made on the Closing Date in accordance with the terms hereof, to obtain a Loan, Borrower Representative shall deliver a completed Loan Request to Administrative Agent (which may be delivered by email) no later than 3:00 p.m. Eastern Time, ten (10) Business Days prior to the date such Loan is requested to be made. On the Funding Date, each applicable Lender shall fund the applicable Loan in the manner requested by the Loan Request, provided that each of the conditions precedent to such Loan is satisfied.

4. CREATION OF SECURITY INTEREST

4.1 Grant of Security Interest. Each Loan Party hereby grants to Collateral Trustee, and in the case of the ISR Guarantor, the ISR Collateral Agent under the ISR Collateral Documents, for the ratable benefit of Secured Parties, to secure the payment and performance in full of all of the Obligations, a continuing security interest in, and pledges to Collateral Trustee or ISR Collateral Agent (as applicable), the respective Collateral, wherever located, whether now owned or hereafter acquired or arising, and all proceeds and products thereof, provided that with respect to Shares owned by ISR Guarantor and pledged pursuant to Section 4.4, the security interest in such Collateral shall be granted to Collateral Trustee for the ratable benefit of the Secured Parties (and not to ISR Collateral Agent). If this Agreement is terminated, Collateral Trustee's and ISR Collateral Agent's respective Liens in the Collateral shall continue until the Obligations (other than contingent indemnification obligations as to which no claim has been asserted or is known to exist) and any other obligations which, by their terms are to survive the Termination Date, are paid in full.

4.2 Priority of Security Interest. Each Loan Party represents, warrants, and covenants that the security interest granted herein is and shall at all times continue to be a first priority perfected security interest in the Collateral (subject only to Permitted Liens that are permitted pursuant to the terms of this Agreement to have superior priority to Collateral Trustee's and ISR Collateral Agent's respective Lien under this Agreement). If a Loan Party shall acquire a commercial tort claim with a potential recovery in excess of $250,000, such Loan Party shall promptly notify Administrative Agent in writing and deliver such other information and documents as Administrative Agent may require to take any further action necessary or advisable to perfect Collateral Trustee's and ISR Collateral Agent's respective Lien in such commercial tort claim. If a Loan Party shall acquire any instrument, such Loan Party shall promptly notify Administrative Agent and deliver the same in original to the Collateral Trustee together with an allonge or other appropriate instrument of transfer and any necessary endorsement, all in form satisfactory to Administrative Agent.

4.3 Authorization to File Financing Statements. Each Loan Party hereby authorizes Collateral Trustee or its designee (or the Administrative Agent, on behalf of the Collateral Trustee) to file at any time financing statements, continuation statements and amendments thereto with all appropriate jurisdictions to perfect or protect Collateral Trustee's interest or rights hereunder.

4.4 Pledge of Collateral. Each Loan Party hereby pledges, collaterally assigns and grants to Collateral Trustee (or in case of the Shares of ISR Guarantor, in favor of ISR Collateral Agent), for the ratable benefit of the Secured Parties, a security interest in the applicable Shares, together with all proceeds and substitutions thereof, all cash, stock and other moneys and property paid thereon, all rights to subscribe for securities declared or granted in connection therewith, and all other cash and noncash proceeds of the foregoing, as security for the performance of the Obligations. On the Closing Date or to the extent any Shares pledged hereunder from time to time are or become certificated, such certificate or certificates shall be delivered to Collateral Trustee or ISR Collateral Agent, as applicable, accompanied by a stock power or other appropriate instrument of assignment duly executed in blank. To

the extent required by the terms and conditions governing the Shares in which a Loan Party has an interest, such Loan Party shall cause the books of each issuer of Shares pledged hereunder and any transfer agent to reflect the pledge of the Shares. Schedule 6 identifies a true and accurate list of pledged Shares as of the Closing Date. If any Loan Party acquires any Shares following the Closing Date or there is any change resulting in the information in Schedule 6 no longer being accurate and complete, Borrower Representative shall deliver the updated Schedule 6 no later than the delivery of the then-next Compliance Certificate, which upon review and acceptance by Agent shall be deemed to replace Schedule 6 to this Agreement. Upon the occurrence and during the continuation of an Event of Default hereunder, Collateral Trustee or ISR Collateral Agent, as applicable, may effect the transfer of any securities included in the Collateral (including but not limited to the Shares) into the name of Collateral Trustee or ISR Collateral Agent, as applicable, and cause new certificates representing such securities to be issued in the name of Collateral Trustee or ISR Collateral Agent, as applicable, or its transferee. Each Loan Party will execute and deliver such documents, and take or cause to be taken such actions, as Administrative Agent may reasonably request to perfect or continue the perfection of Collateral Trustee's or ISR Collateral Agent's, as applicable, security interest in the Shares. Each Loan Party shall be entitled to exercise any voting rights with respect to the Shares in which it has an interest and to give consents, waivers and ratifications in respect thereof, unless following an Event of Default, Collateral Trustee or ISR Collateral Agent, as applicable (in each case, acting at the direction of Administrative Agent subject to the terms of the Collateral Trust Agreement) shall have given notice to Borrower Representative suspending such rights, provided that no such notice shall be required if a Loan Party has commenced an Insolvency Proceeding and, in any event, no vote shall be cast or consent, waiver or ratification given or action taken which would be inconsistent with any of the terms of this Agreement or which would constitute or create any violation of any of such terms. All such rights to vote and give consents, waivers and ratifications shall terminate upon notice given in accordance with the foregoing during the continuation of an Event of Default.

4.5 ISR Collateral Documents. The ISR Guarantor undertakes to create, in favor of the ISR Collateral Agent, a first ranking (subject to Permitted Liens permitted according to applicable law and/or the provisions hereof to have priority) floating charge over all of the present and future assets of the ISR Guarantor whether now existing or hereafter created, and a first ranking (subject to Permitted Liens permitted according to applicable law and/or the provisions hereof to have priority) fixed charge over the ISR Guarantor's registered and unissued share capital, its reputation and goodwill, Accounts, its rights to receive funds from its customers and other fixed assets and any tax benefit it may have, in accordance with the respective ISR Collateral Documents (as amended, modified or restated from time to time). In addition, the ISR Guarantor undertakes to create within twenty (20) days of the end of each financial year, and more often if requested at the sole and absolute discretion of the ISR Collateral Agent to the extent the conditions warrant, a first ranking fixed charge over (i) each Account which is outstanding at such time, and with respect of which advances are or have been made, (ii) the ISR Guarantor's rights, whether then existing or thereafter created, to receive funds from its customers and (iii) the ISR Guarantor's Equipment, all in accordance with the ISR Fixed Debenture (or in the form of an amendment to the existing ISR Collateral Document, at the ISR Collateral Agent's discretion; each such new and/or amended debenture shall also be included in the definition of the term "**ISR Collateral Document**" herein). The ISR Guarantor warrants and represents that the charges of the ISR Collateral Documents, upon the filing thereof, shall be first priority (subject to Permitted Liens permitted according to applicable law and/or the provisions hereof to have priority) fixed and floating charges (as provided therein) in the applicable Collateral.

In addition to and without limiting the foregoing, all Obligations shall also be secured by (a) any and all properties, rights and assets of the ISR Guarantor granted by the ISR Guarantor to the ISR Collateral Agent now, or in the future, in which the ISR Guarantor obtains an interest, or the power to transfer rights in, including, without limitation, the Charged Property as set forth in the ISR Collateral Documents, and (b) any and all security agreements, mortgages or other collateral agreements granted by the ISR Guarantor to the ISR Collateral Agent, now or in the future.

4.6 Exclusion of Certain ISR Collateral. Notwithstanding the foregoing, as to the ISR Guarantor, the foregoing grant of security interest shall not apply to ISR Collateral to the extent a security interest therein is governed by the ISR Collateral Documents.

5. REPRESENTATIONS AND WARRANTIES

Each Loan Party represents and warrants as follows:

5.1 Due Organization, Authorization; Power and Authority.

(a) Each Loan Party and each of its Subsidiaries is duly existing and (in such jurisdictions where applicable) in good standing as a Registered Organization in its respective jurisdiction of formation, ISR Guarantor is not a "*breaching company*" (as such term is defined under the Israeli Companies Law 1999) and each Loan Party and each of its Subsidiaries is qualified and licensed to do business and is in good standing in any other jurisdiction in which the conduct of its respective business or ownership of property requires that it is qualified except where the failure to do so could not reasonably be expected to have a Material Adverse Effect. ISR Guarantor is a limited liability company, duly organized and validly existing and is not in a status of a "breaching company" (as such term is defined under the Israeli Companies Law, 5759-1999), under the laws of the State of Israel and has the power to carry on its business as it is now being conducted and to owns its property and other assets. In connection with this Agreement, Borrower Representative has delivered to Administrative Agent a completed certificate signed by a Responsible Officer of Borrower Representative entitled "**Perfection Certificate**". Except to the extent Borrower Representative has provided notice of a legal name change in accordance with Section 7.2, (i) each Loan Party's exact legal name is that indicated on the Perfection Certificate and on the signature page hereof; (ii) each Loan Party is an organization of the type and is organized in the jurisdiction set forth in the Perfection Certificate; (iii) the Perfection Certificate accurately sets forth each Loan Party's organizational identification number or accurately states that such Loan Party has none; (iv) the Perfection Certificate accurately sets forth each Loan Party's place of business, or, if more than one, its chief executive office as well as such Loan Party's mailing address (if different than its chief executive office); (v) except as set forth in the Perfection Certificate, each Loan Party (and each of its predecessors) has not, in the past five (5) years, changed its jurisdiction of formation, organizational structure or type, or any organizational number assigned by its jurisdiction; and (vi) all other information set forth on the Perfection Certificate pertaining to each Loan Party and each of its Subsidiaries is accurate and complete in all material respects (it being understood and agreed that each Loan Party may from time to time update certain information in the Perfection Certificate after the Closing Date to the extent permitted by one or more specific provisions in this Agreement).

(b) The execution, delivery and performance by each Loan Party of the Loan Documents to which it is a party have been duly authorized, and do not (i) conflict with such Loan Party's Operating Documents or other organizational documents, (ii) contravene, conflict with, constitute a default under or violate any material Requirement of Law, (iii) contravene, conflict or violate any applicable order, writ, judgment, injunction, decree, determination or award of any Governmental Authority by which such Loan Party or any of its Subsidiaries or any of their property or assets may be bound or affected, (iv) require any action by, filing, registration, or qualification with, or Governmental Approval from, any Governmental Authority (except such Governmental Approvals which have already been obtained and are in full force and effect), or (v) conflict with, contravene, constitute a default or breach under, or result in or permit the termination or acceleration of, any material agreement by which such Loan Party is bound. No Loan Party is in default under any agreement to which it is a party or by which it is bound in which the default could reasonably be expected to have a Material Adverse Effect.

5.2 Collateral.

(a) Each Loan Party has good title to, rights in, and the power to transfer each item of the Collateral upon which it purports to grant a Lien hereunder, free and clear of any and all Liens except Permitted Liens.

(b) Except for the Collateral Accounts described in the Perfection Certificate or in a notice timely delivered pursuant to Section 6.6, no Loan Party has any Collateral Accounts at or with any bank, broker or other financial institution, and with respect to each Collateral Account located in the United States, each Loan Party has taken such actions as are necessary to give Collateral Trustee or ISR Collateral Agent (as applicable) a perfected security interest therein as required pursuant to the terms of Section 6.6(b). The Accounts are bona fide, existing obligations of the Account Debtors.

(c) The Collateral is located only at the locations identified in the Perfection Certificate and any other locations as to which Loan Parties have complied with Section 6.12. The Collateral is not in the possession of any third party bailee (such as a warehouse) except as otherwise provided in the Perfection Certificate or as disclosed in writing pursuant to Section 6.12.

(d) Each Loan Party is the sole owner of the Intellectual Property which it owns or purports to own except for (i) licenses constituting "Permitted Transfers", (ii) open-source software, (iii) over-the-counter software that is commercially available to the public, (iv) material Intellectual Property licensed to such Loan Party and noted on the Perfection Certificate or as disclosed pursuant to Section 6.7(b), and (v) immaterial Intellectual Property licensed to such Loan Party. Each Patent (other than patent applications) which it owns or purports to own and which is material to such Loan Party's business is valid and enforceable, and no part of the Intellectual Property which a Loan Party owns or purports to own and which is material to the Loan Parties' business has been judged invalid or unenforceable, in whole or in part. To the best of each Loan Party's knowledge, no claim has been made that any part of the Intellectual Property violates the rights of any third party except to the extent such claim could not reasonably be expected to have a Material Adverse Effect. Except as noted on the Perfection Certificate or as disclosed pursuant to Section 6.7(b), no Loan Party is a party to, nor is it bound by, any Restricted License. No Subsidiary which is not a Loan Party owns any material Intellectual Property. It will not be necessary to use any inventions of any of such Loan Party's employees or consultants (or Persons it currently intends to hire) made prior to their employment by such Loan Party. Each current and prior employee, consultant or other Affiliate thereof has entered into an invention assignment agreement or similar agreement with such Loan Party with respect to all intellectual property rights he or she owns that are related to the Loan Parties' business.

5.3 Accounts; Material Agreements. The Accounts are bona fide existing obligations. The material licenses and agreements to which any Loan Party or any of its Subsidiaries is a party is in good standing and in full force and effect and no Loan Party is in breach with respect thereto, in which the breach could reasonably be expected to have a Material Adverse Effect. No material customer or supplier has terminated, significantly reduced or communicated its intent to do so to any Loan Party or any of its Subsidiaries.

5.4 Litigation and Proceedings. Except as set forth in the Perfection Certificate or as disclosed in writing pursuant to Section 6.2, there are no actions, suits, litigations or proceedings, at law or in equity, pending, or, to the knowledge of any Responsible Officer, threatened in writing, by or against any Loan Party or any of its Subsidiaries, officers or directors involving more than, individually or in the aggregate for all related proceedings, $250,000 or in which any adverse decision has had or could reasonably be expected to have any Material Adverse Effect.

5.5 Financial Statements; Financial Condition. All consolidated and consolidating (if applicable) financial statements for the Loan Parties and each of their Subsidiaries delivered to Administrative Agent fairly present in all material respects the consolidated and consolidating (if applicable) financial condition and results of operations of the Loan Parties and each of their Subsidiaries as of the respective dates and for the respective periods then ended, and there are no material liabilities (including any contingent liabilities) which are not reflected in such financial statements. There has not been any material deterioration in the consolidated and consolidating (if applicable) financial condition of the Loan Parties and each of its Subsidiaries or the Collateral since the date of the most recent financial statements submitted to Administrative Agent.

5.6 Solvency. The fair salable value of the assets (including goodwill minus disposition costs) of the Loan Parties and their Subsidiaries, on a consolidated basis, exceeds the fair value of liabilities of the Loan Parties' and their Subsidiaries, on a consolidated basis; the Loan Parties and their Subsidiaries, on a consolidated basis, are not left with unreasonably small capital after the transactions in this Agreement; and the Loan Parties and their Subsidiaries, on a consolidated basis, are able to pay their debts (including trade debts) as they mature. No Insolvency Proceedings have been commenced by, or have been threatened against, ISR Guarantor, including but not limited to, a stay of proceedings (*ikuv halichim*), an initiation of proceedings order (*tsav le-ptichat halichim*), or an application for a financial rehabilitation order (*tsav le-shikum calcali*), and there has been no other event that could be deemed an

insolvency event or which could be classified as insolvent pursuant to the Israeli Insolvency Law or any other applicable law.

5.7 Consents; Approvals. Each Loan Party and each of its Subsidiaries have obtained all third party consents, approvals, waivers, made all declarations or filings with, given all notices to, and obtained all consents, licenses, permits or other approvals from all Governmental Authorities that are necessary (i) to enter into the Loan Documents and consummate the transactions contemplated thereby, and (ii) to continue their respective businesses as currently conducted, except (with respect to this clause (ii)) where failure to do so could not reasonably be expected to result in a Material Adverse Effect.

5.8 Subsidiaries; Investments. No Loan Party has any Subsidiaries, except as noted on the Perfection Certificate or as disclosed to Administrative Agent pursuant to Section 6.11 below. No Loan Party owns any stock, partnership, or other ownership interest or other Equity Interests except for Permitted Investments.

5.9 Tax Returns and Payments. Each Loan Party and each of its Subsidiaries have timely filed all required federal and all material state, local and foreign tax returns and reports (or appropriate extensions therefor), and such Loan Party and each of its Subsidiaries has timely paid all foreign, federal, state and local taxes, assessments, deposits and contributions owed by such Loan Party or such Subsidiary, as applicable, except (a) to the extent such taxes are being contested in good faith by appropriate proceedings promptly instituted and diligently conducted, so long as such reserve or other appropriate provision, if any, as shall be required in conformity with GAAP shall have been made therefor, or (b) if such taxes, assessments, deposits and contributions do not, individually or in the aggregate, exceed Twenty-Five Thousand Dollars ($25,000). No Loan Party is aware of any claims or adjustments proposed for any prior tax years of such Loan Party or any of its Subsidiaries which could result in a material amount of additional taxes becoming due and payable by such Loan Party or Subsidiary.

5.10Shares. Such Loan Party has full power and authority to create a first lien on the Shares and no disability or contractual obligation exists that would prohibit such Loan Party from pledging the Shares pursuant to this Agreement. There are no subscriptions, warrants, rights of first refusal or other restrictions on transfer relative to, or options exercisable with respect to the Shares. The Shares have been and will be duly authorized and validly issued, and are fully paid and (with respect to Shares issued by a Domestic Subsidiary that is a corporation) non-assessable. The Shares are not the subject of any present or threatened suit, action, arbitration, administrative or other proceeding, and such Loan Party knows of no reasonable grounds for the institution of any such proceedings.

5.11Compliance with Laws.

(a) No Loan Party or Subsidiary of a Loan Party is an "investment company" or an "affiliated person" of, or "promoter" or "principal underwriter" for, an "investment company", as such terms are defined in the Investment Company Act of 1940 as amended.

(b) No Loan Party or Subsidiary of a Loan Party is engaged, nor will it engage, principally or as one of its important activities, in the business of extending credit for the purpose of "purchasing" or "carrying" any "margin security" as such terms are defined in Regulation U of the Federal Reserve Board as now and from time to time hereafter in effect (such securities being referred to herein as "**Margin Stock**"). None of the proceeds of the Loans or other extensions of credit under this Agreement have been (or will be) used, directly or indirectly, for the purpose of purchasing or carrying any Margin Stock, for the purpose of reducing or retiring any Indebtedness which was originally incurred to purchase or carry any Margin Stock or for any other purpose which might cause any of the Loans or other extensions of credit under this Agreement to be considered a "purpose credit" within the meaning of Regulation T, U or X of the Federal Reserve Board.

(c) No Loan Party has taken or permitted to be taken any action which might cause any Loan Document to which it is a party to violate any regulation of the Federal Reserve Board. Neither the making of the Loans hereunder nor Borrowers' use of the proceeds thereof will violate the Trading with the Enemy Act, as amended, or any of the foreign assets control regulations of the United States Treasury Department (31 CFR, Subtitle B, Chapter

V, as amended) or any enabling legislation or executive order relating thereto. No Loan Party, nor any of its Subsidiaries, nor any Affiliate of any Loan Party or of any Subsidiary, nor any present holder of Equity Interests of any of the foregoing (i) is a Person described or designated in the Specially Designated Nationals and Blocked Persons List of the Office of Foreign Assets Control of the United States Department of Treasury ("**OFAC**") or in Section 1 of the Anti-Terrorism Order or similar sanctions laws of any other Governmental Authority including of any other applicable jurisdiction, (ii) is a citizen or resident of any country or territory that is subject to embargo or trade sanctions enforced by OFAC, (iii) is, or will become, a Person whose property or interest in property is blocked or subject to blocking pursuant to Section 1 of the Anti-Terrorism Order, or (iv) engages in any dealings or transactions, or is otherwise associated, with any such Person.

(d) Each Loan Party and its Subsidiaries are in compliance, in all material respects, with the USA Patriot Act. No part of the proceeds from the Loans made hereunder has been (or will be) used, directly or indirectly, for any payments to any governmental official or employee, political party, official of a political party, candidate for political office, or anyone else acting in an official capacity, in order to obtain, retain or direct business or obtain any improper advantage, in violation of the United States Foreign Corrupt Practices Act of 1977, as amended.

(e) No Reportable Event or Prohibited Transaction, as defined in ERISA has occurred or is reasonably expected to occur, and no Loan Party has failed to meet the minimum funding requirements of ERISA. No Loan Party has violated any applicable environmental laws in any material respect, maintains any properties or assets which have been designated in any manner pursuant to any environmental protection statute as a hazardous materials disposal site, or has received any notice, summons, citation or directive from the Environmental Protection Agency or any other similar Governmental Authority.

5.12Products. A complete and accurate list of the Products, is set forth on the Perfection Certificate, as updated from time to time pursuant to the Compliance Certificate. The Loan Parties and each of its Subsidiaries hold all required Governmental Approvals, a list of which is set forth on the Perfection Certificate, and all Governmental Approvals are in full force and effect. There are no proceedings in progress, pending or, to such Loan Party's knowledge, threatened, that may result in revocation, cancellation, suspension, rescission or any adverse modification of any of any Governmental Approval nor, to the best of the knowledge, information and belief of such Loan Party, after due inquiry, are there any facts upon which proceedings could reasonably be based. Without limitation of the foregoing:

(a) Except as could not reasonably be expected to have a Material Adverse Effect, with respect to any Product being tested or manufactured, each Loan Party and each of its Subsidiaries has received, and such Product is the subject of, all Governmental Approvals needed in connection with the testing or manufacture of such Product as such testing is currently being conducted by or on behalf of a Loan Party or any of its Subsidiaries, and neither any Loan Party nor any of its Subsidiaries has received any notice from any applicable Governmental Authority, that such Governmental Authority is conducting an investigation or review of (i) any Loan Party's or any of its Subsidiary's manufacturing facilities and processes for such Product which have disclosed any material deficiencies or violations of any Requirement of Law or the Governmental Approvals related to the manufacture of such Product, or (ii) any such Governmental Approval or that any such Governmental Approval has been revoked or withdrawn, nor has any such Governmental Authority issued any order or recommendation stating that the development, testing and/or manufacturing of such Product should cease.

(b) Except as could not reasonably be expected to have a Material Adverse Effect, with respect to any Product marketed or sold by a Loan Party or any of its Subsidiaries, such Loan Party or such Subsidiary, as applicable, has received, and such Product is the subject of, all Governmental Approvals needed in connection with the marketing and sales of such Product as currently being marketed or sold, and no Loan Party nor any of its Subsidiary has received any notice from any applicable Governmental Authority, that such Governmental Authority is conducting an investigation or review of any such Governmental Approval or approval or that any such Governmental Approval has been revoked or withdrawn, nor has any such Governmental Authority issued any order or recommendation stating that such marketing or sales of such Product cease or that such Product be withdrawn from the marketplace;

(c) There have been no adverse clinical test results in connection with a Product which have or could reasonably be expected to have a Material Adverse Effect; and

(d) There have been no Product recalls or voluntary Product withdrawals from any market, except as could not reasonably be expected to have a Material Adverse Effect.

5.13Royalty and Milestone Payments. As of the Closing Date, except as set forth on Schedule 5 hereto, no Loan Party is obligated to make Royalty and Milestone Payments in excess of $250,000 in the aggregate per fiscal year.

5.14IIA and Investment Center. As of the Closing Date, the ISR Guarantor did not receive any grants, funds or benefits (including, but not limited to, tax benefits) from the IIA (formerly known as, the National Authority for Technological Innovation) or Investment Center, or the Binational Industrial Research and Development Foundation or any other Governmental Authority. The ISR Guarantor is not obligated to pay any royalties or any other payments to the IIA or Investment Center or the Binational Industrial Research and Development Foundation or any other Governmental Authority. The transactions contemplated under this Agreement, the ISR Collateral Documents and any other Loan Document (including the realization of the Charged Property) are not subject to any right and do not require the approval of the IIA or Investment Center or the Binational Industrial Research and Development Foundation or any other Governmental Authority.

5.15Full Disclosure. No written representation, warranty or other statement of a Loan Party or any of its Subsidiaries in any certificate or written statement by or on behalf of a Loan Party or any of its Subsidiaries in connection with this Agreement, as of the date such representation, warranty, or other statement was made, taken together with all such written certificates and written statements given, contains any untrue statement of a material fact or omits to state a material fact necessary to make the statements contained in the certificates or statements not misleading in light of the circumstances under which they were made (it being recognized that the projections and forecasts provided by any Loan Party in good faith and based upon reasonable assumptions are not viewed as facts and that actual results during the period or periods covered by such projections and forecasts may differ from the projected or forecasted results).

6. AFFIRMATIVE COVENANTS

Each Loan Party shall do all of the following:

6.1 Government Compliance. Maintain its and all its Subsidiaries' legal existence and good standing in their respective jurisdictions of formation and maintain qualification in each jurisdiction in which the failure to so qualify could reasonably be expected to have a Material Adverse Effect; comply, and cause each Subsidiary to comply, with all laws, ordinances and regulations to which it is subject except where a failure to do so could not reasonably be expected to have a Material Adverse Effect; obtain all of the Governmental Approvals required in connection with such Loan Party's business and for the performance by each Loan Party of its obligations under the Loan Documents to which it is a party and the grant of a security interest in accordance therewith, and comply with all terms and conditions with respect to such Governmental Approvals.

6.2 Financial Statements, Reports, Certificates. Provide Administrative Agent with the following:

(a) Monthly Financial Statements. Within thirty (30) days after the last day of each month that is not the end of a fiscal quarter, a company prepared consolidated balance sheet, income statement and statement of cash flows covering the Loan Parties and each of their Subsidiaries' operations on a consolidated basis for such month, in form reasonably acceptable to Administrative Agent, and as internally prepared by the Loan Parties consistent with past practices.

(b) Quarterly Financial Statements. Within thirty (30) days after the last day of each fiscal quarter, a company prepared consolidated and consolidating balance sheet, income statement and statement of cash

flows covering the Loan Parties and each of their Subsidiaries' operations for such fiscal quarter, in form reasonably acceptable to Administrative Agent, certified by a Responsible Officer as having been prepared in accordance with GAAP, consistently applied, except for the absence of footnotes, and subject to normal year-end adjustments.

(c) Compliance Certificates. Together with the monthly or quarterly financial statements, a duly completed Compliance Certificate signed by a Responsible Officer.

(d) Annual Operating Budget and Financial Projections. Within thirty (30) days after the end of each fiscal year of Parent (and within seven (7) days of any material modification thereto), an annual operating budget, on a consolidated basis in the format provided to the Board of Parent (including income statements, balance sheets and cash flow statements, by month) for the upcoming fiscal year of Parent, together with any related business forecasts used in the preparation thereof.

(e) Annual Audited Financial Statements. As soon as available, but no later than ninety (90) days after the last day of Parent's fiscal year, audited consolidated financial statements prepared in accordance with GAAP, consistently applied, together with an opinion on the financial statements from KPMG or any other independent certified public accounting firm reasonably acceptable to Administrative Agent, which opinion shall not be subject to any "going concern" or like qualification or exception (other than any provided that the inclusion of explanatory language casting doubt on Borrower's ability to continue as a going concern due solely to the impending maturity date of the Loans), together with any management letter with respect thereto.

(f) Other Statements. Within five (5) days of delivery, copies of all statements, reports and notices generally made available to all stockholders or to any holders of Subordinated Debt.

(g) SEC Filings. Within five (5) days of filing, copies of all periodic and other reports, proxy statements and other materials filed by Parent with the Securities and Exchange Commission (other than in connection with changes in beneficial ownership), provided that such filings shall be deemed to have been delivered on the date on which Parent posts such documents on Parent's website, subject to notification of the filing on the then-next Compliance Certificate.

(h) Legal Action Notice. A prompt report of any legal actions pending or threatened in writing against any Loan Party or any of its Subsidiaries that could result in damages or costs to any Loan Party or any of its Subsidiaries, individually or in the aggregate for all related proceedings, of $250,000 or more, or of any Loan Party or any of its Subsidiaries taking or threatening legal action against any third person with respect to a material claim, and with respect to any pending action or threatened action, a prompt report of any material development with respect thereto.

(i) Board Materials. At the same time and in the same manner as it gives to the members of Parent's Board or any committee or subcommittee thereof or advisory board, copies of all materials that Parent provides to its Board or such committee or subcommittee or advisory board in connection with meetings thereof, including any reports with respect to Loan Parties' operations or performance, and promptly after such meeting, minutes of such meetings; provided, however, the foregoing may be subject to such exclusions and redactions as necessary in order to (A) preserve the confidentiality of highly sensitive proprietary information, (B) prevent impairment of the attorney client privilege, (C) prevent disclosure of information disclosure of which is prohibited pursuant to the order of any court or administrative agency in any pending legal, judicial or administrative proceeding, or otherwise as required by applicable law or compulsory legal process or to the extent required by governmental or regulatory authorities, or (D) prevent disclosure to the Administrative Agent or the Lenders of discussion related to the Loan Documents.

(j) Intellectual Property Report. Together with the Compliance Certificate delivered at the end of each fiscal quarter, a report in form reasonably acceptable to Administrative Agent, listing any applications or registrations that any Loan Party or any of its Subsidiaries has made or filed in respect of any Patents, Copyrights or Trademarks and the status of any outstanding applications or registrations.

(k) Aging Reports; Other Reports and Information. Together with the monthly financial reports, reports as to the following, in form reasonably acceptable to Administrative Agent: accounts receivable and accounts payable aging, a report of cash balance and revenue, by legal entity for Borrower Representative and each of its Subsidiaries, and any other information related to the financial or business condition of any Loan Party as and when reasonably requested by Administrative Agent.

(l) Bank Account Statements. (i) Together with the monthly financial statements delivered in accordance with subsection (a) above, a summary of the balances of each Deposit Account and Securities Account of each Loan Party and its Subsidiaries (together with a copy of the most recent account statement, with transaction detail, for each Deposit Account or Securities Account of a Loan Party or any of its Subsidiaries) and (ii) within three (3) days following Administrative Agent's reasonable request, evidence reasonably satisfactory to Administrative Agent of the balance maintained in any such Deposit Account or Securities Account.

(m) Product Related. Within three (3) Business Days of receipt, copies of all material correspondence, reports, documents and other filings with any Governmental Authority that could reasonably be expected to have a material adverse effect on any Governmental Approvals required for the manufacturing, marketing, testing or sale of Products or which could have a Material Adverse Effect.

(n) Royalty and Milestone Payments. Together with each Compliance Certificate, an updated schedule of reasonably expected Royalty and Milestone Payments, in substantially the same form as Schedule 5 hereto, to the extent any material change thereto.

(o) Updates regarding Disclosed Matters. Together with the monthly financial reports, to the extent there has been any material development in the matter disclosed in Section 10 of the Perfection Certificate, including any change to the contingent liability to the Loan Parties, during the month then ended, together with any supporting materials or calculations as Administrative Agent may reasonably request.

Information required to be delivered pursuant to Section 6.2 may be delivered electronically and if so delivered, shall be deemed to have been delivered on the date (i) on which Borrower posts such information, posted on its website or at http://www.sec.gov, subject to notification thereof in the next Compliance Certificate delivered.

6.3 Inventory; Returns. Keep all Inventory in good and marketable condition, free from material defects. Returns and allowances between a Loan Party and its Account Debtors shall follow such Loan Party's customary practices as they exist at the Closing Date. Borrower Representative shall promptly notify Administrative Agent of all returns, recoveries, disputes and claims that involve more than $250,000.

6.4 Taxes; Pensions. Timely file, and cause each of its Subsidiaries to timely file, all required federal and all material state, local and foreign tax returns and reports and timely pay, and require each of its Subsidiaries to timely pay, all foreign, federal, state and local taxes owed by such Loan Party and each of its Subsidiaries, except for deferred payment of any taxes contested pursuant to the terms of Section 5.9, or such taxes, assessments, deposits and contributions that do not, individually or in the aggregate, exceed Twenty-Five Thousand Dollars ($25,000), and shall deliver to Administrative Agent, on demand, appropriate certificates attesting to such payments, and pay all amounts necessary to fund all present pension, profit sharing and deferred compensation plans in accordance with their terms.

6.5 Insurance.

(a) Keep, and cause each Subsidiary to keep, its business and the Collateral insured for risks and in amounts standard for companies in the Loan Parties' industry and location and as Administrative Agent may reasonably request. Insurance policies shall be in a form, with financially sound and reputable insurance companies that are not Affiliates of any Loan Party, and in amounts that are reasonably satisfactory to Administrative Agent.

(b) Ensure that proceeds payable under any property policy with respect to Collateral are, at Administrative Agent's option, payable to Collateral Trustee, for the ratable benefit of Lenders, on account of the

Obligations. To that end, all property policies shall have a lender's loss payable endorsement showing Collateral Trustee as lender loss payable, all liability policies shall show, or have endorsements showing, Collateral Trustee as an additional insured, in each case, in form satisfactory to Administrative Agent and as set forth on Exhibit E. With respect to any insurance policy of ISR Guarantor, Collateral Trustee shall be designated as a beneficiary (*Motav*) in the meaning and for the purposes of the Israeli Insurance Contract Law 5741-1981.

(c) Notwithstanding the foregoing, (i) so long as no Event of Default has occurred and is continuing, the Loan Parties shall have the option of applying the proceeds of any casualty policy up to $500,000, in the aggregate per fiscal year, toward the prompt replacement or repair of destroyed or damaged property; provided that any such replaced or repaired property (A) shall be of equal or like value as the replaced or repaired Collateral and (B) shall be Collateral in which Collateral Trustee has been granted a first priority security interest and (ii) after the occurrence and during the continuation of an Event of Default, all such proceeds shall, at the option of Administrative Agent, be payable to Collateral Trustee, for the ratable benefit of Lenders, on account of the Obligations.

(d) At Administrative Agent's request, Borrower Representative shall deliver certified copies of insurance policies and evidence of all premium payments. Each provider of any such insurance required under this Section 6.5 shall agree, by endorsement upon the policy or policies issued by it or by independent instruments furnished to Collateral Trustee, that it will give Collateral Trustee thirty (30) days prior written notice before any such policy or policies shall be canceled (or ten (10) days' notice for cancellation for non-payment of premiums).

(e) If any Loan Party fails to obtain insurance as required under this Section 6.5 or to pay any amount or furnish any required proof of payment upon Administrative Agent's request, Collateral Trustee may make all or part of such payment or obtain such insurance policies required in this Section 6.5, and take any action under the policies as Administrative Agent deems prudent or may direct upon instruction by Required Lenders.

6.6 Deposit and Securities Accounts.

(a) Maintain Collateral Accounts only at the banks and other financial institutions identified in the Perfection Certificate or as disclosed pursuant to a notice timely delivered pursuant to subsection (b) below. Borrowers shall further maintain an ACH payment structure in favor of Administrative Agent, satisfactory to Administrative Agent.

(b) Provide Administrative Agent with written notice concurrently with the delivery of each Compliance Certificate of any Collateral Account established at or with any bank, broker or other financial institution since the delivery of the last Compliance Certificate, and which notice shall identify the name, address of each bank or other institution, the name in which the account is held, a description of the purpose of the account, and the complete account number therefor, provided that prior to effectiveness of an Account Control Agreement with respect to any such new Collateral Account, to the extent such Collateral Account is required to be subject to an Account Control Agreement, Loan Parties shall not permit the account balance of such new Collateral Account to exceed $100,000. ~~For~~ Subject to any period allowed for implementation of Account Control Agreements following the Restatement Date as set forth in Schedule 2B hereto, for each Collateral Account that any Loan Party at any time maintains, Loan Parties shall cause the applicable bank, broker or financial institution at or with which any Collateral Account is maintained to execute and deliver an Account Control Agreement or other appropriate instrument with respect to such Collateral Account to perfect Collateral Trustee's Lien in such Collateral Account in accordance with the terms hereunder. The provisions of the previous sentence shall not apply to (i) deposit accounts exclusively used for payroll, payroll taxes and other employee wage and benefit payments to or for the benefit of any Loan Party or any of their Subsidiaries' employees, provided that the aggregate balance of such accounts does not exceed the amount necessary to fund the then-next payroll period, (ii) Collateral Accounts maintained by ISR Guarantor established in Israel; and (iii) accounts established exclusively to hold cash collateral permitted to be pledged pursuant to the definition of "Permitted Liens", provided that the balance of such accounts does not exceed the amount permitted by the corresponding clause of "Permitted Liens", and provided further, in each case, with respect to clauses (i) and (iii) that

such Collateral Account is identified as such in the Perfection Certificate or any updated schedule of Collateral Accounts provided with a Compliance Certificate.

6.7 Intellectual Property.

(a) Protect, defend and maintain the validity and enforceability of its Intellectual Property material to its business; promptly advise Administrative Agent in writing of material infringements or any other event that could reasonably be expected to materially and adversely affect the value of its Intellectual Property material to its business; not suffer any material claim of infringement that could reasonably be expected to have a Material Adverse Effect unless such claim is dismissed within thirty (30) days from initiation thereof or Borrower Representative has demonstrated to Administrative Agent's satisfaction that such proceedings are without merit and adequate reserves have been taken; and not allow any Intellectual Property material to the Loan Parties' business to be abandoned, forfeited or dedicated to the public without Administrative Agent's written consent.

(b) Provide written notice to Administrative Agent at least thirty (30) days (or such shorter period as agreed by Administrative Agent in its sole discretion) prior to any Loan Party entering or becoming bound by any Restricted License (other than off the shelf software and services that are commercially available to the public), and obtain, or cause such Loan Party to obtain, the consent of, or waiver in form satisfactory to Administrative Agent from any person whose consent or waiver is necessary for (i) any Restricted License to be deemed "Collateral" and for Collateral Trustee to have a security interest in it that might otherwise be restricted or prohibited by law or by the terms of any such Restricted License, and (ii) Collateral Trustee to have the ability in the event of a liquidation of any Collateral to dispose of such Restricted License together with other Collateral in accordance with Collateral Trustee's rights and remedies under this Agreement and the other Loan Documents.

6.8 Litigation Cooperation. From the Closing Date and continuing through the termination of this Agreement, make available to any Secured Party, without expense to such Secured Party, each Loan Party and its officers, employees and agents and each Loan Party's books and records, to the extent that such Secured Party may deem them reasonably necessary to prosecute or defend any third-party suit or proceeding instituted by or against such Secured Party with respect to any Collateral or relating to such Loan Party.

6.9 Access to Collateral; Books and Records. Allow Administrative Agent, Collateral Trustee, or their respective agents, to inspect the Collateral and audit and copy such Loan Party's Books in accordance with Section 6.13. Such inspections or audits shall be conducted no more often than once in any twelve (12) month period unless an Event of Default has occurred and is continuing in which case such inspections and audits shall occur as often as Administrative Agent shall determine is necessary. No more than one such inspection or audit shall be at Borrowers' expense in any fiscal year, provided that during the continuance of an Event of Default, all such inspections and audits shall be at Borrowers' expense.

6.10Financial Covenant – Minimum Remaining Months Liquidity. Beginning ~~January 1, 2024~~on the Financial Covenant Start Date and at all times thereafter (unless waived in accordance with the following) Borrowers to maintain ~~Unrestricted Cash~~Liquidity in an amount equal to the Minimum RML Amount, provided that, compliance with this covenant may be waived with respect to any specified period by Administrative Agent in its sole discretion, based on review of Parent's financing and operating plans.

6.11Joinder of Subsidiaries.

(a) If a Loan Party or any of its Subsidiaries forms or acquires any direct or indirect Subsidiary after the Closing Date: (i) promptly, and in any event within ten (10) Business Days of creation or acquisition, as applicable, provide written notice to Administrative Agent of the new Subsidiary, and, if requested by Administrative Agent, certified copies of the Operating Documents of such Subsidiary, and (b) promptly, and in any event within thirty (30) days of creation or acquisition, as applicable: (A) take all such action as may be reasonably required by Administrative Agent (x) to cause the applicable Subsidiary to enter into a joinder to this Agreement pursuant to which such Subsidiary becomes a Loan Party hereunder, or enter into a separate guaranty and such collateral security

documents as Administrative Agent may require to cause such Subsidiary to grant a security interest in and to the property of such Subsidiary (substantially consistent with the scope of collateral as described on Exhibit B), and, in each case, any Account Control Agreements and other Security Instruments reasonably requested by Administrative Agent, all in form and substance satisfactory to Administrative Agent (including being sufficient to grant Collateral Trustee or ISR Collateral Agent, as applicable, for the ratable benefit of the Secured Parties, a first priority Lien, subject to Permitted Liens in and to the assets of such Subsidiary), and (y) to pledge all of the Equity Interests in such Subsidiary owned by another Loan Party. Any document, agreement, or instrument executed or issued pursuant to this Section 6.11 shall be a Loan Document. Notwithstanding the foregoing, except as required to maintain compliance with subsection (b) below, no Foreign Subsidiary shall be required to be joined as a Loan Party pursuant to the foregoing.

(b) Borrowers shall not permit Subsidiaries which are not Loan Parties, in the aggregate to maintain (i) cash and other assets with an aggregate value for all such Subsidiaries in excess of 5.0% of consolidated assets of Parent and its Subsidiaries, (ii) revenue in excess of 5.0% of consolidated revenues of Parent and its Subsidiaries for any twelve month period then ended, (iii) any Intellectual Property which is material to the business of Borrowers as a whole, or (iv) any contracts which are material to the business of Parent and its Subsidiaries, as a whole, without causing one or more of such Subsidiaries to become a Loan Party and to cause the Equity Interests of such Subsidiary to be pledged, in each case, as contemplated by subsection (a) above, within thirty days of the date the applicable threshold is exceeded (or such later date as Administrative Agent may agree in writing in its discretion), such that compliance with clauses (i) through (iv) shall be restored.

(c) Borrowers shall not permit the aggregate value of cash, Cash Equivalents and other Investments held by ISR Guarantor to exceed, at any time, the lower of $7,000,000 and 20% of the aggregate value of cash, Cash Equivalents and other Investments of Parent and its Subsidiaries on a consolidated basis.

6.12Property Locations.

(a) Concurrently with the delivery of each Compliance Certificate, provide to Administrative Agent notice of any new offices or business or Collateral locations, including warehouses (unless such new offices or business or Collateral locations qualify as Excluded Locations), since the delivery of the last Compliance Certificate delivered to Agent.

(b) With respect to any property or assets of a Loan Party located with a third party, including a bailee, datacenter or warehouse (other than Excluded Locations), the applicable Loan Party shall exercise commercially reasonable efforts to cause such third party to execute and deliver a Collateral Access Agreement for such location, including an acknowledgment from each of the third parties that it is holding or will hold such property, subject to Collateral Trustee's security interest.

(c) With respect to any property or assets of a Loan Party located on leased premises (other than Excluded Locations), the applicable Loan Party shall exercise commercially reasonable efforts to cause such third party to execute and deliver a Collateral Access Agreement for such location.

6.13Management Rights. Any representative of Administrative Agent shall have the right to meet with management and officers of Borrowers to discuss such books of account and records. In addition, Administrative Agent shall be entitled at reasonable times and intervals to consult with and advise the management and officers of Borrowers concerning significant business issues affecting Borrowers. Such consultations shall not unreasonably interfere with any Loan Party's business operations.

6.14Further Assurances. Execute any further instruments and take further action as Administrative Agent, Collateral Trustee or ISR Collateral Agent reasonably request to perfect or continue Collateral Trustee's or ISR Collateral Agent's Lien, as applicable, in the Collateral or to effect the purposes of this Agreement.

7. NEGATIVE COVENANTS

No Loan Party shall, or shall cause or permit any of its Subsidiaries to, do any of the following:

7.1 Dispositions. Convey, sell, lease, transfer, assign, or otherwise dispose of (collectively, "**Transfer**") all or any part of its business or property, except for Permitted Transfers.

7.2 Changes in Business, Management, Ownership, or Business Locations. (a) Engage in any business other than the businesses currently engaged in by such Person, as applicable, or reasonably related thereto; (b) cease doing business, or liquidate or dissolve; (c) fail to provide notice to Administrative Agent of any Key Person departing from or ceasing to be employed by a Loan Party within five (5) days thereof; (d) permit or suffer a Change in Control; or (e) without at least ten (10) days prior written notice to Administrative Agent (i) change its jurisdiction of organization, (ii) change its organizational structure or type, (iii) change its legal name, or (iv) change its organizational number (if any) assigned by its jurisdiction of organization.

7.3 Mergers or Acquisitions. Merge or consolidate with any other Person (except if concurrently with, and as a condition to the effectiveness of, the closing of such merger or consolidation, the Termination Date shall occur), or acquire all or substantially all of the capital stock or property of another Person or business line of another Person (including, without limitation, by the formation of any Subsidiary) or enter into any agreement to do any of the same, except to the extent such agreement contemplates the prepayment in full of the Obligations concurrently with the consummation of the transaction), provided that (i) a Subsidiary may merge or consolidate into another Subsidiary or into a Loan Party, provided further that in any such merger or consolidation involving a Loan Party, such Loan Party shall be the surviving entity and (ii) Loan Parties or their Subsidiaries may organize new Subsidiaries, subject to limitations on Investments.

7.4 Indebtedness. Create, incur, assume, or be liable for any Indebtedness, other than Permitted Indebtedness.

7.5 Encumbrance. Create, incur, allow, or suffer any Lien on any of its property, or assign or convey any right to receive income, including the sale of any Accounts, except for Permitted Liens, or otherwise permit any Collateral not to be subject to the first priority security interest granted herein, except in connection with Permitted Liens permitted to have priority over Collateral Trustee's Lien, or enter into any agreement, document, instrument or other arrangement (except with or in favor of Collateral Trustee or ISR Collateral Agent, as applicable) with any Person which directly or indirectly prohibits or has the effect of prohibiting any Loan Party or Subsidiary from assigning, mortgaging, pledging, granting a security interest in or upon, or encumbering any of such Loan Party's or Subsidiary's Intellectual Property, except in connection with: (a) restrictions in the Ordinary Course of Business in connection with licenses of Intellectual Property constituting a Permitted Transfer with respect to the Intellectual Property subject to such license, (b) any negative pledge incurred or provided in favor of any holder of Indebtedness permitted under clause (j) of the definition of "Permitted Indebtedness" solely to the extent any such negative pledge relates to property financed by or the subject of such Indebtedness; (c) customary restrictions and conditions contained in any agreement relating to any Transfer not prohibited hereunder (in which case such restrictions or conditions shall relate only to the applicable property) or otherwise relating to a Transfer that is conditioned upon the amendment, restatement or replacement of this Agreement or the payment in full of the Obligations hereunder,

(a) any restriction existing in any agreement with any holder of a Permitted Lien restricting the transfer or encumbrance of the property subject to such Permitted Lien; (e) customary anti-assignment provisions found in contractual obligations entered into in the Ordinary Course of Business; (f) customary restrictions in leases, subleases, licenses or asset sale agreements and other similar contracts otherwise permitted hereby so long as such restrictions relate solely to the assets subject thereto; and (g) restrictions arising in connection with cash or other deposits permitted under the definition of "Permitted Indebtedness" or "Permitted Liens" and limited to such cash or deposit.

7.6 Maintenance of Collateral Accounts. Maintain any Collateral Account except pursuant to the terms of Section 6.6(b).

7.7 Distributions; Investments. (a) Pay any dividends or make any distribution or payment or redeem, retire or purchase any Equity Interests provided that (i) Parent may convert any of its convertible Equity Interests (including warrants) into other Equity Interests issued by Parent pursuant to the terms of such convertible securities or otherwise in exchange thereof, (ii) Parent may convert Subordinated Debt issued by Parent into Equity Interests issued by Parent pursuant to the terms of such Subordinated Debt and to the extent permitted under the terms of the applicable subordination terms or intercreditor agreement; (iii) Parent or any Subsidiary thereof may pay dividends solely in Equity Interests of Parent or such Subsidiary, as applicable; (iv) Parent may make cash payments in lieu of fractional shares; (v) Parent may repurchase the Equity Interests issued by Parent pursuant to stock repurchase agreements approved by Parent's Board so long as an Event of Default does not exist at the time of such repurchase and would not exist after giving effect to such repurchase, provided that the aggregate amount of all such repurchases does not exceed $250,000 per fiscal year; (vi) any Subsidiary may (directly or indirectly) pay dividends, or make distributions or other payments in respect of Equity Interests to a Loan Party, (vi) Parent and each of its Subsidiaries may make cashless repurchases of its Equity Interests deemed to occur upon exercise of stock options or warrants or similar rights if such Equity Interests represent a portion of the exercise price of such options or warrants or similar rights or (b) directly or indirectly make any Investment (including, without limitation, by the formation of any Subsidiary), other than Permitted Investments.

7.8 Transactions with Affiliates. Directly or indirectly enter into or permit to exist any material transaction with any Affiliate of a Loan Party, except for (a) transactions that are in the Ordinary Course of Business and on fair and reasonable terms that are no less favorable to such Person than would be obtained in an arm's length transaction with a non-affiliated Person; (b) bona fide rounds of Subordinated Debt or equity financing by existing investors in Parent for capital raising purposes, (c) reasonable and customary director, officer and employee compensation and other customary benefits including retirement, health, stock option and other benefit plans and indemnification arrangements approved by Parent's Board, (d) transactions among Loan Parties, (e) transactions permitted by Sections 7.4 and Section 7.7 expressly contemplated to be a transaction with an Affiliate, and (f) transactions pursuant to intercompany transfer pricing agreements, in the Ordinary Course of Business.

7.9 Subordinated Debt; Payments of Royalty and Milestone Payments. (a) Make or permit any payment on any Subordinated Debt, except as permitted pursuant to the terms of the subordination, intercreditor, or other similar agreement to which such Subordinated Debt is subject, (b) amend any provision in any document relating to the Subordinated Debt which would increase the amount thereof, provide for earlier or greater principal, interest, or other payments thereon, or adversely affect the subordination thereof to the Obligations, (c) make or permit payment in respect of any Royalty and Milestone Payments in excess of $250,000 per fiscal year except in accordance with Schedule 5, as the same may be updated from time to time, subject to Administrative Agent's reasonable review and approval, and (d) amend or modify any agreement giving rise to Royalty and Milestone Payments if as a result thereof, such payments would be increased or the due date thereof would be accelerated, except as set forth in an updated Schedule 5 delivered from time to time by Borrower Representative, subject to Administrative Agent's reasonable review and approval.

7.10Compliance. Become an "investment company" or a company controlled by an "investment company", under the Investment Company Act of 1940, as amended, or undertake as one of its important activities extending credit to purchase or carry margin stock (as defined in Regulation U of the Board of Governors of the Federal Reserve System), or use the proceeds of any Loan for that purpose; take any action or fail to take any action (or suffer any other Person to do so), to the extent the same would cause the representations set forth in Section 5.11(c) to be untrue; fail to meet the minimum funding requirements of ERISA, permit a Reportable Event or Prohibited Transaction, as defined in ERISA, to occur; fail to comply with the Federal Fair Labor Standards Act or violate any other law or regulation, if the violation could reasonably be expected to have a Material Adverse Effect; withdraw from participation in, permit partial or complete termination of, or permit the occurrence of any other event with respect to, any present pension, profit sharing and deferred compensation plan which could reasonably be expected to result in any liability of a Loan Party or any of its Subsidiaries, including any liability to the Pension Benefit Guaranty Corporation or its successors or any other governmental agency.

7.11Grants. Without the prior written consent of the Administrative Agent, in its discretion, obtain any grants, funds or benefits, or filing for an application to receive funding from the IIA or the Investment Center or the Binational Industrial Research and Development Foundation or any other Government Authority.

8. EVENTS OF DEFAULT

Any one of the following shall constitute an event of default (an "**Event of Default**") under this Agreement:

8.1 Payment Default. Any Loan Party fails to pay any Obligations after such Obligations are due and payable (other than as a result of Administrative Agent's failure to debit such Loan Party's account from which Administrative Agent has authorization to debit and such Loan Party has sufficient funds on deposit therein on the date due, so long as, in case of such failure, payment is made within three (3) Business Days of the earlier of Administrative Agent's written notice or the date any Loan Party becomes aware of such failure).

8.2 Covenant Default.

(a) A Loan Party fails or neglects to perform any obligation in Section 3.3(b), Section 4.2, Section 6, or violates any covenant in Section 7; or

(b) Parent fails to deliver Conversion Shares when due, and such failure continues for three (3) Business Days; or

(c) A Loan Party fails or neglects to perform, keep, or observe any other term, provision, condition, covenant or agreement contained in this Agreement or any Loan Documents, and as to any default (other than those specified in this Section 8) under such other term, provision, condition, covenant or agreement that can be cured, has failed to cure the default within fifteen (15) Business Days after the occurrence thereof.

8.3 Material Adverse Effect. An event or circumstance has occurred which could be expected to have a Material Adverse Effect.

8.4 Attachment; Levy; Restraint on Business.

(a) (i) The service of process seeking to attach, by trustee or similar process, any funds of a Loan Party or of any of its Subsidiaries, or (ii) a notice of Lien or levy is filed against the assets of any Loan Party or any of its Subsidiaries by any Governmental Authority, and the same under clauses (i) and (ii) hereof are not, within ten (10) days after the occurrence thereof, discharged or stayed (whether through the posting of a bond or otherwise); provided, however, no Loans shall be made during any ten (10) day cure period; or

(b) (i) Any material portion of the assets of a Loan Party or any of its Subsidiaries is attached, seized, levied on, or comes into possession of a trustee or receiver, or (ii) any court order enjoins, restrains, or prevents a Loan Party or any of its Subsidiaries from conducting all or any material part of its business.

8.5 Insolvency. (a) The Loan Party and their Subsidiaries, as a whole, are unable to pay their debts (including trade debts) as they become due or otherwise become insolvent, (b) the realizable value of the Loan Parties' assets, as a whole, is less than the aggregate sum of their consolidated liabilities; (c) a Loan Party or any of its Subsidiaries begins an Insolvency Proceeding; or (d) an Insolvency Proceeding is begun against a Loan Party or any of its Subsidiaries and is not dismissed or stayed within thirty (30) days (but no Loans shall be made while any of the conditions described in this Section 8.5 exist and/or until any Insolvency Proceeding is dismissed).

8.6 Other Agreements. There is, under any agreement to which a Loan Party or any of its Subsidiaries is a party with a third party or parties, (a) any default resulting in a right by such third party or parties, whether or not exercised, to accelerate the maturity of any Indebtedness in an amount individually or in the aggregate in excess of

$250,000 (except if such third party is restricted from accelerating the maturity of such Indebtedness, including pursuant to the terms of a subordination or similar agreement entered into with respect to the Obligations); or (b) any breach or default by a Loan Party or a Subsidiary of such Loan Party, the result of which could reasonably be expected to have a Material Adverse Effect.

8.7 Judgments; Penalties. One or more fines, penalties or final judgments, orders or decrees for the payment of money in an amount, individually or in the aggregate, of at least $250,000 shall be rendered against a Loan Party or any of its Subsidiaries by any Governmental Authority, and the same are not, within ten (10) days after the entry, assessment or issuance thereof, vacated, or after execution thereof, stayed or bonded pending appeal, (provided that no Loans will be made prior to the vacation, stay, or bonding of such fine, penalty, judgment, order or decree)~~.~~ [***].

8.8 Misrepresentations. Any Loan Party or any Person acting for such Loan Party makes any representation, warranty, or other statement now or later in this Agreement, any Loan Document or in any writing delivered to any Secured Party or to induce any Secured Party to enter this Agreement or any Loan Document, and such representation, warranty, or other statement is incorrect in any material respect when made.

8.9 Subordinated Debt. Any Subordination Agreement governing any Subordinated Debt shall for any reason be revoked or invalidated or otherwise cease to be in full force and effect, any party thereto shall be in breach thereof or contest in any manner the validity or enforceability thereof or deny that it has any further obligation thereunder, or the Obligations shall for any reason not have the priority contemplated by this Agreement.

8.10Governmental Approval. Any Governmental Approval shall have been revoked, rescinded, suspended, modified in an adverse manner or not renewed for a full term, and such revocation, rescission, suspension, modification or non-renewal has, or could reasonably be expected to have, a Material Adverse Effect.

8.11Delisting. The shares of common stock of Parent are delisted from NASDAQ Capital Market because of failure to comply with continued listing standards thereof or due to a voluntary delisting which results in such shares not being listed on any other nationally recognized stock exchange in the United States having listing standards at least as restrictive as the NASDAQ Capital Market.

8.12Guaranty. Any guaranty of any Obligations terminates or ceases for any reason to be in full force and effect other than pursuant to the terms thereof.

9. RIGHTS AND REMEDIES

9.1 Acceleration. Upon the occurrence and during the continuation of an Event of Default, Administrative Agent, is entitled, without notice or demand, to declare all Obligations immediately due and payable (but if an Event of Default described in Section 8.5 occurs all Obligations are immediately due and payable without any action by Administrative Agent), and to stop advancing money or extending credit for any Borrower's benefit under this Agreement (and each Lender's Commitment shall be deemed terminated as long as an Event of Default has occurred and is continuing).

9.2 Rights. Upon the occurrence and during the continuation of an Event of Default, Collateral Trustee is entitled, at the direction of Administrative Agent, subject to the terms of the Collateral Trust Agreement, without notice or demand, to do any or all of the following, to the extent not prohibited by applicable law::

(a) verify the amount of, demand payment of and performance under, and collect any Accounts and General Intangibles, settle or adjust disputes and claims directly with Account Debtors for amounts on terms and in any order that Administrative Agent may determine is advisable, and notify any Person owing a Loan Party money of Collateral Trustee's security interest in such funds;

(b) make any payments and do any acts it considers necessary or reasonable to protect the Collateral and/or its security interest in the Collateral;

(c) ratably apply to the Obligations any amount held by Collateral Trustee owing to or for the credit or the account of a Loan Party;

(d) ship, reclaim, recover, store, finish, maintain, repair, prepare for sale, advertise for sale, and sell the Collateral;

(e) deliver a notice of exclusive control, any entitlement order, or other directions or instructions pursuant to any Account Control Agreement or similar agreements providing control of any Collateral;

(f) demand and receive possession of any Loan Party's Books; and

(g) exercise all rights and remedies available to Collateral Trustee under the Loan Documents or at law or equity, including all remedies provided under the Code (including disposal of the Collateral pursuant to the terms thereof).

Loan Parties shall assemble the Collateral if Collateral Trustee requests and make it available as Collateral Trustee designates. Collateral Trustee may enter premises where the Collateral is located, take and maintain possession of any part of the Collateral, and pay, purchase, contest, or compromise any Lien which appears to be prior or superior to its security interest and pay all expenses incurred. Each Loan Party grants Collateral Trustee a license to enter and occupy any of its premises, without charge, to exercise any of Collateral Trustee's rights or remedies. Collateral Trustee is hereby granted a non-exclusive, royalty-free license or other right to use, without charge, a Loan Party's labels, Patents, Copyrights, mask works, rights of use of any name, trade secrets, trade names, Trademarks, and advertising matter, or any similar property as it pertains to the Collateral, in completing production of, advertising for sale, and selling any Collateral and, in connection with Collateral Trustee's exercise of its rights under this Section, a Loan Party's rights under all licenses and all franchise agreements inure to Collateral Trustee's benefit. If, after the acceleration of the Obligations, a Loan Party receives proceeds of Collateral, such Loan Party shall to deliver such proceeds to Collateral Trustee, for the benefit of the Secured Parties, to be applied to the Obligations.

9.3 Power of Attorney. Each Loan Party hereby irrevocably appoints Collateral Trustee (and any of Collateral Trustee's partners, managers, officers, agents or employees) as its lawful attorney-in-fact, with full power of substitution, exercisable upon the occurrence and during the continuation of an Event of Default, to: (a) send requests for verification of Accounts or notify Account Debtors of Collateral Trustee's security interest and Liens in the Collateral; (b) endorse such Loan Party's name on any checks or other forms of payment or security; (c) sign such Loan Party's name on any invoice or bill of lading for any Account or drafts against Account Debtors schedules and assignments of Accounts, verifications of Accounts, and notices to Account Debtors; (d) settle and adjust disputes and claims about the Accounts directly with Account Debtors, for amounts and on terms Administrative Agent or Collateral Trustee determine reasonable; (e) make, settle, and adjust all claims under such Loan Party's insurance policies; (f) pay, contest or settle any Lien, charge, encumbrance, security interest, and adverse claim in or to the Collateral, or any judgment based thereon, or otherwise take any action to terminate or discharge the same; (g) transfer the Collateral into the name of Collateral Trustee or a third party as the Code permits; and (h) dispose of the Collateral. Each Loan Party further hereby (i) appoints Collateral Trustee (and any of Collateral Trustee's partners, managers, officers, agents or employees) as its lawful attorney-in-fact, with full power of substitution, regardless of whether or not an Event of Default has occurred or is continuing to: (A) sign such Loan Party's name on any documents and other Security Instruments necessary to perfect or continue the perfection of, or maintain the priority of, Collateral Trustee's security interest in the Collateral, and (B) take any and all such actions as Collateral Trustee may reasonably determine to be necessary or advisable for the purpose of maintaining, preserving or protecting the Collateral or any of the rights, remedies, powers or privileges of Collateral Trustee under this Agreement or the other Loan Documents, and (ii) appoints Administrative Agent (and any of Administrative Agent's partners, managers, officers, agents or employees) as its lawful attorney-in-fact, with full power of substitution, regardless of whether or not an Event of Default has occurred and is continuing, to take all such actions which such Loan Party is required, but fails to do under

the covenants and provisions of the Loan Documents. The foregoing appointments of Collateral Trustee and Administrative Agent as each Loan Party's attorney in fact, and all of Collateral Trustee's rights and powers, are coupled with an interest, are irrevocable until the Termination Date.

9.4 Protective Payments. If a Loan Party fails to obtain the insurance called for by Section 6.5 or fails to pay any premium thereon or fails to pay any other amount which such Loan Party is obligated to pay under this Agreement or any other Loan Document or which may be required to preserve the Collateral, Collateral Trustee may obtain such insurance or make such payment, and all amounts so paid by Collateral Trustee are Secured Party Expenses and immediately due and payable, bearing interest at the then highest rate applicable to the Obligations, and secured by the Collateral. Collateral Trustee will make reasonable efforts to provide Borrower Representative with notice of Collateral Trustee obtaining such insurance at the time it is obtained or within a reasonable time thereafter. No payments by Collateral Trustee are deemed an agreement to make similar payments in the future or Collateral Trustee's waiver of any Event of Default.

9.5 Application of Payments and Proceeds Upon Default. If an Event of Default has occurred and is continuing, Collateral Trustee shall have the right to apply in any order any funds in its possession, whether payments, proceeds realized as the result of any collection of Accounts or other disposition of the Collateral, or otherwise, to the Obligations, for the benefit of Secured Parties. Collateral Trustee shall pay any surplus to Borrowers by credit to the Deposit Account designated by Borrowers or as directed by a court of competent jurisdiction. Borrowers shall remain liable to Collateral Trustee and Lenders for any deficiency. If Collateral Trustee, as directed by Administrative Agent in Administrative Agent's good faith business judgment, directly or indirectly, enters into a deferred payment or other credit transaction with any purchaser at any sale of Collateral, Collateral Trustee may, at the direction of Administrative Agent, either reduce the Obligations by the principal amount of the purchase price or defer the reduction of the Obligations until the actual receipt by Collateral Trustee of cash or immediately available funds therefor.

9.6 Collateral Trustee's Liability for Collateral. Collateral Trustee shall not be liable or responsible for: (a) the safekeeping of the Collateral; (b) any loss or damage to the Collateral; (c) any diminution in the value of the Collateral; or (d) any act or default of any carrier, warehouseman, bailee, or other Person, except to the extent that any of the foregoing have been found by a final judgment of a court of competent court of competent jurisdiction to be the result of Collateral Trustee's gross negligence or willful misconduct. Loan Parties bear all risk of loss, damage or destruction of the Collateral.

9.7 No Waiver; Remedies Cumulative. Any failure by any Secured Party at any time or times, to require strict performance by each Loan Party of any provision of this Agreement or any other Loan Document shall not waive, affect, or diminish any right of any Secured Party thereafter to demand strict performance and compliance herewith or therewith. Secured Parties' rights and remedies under this Agreement and the other Loan Documents are cumulative. Collateral Trustee has all rights and remedies provided under the Code, by law, or in equity. Any Secured Party's exercise of one right or remedy is not an election and shall not preclude any Secured Party from exercising any other remedy under this Agreement or other remedy available at law or in equity, and any waiver of any Event of Default is not a continuing waiver. Any delay in exercising any remedy is not a waiver, election, or acquiescence.

9.8 Demand Waiver. Each Loan Party waives presentment, demand, notice of default or dishonor, notice of payment and nonpayment, release, compromise, settlement, extension, or renewal of accounts, documents, instruments or chattel paper.

9.9 Shares. Each Loan Party recognizes that Collateral Trustee may be unable to effect a public sale of any or all the Shares, by reason of certain prohibitions contained in federal securities laws and applicable state securities laws or otherwise, and may be compelled to resort to one or more private sales thereof to a restricted group of purchasers which will be obliged to agree, among other things, to acquire such securities for their own account for investment and not with a view to the distribution or resale thereof. Each Loan Party acknowledges and agrees that any such private sale may result in prices and other terms less favorable than if such sale were a public sale and, notwithstanding such circumstances, agrees that any such private sale shall be deemed to have been made in a

commercially reasonable manner. Collateral Trustee shall be under no obligation to delay a sale of any of the Shares for the period of time necessary to permit the issuer thereof to register such securities for public sale under federal securities laws or under applicable state securities laws, even if such issuer would agree to do so. Upon the occurrence and during the continuation of an Event of Default, (i) Collateral Trustee (acting at the direction of Administrative Agent subject to the terms of the Collateral Trust Agreement) may, with two Business Days prior notice to Borrower Representative (unless such Event of Default is an Event of Default specified in Section 8.4 or 8.5, in which case no such notice need be given), in addition to all rights and remedies available under this Agreement, any other Loan Document, at law, in equity, or otherwise, exercise all voting rights, or any other ownership or consensual rights (including any dividend or distribution rights) in respect of the Shares constituting Collateral, but under no circumstances is Collateral Trustee obligated by the terms of this Agreement to exercise such rights, and (ii) if Collateral Trustee (acting at the direction of Administrative Agent subject to the terms of the Collateral Trust Agreement) duly exercises its right to vote any of such Shares, each Loan Party hereby appoints Collateral Trustee, as such Loan Party's true and lawful attorney-in-fact and IRREVOCABLE PROXY to vote such Shares as directed by Administrative Agent (subject to the terms of the Collateral Trust Agreement). The power-of-attorney and proxy granted hereby is coupled with an interest and shall be irrevocable.

10. NOTICES

All notices, consents, requests, approvals, demands, or other communication by any party to this Agreement or any other Loan Document must be in writing and shall be deemed to have been validly served, given, or delivered: (a) upon the earlier of actual receipt and three (3) Business Days after deposit in the U.S. mail, first class, registered or certified mail return receipt requested, with proper postage prepaid; (b) upon confirmation of receipt, when sent by electronic mail transmission; (c) one (1) Business Day after deposit with a reputable overnight courier with all charges prepaid; or (d) when delivered, if hand-delivered by messenger, all of which shall be addressed to the party to be notified and sent to the address, or email address indicated below. Administrative Agent, Collateral Trustee, Lenders and Loan Parties may change their respective mailing or electronic mail addresses by giving the other party written notice thereof in accordance with the terms of this Section 10.

If to Loan Parties:	**89BIO, INC.** 142 Sansome Street, 2nd Floor San Francisco, CA 94104 Attention: Ryan Martins, Chief Financial Officer Email: ryan.martins@89bio.com
With a copy, not constituting notice, to:	**GIBSON, DUNN & CRUTCHER LLP** 333 South Grand Avenue Los Angeles, CA 90071-3197 Attn: Cromwell R. Montgomery Email: Cmontgomery@gibsondunn.com
If to Collateral Trustee:	**ANKURA TRUST COMPANY, LLC** 140 Sherman Street, Fourth Floor Fairfield, CT 06824 Attention: Beth Micena Email: Beth.Micena@ankura.com
With a copy, not constituting notice, to:	**ROPES & GRAY LLP** 10250 Constellation Boulevard Los Angeles, CA 90067 Attn: Jennifer Harris Email: Jennifer.Harris@ropesgray.com

If to Administrative Agent or Lenders:	**K2 HEALTHVENTURES LLC** 855 Boylston Street, 10th Floor Boston, MA 02116 *For Loan Requests, monthly reporting Compliance Certificates, and other regular reporting deliverables*: Attention: Finance Email: finance@k2hv.com; ben@k2hv.com; anup@k2hv.com; derek@k2hv.com; ben@k2hv.com; zach@k2hv.com; patrick@k2hv.com *For all other notices*: Attention: Legal Notices Email: legal@k2hv.com
With a copy to (but not constituting notice, and excluding Loan Requests and regular reporting):	**SIDLEY AUSTIN LLP** 1001 Page Mill Rd., Bldg. 1 Palo Alto, CA 94304 Attention: Cynthia Bai Email: cbai@sidley.com

11. CHOICE OF LAW, VENUE AND JURY TRIAL WAIVER

Except as otherwise expressly provided in any of the Loan Documents, this Agreement and the other Loan Documents shall be governed by, and construed in accordance with, the laws of the State of New York without regard to principles of conflicts of law. Each Loan Party hereby submits to the exclusive jurisdiction of the State and Federal courts in New York County, City of New York, New York; provided, however, that nothing in this Agreement shall be deemed to operate to preclude Collateral Trustee from bringing suit or taking other legal action in any other jurisdiction to realize on the Collateral or any other security for the Obligations, or to enforce a judgment or other court order in favor of Administrative Agent, Collateral Trustee or any Lender. Each Loan Party expressly submits and consents in advance to such jurisdiction in any action or suit commenced in any such court, and each Loan Party hereby waives any objection that it may have based upon lack of personal jurisdiction, improper venue, or forum non conveniens and hereby consents to the granting of such legal or equitable relief as is deemed appropriate by such court. Each Loan Party hereby waives personal service of the summons, complaints, and other process issued in such action or suit and agrees that service of such summons, complaints, and other process may be made by registered or certified mail addressed to such Loan Party at the address set forth in, or subsequently provided by such Loan Party in accordance with, Section 10 and that service so made shall be deemed completed upon the earlier to occur of the applicable Loan Party's actual receipt thereof or three (3) Business Days after deposit in the U.S. mails, proper postage prepaid. Each Loan Party hereby expressly waives any claim to assert that the laws of any other jurisdiction govern this Agreement.

TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, EACH OF THE PARTIES HERETO WAIVES ITS RIGHT TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION ARISING OUT OF OR BASED UPON THIS AGREEMENT, THE OTHER LOAN DOCUMENTS OR ANY TRANSACTION CONTEMPLATED HEREBY OR THEREBY, INCLUDING CONTRACT, TORT, BREACH OF DUTY AND ALL OTHER CLAIMS. THIS WAIVER IS A MATERIAL INDUCEMENT FOR THE PARTIES TO ENTER INTO THIS AGREEMENT. NOTWITHSTANDING ANYTHING TO THE CONTRARY CONTAINED IN THIS AGREEMENT OR ANYWHERE ELSE, EACH LOAN PARTY AGREES THAT IT SHALL NOT SEEK FROM ANY LENDER UNDER ANY THEORY OF LIABILITY

(INCLUDING ANY THEORY IN TORTS), ANY SPECIAL, INDIRECT, CONSEQUENTIAL OR PUNITIVE DAMAGES. EACH PARTY HAS REVIEWED THIS WAIVER WITH ITS COUNSEL.

This Section 11 shall survive the termination of this Agreement.

12. GENERAL PROVISIONS

12.1Termination Prior to Restatement Term Loan Maturity Date; Survival; Release of Collateral. All covenants, representations and warranties and grants of security interests made in this Agreement continue in full force until the Termination Date. So long as Borrowers have satisfied the Obligations (other than contingent indemnification obligations as to which no claim has been asserted or is known to exist and any other obligations which, by their terms, are to survive the termination of this Agreement), this Agreement and any remaining commitments to extend credit may be terminated prior to the Restatement Term Loan Maturity Date by Borrowers, by written notice of termination to Lenders. Those obligations that are expressly specified in this Agreement as surviving this Agreement's termination shall continue to survive notwithstanding this Agreement's termination. On the Termination Date, Administrative Agent shall direct Collateral Trustee to deliver evidence of the release of Collateral, which release shall occur substantially concurrently with the Termination Date. Collateral Trustee hereby agrees that any Liens granted to Collateral Trustee by the Loan Parties on any Collateral shall be automatically released (a) in accordance with this Section 12.1, upon the Termination Date, (b) if such Collateral is sold, transferred or otherwise disposed of by a Loan Party pursuant to any sale, transfer or other disposition that is made in compliance with, and subject to the terms and condition of, this Agreement, or (c) if required to effect any sale, transfer or other disposition of such Collateral in connection with any exercise of remedies by Administrative Agent or Collateral Trustee pursuant to Section 9. Any such release shall not in any manner discharge, affect, or impair the Obligations or any Liens (other than those expressly being released) upon (or obligations of Loan Parties in respect of) all interests retained by Secured Parties or any of their Subsidiaries. Upon Borrower's reasonable request and at Borrower's sole cost and expense, Administrative Agent shall execute, deliver or authorize such documents as may be reasonably required to evidence any release described above.

12.2Successors and Assigns.

(a) Successors and Assigns Generally. This Agreement binds and is for the benefit of the successors and permitted assigns of each party. No Loan Party may assign this Agreement or any rights or obligations under it without Lenders' prior written consent (which may be granted or withheld in each Lender's discretion). Each Lender has the right, without the consent of or notice to Loan Parties, to sell, transfer, assign, negotiate, or grant participation in all or any part of, or any interest in, such Lender's obligations, rights, and benefits under this Agreement and the other Loan Documents (other than the Warrant, as to which assignment, transfer and other such actions are governed by the terms thereof).

(b) Assignment by Lenders. Each Lender may at any time assign to one or more Affiliates of such Lender or as otherwise permitted by subsection (a) above, all or a portion of its rights and obligations under this Agreement (including all or a portion of its commitment and the Loans at the time owing to it), subject to any restrictions on such assignment set forth in the other Loan Documents. Each such Lender shall notify the Administrative Agent of such assignment and deliver to the Administrative Agent a copy of any assignment and assumption agreement entered into in connection thereto. Each Lender may at any time pledge or assign a security interest in all or any portion of its rights under this Agreement to secure obligations of such Lender. Notwithstanding anything herein to the contrary, any pledge or assignment of all or a portion of the rights, or a security interest in such rights, of K2 HealthVentures LLC as a Lender made to an Affiliate of K2 HealthVentures LLC, shall only be made to K2 HealthVentures Equity Trust LLC.

(c) Register; Participant Register. Administrative Agent, acting solely for this purpose as an agent of the Loan Parties, shall maintain at one of its offices in the United States a register for the recordation of the names and addresses of the Lenders, and the Commitments of, and principal amounts (and stated interest) of the Term Loans owing to each Lender pursuant to the terms hereof from time to time (the "**Register**"). The entries in the

Register shall be conclusive absent manifest error, and the Loan Parties, Administrative Agent and the Lenders shall treat each Person whose name is recorded in the Register pursuant to the terms hereof as Lender hereunder for all purposes of this Agreement. The Register shall be available for inspection by the Loan Parties, any Lender and the Collateral Trustee at any reasonable time and from time to time upon reasonable prior notice. Each Lender that sells a participation shall, acting solely for this purpose as a non-fiduciary agent of the Loan Parties, maintain a register on which it enters the name and address of each participant and the principal amounts (and stated interest) of each participant's interest in the Term Loans or other obligations under the Loan Documents (the "**Participant Register**"); provided that no Lender shall have any obligation to disclose all or any portion of the Participant Register (including the identity of any participant or any information relating to a participant's interest in any commitments, loans or its other obligations under any Loan Document) to any Person except to the extent that such disclosure is necessary to establish that such commitment, loan or other obligation is in registered form under Section 5f.103-1(c) of the United States Treasury Regulations. The entries in the Participant Register shall be conclusive absent manifest error, and such Lender shall treat each Person whose name is recorded in the Participant Register as the owner of such participation for all purposes of this Agreement notwithstanding any notice to the contrary. For the avoidance of doubt, Administrative Agent (in its capacity as Administrative Agent) shall have no responsibility for maintaining a Participant Register.

12.3Indemnification. Each Loan Party agrees to indemnify, defend and hold each Secured Party and their respective directors, officers, employees, agents, attorneys, or any other Person affiliated with or representing Lender (each, an "**Indemnified Person**") harmless against: (i) all obligations, demands, claims, and liabilities (including such claims, costs, expenses, damages and liabilities based on liability in tort, including strict liability in tort) (collectively, "**Claims**") claimed or asserted by any other party in connection with the transactions contemplated by the Loan Documents; and (ii) all losses or expenses (including Secured Party Expenses) in any way suffered, incurred, or paid by such Indemnified Person as a result of, following from, consequential to, or arising from transactions among Secured Parties and Loan Parties (including reasonable attorneys' fees and expenses), except for Claims and/or losses to the extent directly caused by such Indemnified Person's gross negligence or willful misconduct as determined by final judgment of a court of competent jurisdiction. This Section 12.3 shall survive until all statutes of limitation with respect to the Claims, losses, and expenses for which indemnity is given shall have run. This Section 12.3 shall not apply with respect to Taxes other than any Taxes that represent losses, claims, damages, etc. arising from any non-Tax claim; provided that this Section 12.3 shall not apply to any Excluded Taxes.

12.4Borrower Liability. If any Person is joined to this Agreement as a Borrower, the following provisions shall apply: Each Borrower hereunder shall be jointly and severally obligated to repay all Loans made hereunder, regardless of which Borrower actually receives said Loan, as if each Borrower hereunder directly received all Loans. Each Borrower waives (a) any suretyship defenses available to it under the Code or any other applicable law, and (b) any right to require Collateral Trustee to: (i) proceed against any Borrower or any other person; (ii) proceed against or exhaust any security; or (iii) pursue any other remedy. Collateral Trustee may exercise or not exercise any right or remedy it has against any Borrower or any security it holds (including the right to foreclose by judicial or non-judicial sale) without affecting any Borrower's liability. Notwithstanding any other provision of this Agreement or other related document, each Borrower irrevocably waives all rights that it may have at law or in equity (including, without limitation, any law subrogating Borrower to the rights of Collateral Trustee under this Agreement) to seek contribution, indemnification or any other form of reimbursement from any other Borrower, or any other Person now or hereafter primarily or secondarily liable for any of the Obligations, for any payment made by such Borrower with respect to the Obligations in connection with this Agreement or otherwise and all rights that it might have to benefit from, or to participate in, any security for the Obligations as a result of any payment made by a Borrower with respect to the Obligations in connection with this Agreement or otherwise. Any agreement providing for indemnification, reimbursement or any other arrangement prohibited under this Section shall be null and void. If any payment is made to a Borrower in contravention of this Section, such Borrower shall hold such payment in trust for Lenders and such payment shall be promptly delivered to Collateral Trustee, for the ratable benefit of Lenders, for application to the Obligations, whether matured or unmatured.

12.5Time of Essence. Time is of the essence for the performance of all Obligations in this Agreement.

12.6Severability of Provisions. Each provision of this Agreement is severable from every other provision in determining the enforceability of any provision.

12.7Correction of Loan Documents. Administrative Agent may correct patent errors and fill in any blanks in the Loan Documents consistent with the agreement of the parties.

12.8Amendments in Writing; Waiver; Integration. No purported amendment or modification of any Loan Document, or waiver, discharge or termination of any obligation under any Loan Document, shall be effective except, pursuant to an agreement in writing by the parties thereto, and in case of this Agreement, pursuant to an agreement in writing entered into by Borrowers, Administrative Agent, the Required Lenders and Collateral Trustee, provided that Collateral Trustee's approval shall not be required for any amendment or supplement that has the effect solely of (i) adding or maintaining Collateral, securing additional Obligations that are otherwise permitted by the terms of this Agreement to be secured by the Collateral or preserving, perfecting or establishing the priority of the Liens thereon or the rights of Collateral Trustee therein; (ii) curing any ambiguity, defect or inconsistency; (iii) providing for the assumption of a Borrower's or Guarantor's Obligations under any Loan Document in the case of a merger or consolidation or sale of all or substantially all of the assets of a Borrower or Guarantor, as applicable; (iv) making any change that would provide any additional rights or benefits to the Administrative Agent, any Lender or Collateral Trustee or that does not adversely affect the legal rights under this Agreement or any other Loan Document of Collateral Trustee; or (v) to the extent the Collateral Trust Agreement provides that Collateral Trustee's approval is not required. It is agreed that any change (i) to the definition of "Designated Holder", (ii) the rights of a Designated Holder, or (iii) the final sentence of Section 12.2(b) (and any change to this Agreement that would modify the consent required pursuant to this sentence) shall require the consent of the Collateral Trustee. Without limiting the generality of the foregoing, no oral promise or statement, nor any action, inaction, delay, failure to require performance or course of conduct shall operate as, or evidence, an amendment, supplement or waiver or have any other effect on any Loan Document. Any waiver granted shall be limited to the specific circumstance expressly described in it, and shall not apply to any subsequent or other circumstance, whether similar or dissimilar, or give rise to, or evidence, any obligation or commitment to grant any further waiver. The Loan Documents represent the entire agreement about this subject matter and supersede prior negotiations or agreements. All prior agreements, understandings, representations, warranties, and negotiations among the parties about the subject matter of the Loan Documents merge into the Loan Documents.

12.9Counterparts; Electronic Execution of Documents. This Agreement and any other Loan Documents, except to the extent otherwise required pursuant to the terms thereof, may be executed in any number of counterparts and by different parties on separate counterparts, each of which, when executed and delivered, is an original, and all taken together, constitute one Agreement. The words "execution," "signed," "signature" and words of like import in any Loan Document shall be deemed to include electronic signatures or the keeping of records in electronic form, each of which shall be of the same legal effect, validity and enforceability as a manually executed signature or the use of a paper-based recordkeeping systems, as the case may be, to the extent and as provided for in any applicable law, including, without limitation, any state law based on the Uniform Electronic Transactions Act. Delivery of an executed counterpart of a signature page of any Loan Document by electronic means including by email delivery of a ".pdf" format data file shall be effective as delivery of an original executed counterpart of such Loan Document.

12.10Confidentiality; Publicity.

(a) In handling any confidential information, each Secured Party agrees to exercise the same degree of care that it exercises for its own proprietary information, but disclosure of information may be made: (a) to its Subsidiaries or Affiliates; (b) to prospective transferees or purchasers of any interest in the Loans; (c) as required by law, regulation, subpoena, or other order and in connection with reporting obligations applicable to such Secured Party, including pursuant to the Exchange Act, (d) to such Secured Party's regulators or as otherwise required in connection with any examination or audit; (e) as such Secured Party considers appropriate in connection with the exercise of remedies with respect to the Obligations; and (f) to third-party service providers of such Secured Party so long as such service providers are bound by confidentiality terms not more permissive than the terms hereof.

Confidential information does not include information that is either: (i) in the public domain or in any Secured Party's possession when disclosed to such Secured Party, or becomes part of the public domain (other than as a result of its disclosure by such Secured Party in violation of this Agreement) after disclosure to such Secured Party, or (ii) disclosed to such Secured Party by a third party, if such Secured Party does not know that the third party is prohibited from disclosing the information. The provisions of this paragraph shall survive the termination of this Agreement.

(b) No party hereto shall publicize or use another party's name or logo, or hyperlink to such other parties' website, describe the relationship of the parties or the transaction contemplated by this Agreement, in written and oral presentations, advertising, promotional and marketing materials, client lists, public relations materials or on its web site (together, the "**Publicity Materials**") without prior written notice to the party that is the subject of the proposed Publicity Materials, together with a draft (or, if Publicity Materials are not proposed to be delivered in written form, an outline of the content to be included) so as to provide such subject party a reasonable opportunity to review prior to publication, and each party agrees, in connection with any Publicity Materials proposed by such party to reasonably consider requested changes or corrections requested by the party that is the subject of such Publicity Materials in good faith, and upon request, to provide the final form prior to publication or other dissemination.

12.11Borrower Representative. Each of the Borrowers hereby appoints Borrower Representative to act as its exclusive agent for all purposes under the Loan Documents (including, without limitation, with respect to all matters related to the borrowing and repayment of any Loan). Each of the Borrowers acknowledges and agrees that (a) Borrower Representative may execute such documents on behalf of any Borrower as Borrower Representative deems appropriate in its sole discretion and each Borrower shall be bound by and obligated by all of the terms of any such document executed by Borrower Representative on its behalf, (b) any notice or other communication delivered hereunder to Borrower Representative shall be deemed to have been delivered to each Borrower and (c) any Secured Party shall accept (and shall be permitted to rely on) any document or agreement executed by Borrower Representative on behalf of Borrowers (or any of them). Each Borrower must act through the Borrower Representative for all purposes under this Agreement and the other Loan Documents. Notwithstanding anything contained herein to the contrary, to the extent any provision in this Agreement requires any Borrower to interact in any manner with any Secured Party such Borrower shall do so through Borrower Representative.

12.12Captions. The headings used in this Agreement are for convenience only and shall not affect the interpretation of this Agreement.

12.13Construction of Agreement. The parties mutually acknowledge that they and their attorneys have participated in the preparation and negotiation of this Agreement. In cases of uncertainty this Agreement shall be construed without regard to which of the parties caused the uncertainty to exist.

12.14Relationship. The relationship of the parties to this Agreement is determined solely by the provisions of this Agreement. The parties do not intend to create any agency, partnership, joint venture, trust, fiduciary or other relationship with duties or incidents different from those of parties to an arm's-length contract.

12.15Third Parties. Nothing in this Agreement, whether express or implied, is intended to: (a) confer any benefits, rights or remedies under or by reason of this Agreement on any persons other than the express parties to it and their respective permitted successors and assigns; (b) relieve or discharge the obligation or liability of any person not an express party to this Agreement; or (c) give any person not an express party to this Agreement any right of subrogation or action against any party to this Agreement.

12.16Appointment of Collateral Trustee.

(a) Each Lender hereby appoints Collateral Trustee to act on behalf of the Secured Parties as collateral agent under this Agreement and the other Loan Documents, and to hold and enforce any and all Liens on Collateral granted by any of the Loan Parties to secure any of the Obligations, all in accordance with the terms of the Collateral Trust Agreement. The provisions of this Section 12.16 are solely for the benefit of Collateral Trustee, Administrative Agent and Lenders and no Loan Party nor any other Person shall have any rights as a third party

beneficiary of any of the provisions hereof. Collateral Trustee shall not have any duties or responsibilities except for those expressly set forth in this Agreement and the other Loan Documents, together with such powers as are reasonably related thereto. The duties of Collateral Trustee shall be mechanical and administrative in nature and Collateral Trustee shall not have, or be deemed to have, by reason of this Agreement, any other Loan Document or otherwise a fiduciary relationship in respect of any Lender. Collateral Trustee may resign or be removed or replaced, and a successor Collateral Trustee may be appointed in accordance with the terms and subject to the conditions of the Collateral Trust Agreement.

(b) Each Lender hereby agrees that upon receipt of instruction from Administrative Agent, Collateral Trustee shall be entitled to take or refrain from taking such action, and shall be entitled to take all such actions set forth in the Collateral Trust Agreement.

(c) Neither Collateral Trustee nor any of its Affiliates nor any of their respective directors, officers, agents or employees shall be liable for any action taken or omitted to be taken by it or them under or in connection with this Agreement or the other Loan Documents, except for damages solely caused by its or their own gross negligence or willful misconduct as finally determined by a court of competent jurisdiction. Without limitation of the generality of the foregoing, Collateral Trustee: (i) may consult with legal counsel, independent chartered accountants and other experts and consultants selected by it and shall not be liable for any action taken or omitted to be taken in good faith by it in accordance with the advice of such counsel, accountants, experts or consultants; (ii) makes no warranty or representation to any Lender and shall not be responsible to any Lender for any statements, warranties or representations made in or in connection with this Agreement or the other Loan Documents; (iii) shall not have any duty to ascertain or to inquire as to the performance or observance of any of the terms, covenants or conditions of this Agreement or the other Loan Documents on the part of any Loan Party or to inspect the Collateral (including the books and records) of any Loan Party; (iv) shall not be responsible to any Lender for the due execution, legality, validity, enforceability, genuineness, sufficiency or value of this Agreement or the other Loan Documents or any other instrument or document furnished pursuant hereto or thereto; and (v) shall incur no liability under or in respect of this Agreement or the other Loan Documents by acting upon any notice, consent, certificate or other instrument or writing (which may be by email, telecopy, telegram, cable or telex) believed by it to be genuine and signed or sent by the proper party or parties.

(d) Notwithstanding the foregoing, with respect to the ISR Collateral and the ISR Collateral Documents, ISR Collateral Agent (and not the Collateral Trustee) shall hold the Lien for the benefit of the Secured Parties in accordance with Section 12.17.

12.17Appointment of ISR Collateral Agent; Administration of ISR Collateral.

(a) Each Lender hereby appoints ISR Collateral Agent to act on behalf of the Secured Parties as collateral agent with respect to the ISR Collateral under the ISR Collateral Documents, and, as applicable to hold, administer and enforce any and all Liens on the ISR Collateral granted by any of the Loan Parties under the ISR Collateral Documents to secure any of the Obligations. The provisions of this Section 12.17 are solely for the benefit of ISR Collateral Agent and the other Secured Parties, and no Loan Party nor any other Person shall have any rights as a third party beneficiary of any of the provisions hereof. ISR Collateral Agent shall not have any duties or responsibilities except for those expressly set forth in this Agreement and the other Loan Documents, together with such powers as are reasonably related thereto. The duties of ISR Collateral Agent shall be mechanical and administrative in nature and ISR Collateral Agent shall not have, or be deemed to have, by reason of this Agreement, any other Loan Document or otherwise a fiduciary relationship in respect of any other Secured Party. ISR Collateral Agent may resign or be removed or replaced, and a successor ISR Collateral Agent may be appointed.

(b) ISR Collateral Agent may resign at any time by giving not less than thirty (30) days' prior written notice thereof to the other Secured Parties and Borrower. Upon any such resignation, Lenders shall have the right to appoint a successor ISR Collateral Agent. If no successor ISR Collateral Agent shall have been so appointed by Lenders and shall have accepted such appointment within thirty (30) days after ISR Collateral Agent's giving notice of resignation, then Administrative Agent shall, on behalf of Lenders, appoint a successor ISR Collateral Agent,

which shall be a Lender or the Collateral Trustee, if a Lender or Collateral Trustee is willing to accept such appointment, or otherwise shall be a commercial bank or financial institution or a subsidiary of a commercial bank or financial institution if such commercial bank or financial institution has combined capital of at least $300,000,000 or other entity capable of carrying out the duties of ISR Collateral Agent (in the opinion of retiring ISR Collateral Agent). Upon the acceptance of any appointment as ISR Collateral Agent hereunder by a successor ISR Collateral Agent, such successor ISR Collateral Agent shall succeed to and become vested with all the rights, powers, privileges and duties under the Loan Documents of the resigning ISR Collateral Agent, subject to the filing of any and all requisite documentation to the Israeli Registrar of Companies. Upon the earlier of the acceptance of any appointment as ISR Collateral Agent hereunder by a successor ISR Collateral Agent or the effective date of the resigning ISR Collateral Agent's resignation, the resigning ISR Collateral Agent shall be discharged from its duties and obligations under the Loan Documents, except that any indemnity, expense reimbursement or other rights in favor of such resigning ISR Collateral Agent shall continue. After any resigning ISR Collateral Agent's resignation hereunder, the provisions of this Section 12.17 shall inure to its benefit as to any actions taken or omitted to be taken by it while it was ISR Collateral Agent under this Agreement and the other Loan Documents.

(c) Each other Secured Party authorizes ISR Collateral Agent (whether or not by or through employees or agents): (i) to perform such duties and exercise such rights, remedies, powers and discretions as are specifically delegated to or conferred upon ISR Collateral Agent by the ISR Collateral Documents, this Agreement and the other Loan Documents, together which such powers and discretions as are reasonably incidental thereto; and (ii) to take such action on its behalf as may, from time to time, be authorized under or in accordance with the ISR Collateral Documents, this Agreement and the other Loan Documents.

12.18Appointment of Administrative Agent.

(a) Each Lender hereby appoints Administrative Agent to act on behalf of Lenders as administrative agent under this Agreement and the other Loan Documents. The provisions of this Section 12.18 are solely for the benefit of Administrative Agent and Lenders and no Loan Party nor any other Person shall have any rights as a third party beneficiary of any of the provisions hereof. In performing its functions and duties under this Agreement, Administrative Agent does not assume and shall not be deemed to have assumed any obligation toward or relationship of agency or trust with or for any Loan Party or any other Person. Administrative Agent shall not have any duties or responsibilities except for those expressly set forth in this Agreement and the other Loan Documents, together with such powers as are reasonably related thereto. The duties of Administrative Agent shall be mechanical and administrative in nature and Administrative Agent shall not have, or be deemed to have, by reason of this Agreement, any other Loan Document or otherwise a fiduciary relationship in respect of any Lender.

(b) If Administrative Agent shall request instructions from Lenders with respect to any act or action (including failure to act) in connection with this Agreement or any other Loan Document, then Administrative Agent shall be entitled to refrain from such act or taking such action unless and until it shall have received instructions from the Required Lenders, and Administrative Agent shall incur no liability to any Person by reason of so refraining. Administrative Agent shall be fully justified in failing or refusing to take any action hereunder or under any other Loan Document for any reason. Without limiting the foregoing, no Lender shall have any right of action whatsoever against Administrative Agent as a result of Administrative Agent's acting or refraining from acting hereunder or under any other Loan Document in accordance with the instructions of Lenders.

(c) Administrative Agent may perform any and all of its duties and exercise its rights and powers hereunder by or through any one or more sub-agents appointed by Administrative Agent. Administrative Agent and any such sub-agent may perform any and all of its duties and exercise its rights and powers by or through their respective related parties. The exculpatory provisions of this Section 12.18 shall apply to any such sub-agent and to the related parties of such Administrative Agent and any such sub-agent. No Administrative Agent shall be responsible for the negligence or misconduct of any sub-agent except to the extent that a court of competent jurisdiction determines in a final and non-appealable judgment that such Administrative Agent acted with gross negligence or willful misconduct in the selection of such sub-agents.

(d) Neither Administrative Agent nor any of its Affiliates nor any of their respective directors, officers, agents or employees shall be liable for any action taken or omitted to be taken by it or them under or in connection with this Agreement or the other Loan Documents, except for damages solely caused by its or their own gross negligence or willful misconduct as finally determined by a court of competent jurisdiction. Without limitation of the generality of the foregoing, Administrative Agent: (i) may consult with legal counsel, independent chartered accountants and other experts and consultants selected by it and shall not be liable for any action taken or omitted to be taken in good faith by it in accordance with the advice of such counsel, accountants, experts or consultants; (ii) makes no warranty or representation to any Lender and shall not be responsible to any Lender for any statements, warranties or representations made in or in connection with this Agreement or the other Loan Documents; (iii) shall not have any duty to ascertain or to inquire as to the performance or observance of any of the terms, covenants or conditions of this Agreement or the other Loan Documents on the part of any Loan Party or to inspect the Collateral (including the books and records) of any Loan Party; (iv) shall not be responsible to any Lender for the due execution, legality, validity, enforceability, genuineness, sufficiency or value of this Agreement or the other Loan Documents or any other instrument or document furnished pursuant hereto or thereto; and (v) shall incur no liability under or in respect of this Agreement or the other Loan Documents by acting upon any notice, consent, certificate or other instrument or writing (which may be by email, telecopy, telegram, cable or telex) believed by it to be genuine and signed or sent by the proper party or parties.

(e) With respect to its Commitments and Loans hereunder, Administrative Agent shall have the same rights and powers under this Agreement and the other Loan Documents as any other Lender and may exercise the same as though it were not Administrative Agent; and the term "Lender" or "Lenders" shall, unless otherwise expressly indicated, include Administrative Agent in its individual capacity (to the extent it holds any Obligations owing to Lenders or Commitments hereunder). Administrative Agent and each of its Affiliates may lend money to, invest in, and generally engage in any kind of business with, any Loan Party, any of their Affiliates and any Person who may do business with or own securities of any Loan Party or any such Affiliate, all as if Administrative Agent was not Administrative Agent and without any duty to account therefor to Lenders. Administrative Agent and its Affiliates may accept fees and other consideration from any Loan Party for services in connection with this Agreement or otherwise without having to account for the same to Lenders.

(f) Each Lender acknowledges that it has, independently and without reliance upon Administrative Agent or any other Lender, made its own credit and financial analysis of the Loan Parties and its own decision to enter into this Agreement. Each Lender also acknowledges that it will, independently and without reliance upon Administrative Agent or any other Lender and based on such documents and information as it shall deem appropriate at the time, continue to make its own credit decisions in taking or not taking action under this Agreement. Each Lender acknowledges the potential conflict of interest of each other Lender as a result of Lenders holding disproportionate interests in the Loans, and expressly consents to, and waives any claim based upon, such conflict of interest.

(g) Each Lender agrees to indemnify Administrative Agent (to the extent not reimbursed by Loan Parties and without limiting the obligations of Loan Parties hereunder), ratably according to its respective Pro Rata Share, from and against any and all liabilities, obligations, losses, damages, penalties, actions, judgments, suits, costs, expenses or disbursements of any kind or nature whatsoever which may be imposed on, incurred by, or asserted against Administrative Agent in any way relating to or arising out of this Agreement or any other Loan Document or any action taken or omitted by Administrative Agent in connection therewith; provided, however, that no Lender shall be liable for any portion of such liabilities, obligations, losses, damages, penalties, actions, judgments, suits, costs, expenses or disbursements resulting solely from Administrative Agent's gross negligence or willful misconduct as finally determined by a court of competent jurisdiction. Without limiting the foregoing, each Lender agrees to reimburse Administrative Agent promptly upon demand for its ratable share of any out-of-pocket expenses (including reasonable and documented counsel fees) incurred by Administrative Agent in connection with the preparation, execution, delivery, administration, modification, amendment or enforcement (whether through negotiations, legal proceedings or otherwise) of, or legal advice in respect of rights or responsibilities under, this Agreement and each other Loan Document, to the extent that Administrative Agent is not reimbursed for such expenses by the Loan Parties.

(h) Administrative Agent may resign at any time by giving not less than thirty (30) days' prior written notice thereof to Lenders, Collateral Trustee and Borrower Representative. Upon any such resignation, Lenders shall have the right to appoint a successor Administrative Agent that may be the Collateral Trustee. If no successor Administrative Agent shall have been so appointed by Lenders and shall have accepted such appointment within thirty (30) days after Administrative Agent's giving notice of resignation, then Administrative Agent may, on behalf of Lenders, appoint a successor Administrative Agent, which shall be a Lender or the Collateral Trustee, if a Lender or Collateral Trustee is willing to accept such appointment, or otherwise shall be a commercial bank or financial institution or a subsidiary of a commercial bank or financial institution if such commercial bank or financial institution has combined capital of at least $300,000,000. If no successor Administrative Agent has been appointed pursuant to the foregoing, by the 30th day after the date such notice of resignation was given by the resigning Administrative Agent, such resignation shall become effective and Lenders shall thereafter perform all the duties of Administrative Agent hereunder until such time, if any, as Lenders appoint a successor Administrative Agent as provided above. Upon the acceptance of any appointment as Administrative Agent hereunder by a successor Administrative Agent, such successor Administrative Agent shall succeed to and become vested with all the rights, powers, privileges and duties of the resigning Administrative Agent. Upon the earlier of the acceptance of any appointment as Administrative Agent hereunder by a successor Administrative Agent or the effective date of the resigning Administrative Agent's resignation, the resigning Administrative Agent shall be discharged from its duties and obligations under this Agreement and the other Loan Documents, except that any indemnity, expense reimbursement or other rights in favor of such resigning Administrative Agent shall continue. After any resigning Administrative Agent's resignation hereunder, the provisions of this Section 12.18 shall inure to its benefit as to any actions taken or omitted to be taken by it while it was Administrative Agent under this Agreement and the other Loan Documents. Notwithstanding the foregoing, as long as K2 HealthVentures LLC is a Lender pursuant to this Agreement, K2 HealthVentures LLC shall not resign as Administrative Agent unless a successor Administrative Agent is appointed concurrently with such resignation, which successor Administrative Agent shall have the wherewithal to perform, and shall succeed to and become vested with all the rights, powers, privileges and duties of the resigning Administrative Agent under this Agreement and the other Loan Documents.

(i) In addition to any rights now or hereafter granted under applicable law and not by way of limitation of any such rights, upon the occurrence and during the continuation of any Event of Default, with the prior written consent of Administrative Agent, each Lender and each holder of any Obligation is hereby authorized at any time or from time to time, without notice to any Loan Party or to any other Person, any such notice being hereby expressly waived, to set off and to appropriate and to apply any and all balances held by it at any of its offices for the account of any Loan Party or any Subsidiary of a Loan Party (regardless of whether such balances are then due to such Loan Party or such Subsidiary) and any other properties or assets any time held or owing by that Lender or that holder to or for the credit or for the account of any Loan Party or any Subsidiary of a Loan Party against and on account of any of the Obligations which are not paid when due. Any Lender or holder of any Obligation exercising a right to set off or otherwise receiving any payment on account of the Obligations in excess of its Pro Rata Share thereof in accordance with the terms of this Agreement relating to the priority of the repayment of the Obligations shall purchase for cash (and the other Lenders or holders shall sell) such participations in each such other Lender's or holder's Pro Rata Share of the Obligations as would be necessary to cause such Lender to share the amount so set off or otherwise received with each other Lender or holder in accordance with their respective Pro Rata Shares and in accordance with the terms of this Agreement relating to the priority of the repayment of the Obligations. Each Loan Party agrees, to the fullest extent permitted by law, that (i) any Lender or holder may exercise its right to set off with respect to amounts in excess of its Pro Rata Share of the Obligations and may sell participations in such amount so set off to other Lenders and holders and (ii) any Lender or holders so purchasing a participation in the Loans made or other Obligations held by other Lenders or holders may exercise all rights of set-off, bankers' Lien, counterclaim or similar rights with respect to such participation as fully as if such Lender or holder were a direct holder of the Loans and the other Obligations in the amount of such participation. Notwithstanding the foregoing, if all or any portion of the set-off amount or payment otherwise received is thereafter recovered from Lender that has exercised the right of set-off, the purchase of participations by that Lender shall be rescinded and the purchase price restored without interest.

(j) Nothing in this Agreement or the other Loan Documents shall be deemed to require Administrative Agent to advance funds on behalf of any Lender or to relieve any Lender from its obligation to fulfill

its Commitments hereunder or to prejudice any rights that Borrowers may have against any Lender as a result of any default by such Lender hereunder. To the extent that Administrative Agent advances funds to Borrowers on behalf of any Lender and is not reimbursed therefor on the same Business Day as such advance is made, Administrative Agent shall be entitled to retain for its account all interest accrued on such advance until reimbursed by the applicable Lender.

(k) If Administrative Agent pays an amount to a Lender under this Agreement in the belief or expectation that a related payment has been or will be received by Administrative Agent from Borrowers and such related payment is not received thereby, then Administrative Agent will be entitled to recover such amount from such Lender on demand without set-off, counterclaim or deduction of any kind.

(l) If Administrative Agent determines at any time that any amount received thereby under this Agreement shall be returned to Borrowers or paid to any other Person pursuant to any insolvency law or otherwise, then, notwithstanding any other term or condition of this Agreement or any other Loan Document, Administrative Agent will not be required to distribute any portion thereof to any Lender. In addition, each Lender will repay to Administrative Agent on demand any portion of such amount that Administrative Agent has distributed to such Lender, together with interest at such rate, if any, as Administrative Agent is required to pay to Borrowers or such other Person, without set-off, counterclaim or deduction of any kind.

(m) Administrative Agent will use reasonable efforts to provide Lenders with any written notice of Event of Default received by Administrative Agent from, or delivered by Administrative Agent to, any Loan Party; provided, however, that Administrative Agent shall not be liable to any Lender for any failure to do so, except to the extent that such failure is attributable solely to Administrative Agent's gross negligence or willful misconduct as finally determined by a court of competent jurisdiction.

(n) Anything in this Agreement or any other Loan Document to the contrary notwithstanding, each Lender hereby agrees with each other Lender and with Administrative Agent that no Lender shall take any action to protect or enforce its rights arising out of this Agreement or any other Loan Document (including exercising any rights of set-off) without first obtaining the prior written consent of the Required Lenders, it being the intent of Lenders that any such action to protect or enforce rights under this Agreement and the other Loan Documents shall be taken in concert and at the direction or with the consent of Administrative Agent at the request of Required Lenders.

13. GUARANTY

13.1Guaranty. Each Guarantor from time to time party hereto (including any Guarantor joining as a Guarantor under this Agreement after the Closing Date pursuant to Section 6.11 hereby), jointly and severally, unconditionally and irrevocably, guarantees the prompt and complete payment and performance by Borrowers and the other Loan Parties when due (whether at the stated maturity, by acceleration or otherwise) of the Obligations. In furtherance of the foregoing, and without limiting the generality thereof, each Guarantor agrees as follows:

(a) each Guarantor's liability hereunder shall be the immediate, direct, and primary obligation of such Guarantor and shall not be contingent upon any exercise or enforcement of any remedy of any Secured Party or that any Secured Party may have against a Borrower, or any other Guarantor or other Person liable in respect of the Obligations, or all or any portion of the Collateral;

(b) Administrative Agent, on behalf of Lenders, may enforce this guaranty notwithstanding the existence of any dispute between any Secured Party and any Loan Party with respect to the existence of any Event of Default; and

(c) notwithstanding anything in this Article 13 to the contrary, the Collateral Trustee or ISR Collateral Agent (as applicable) shall be the only party with the right to enforce any of the Collateral or take other security.

13.2Maximum Liability. Anything herein or in any other Loan Document to the contrary notwithstanding, the maximum liability of each Guarantor shall in no event exceed the amount which can be guaranteed by such Guarantor under applicable federal, state provincial or territorial laws relating to the insolvency of debtors (after giving effect to the right of contribution established in Section 13.5).

13.3Termination. The guaranty pursuant to this Section 13 shall remain in full force and effect until the Termination Date.

13.4Unconditional Nature of Guaranty. No payment made by a Borrower, Guarantor, any other guarantor or any other Person or received or collected by any Secured Party from a Borrower, Guarantor, any other guarantor or any other Person by virtue of any action or proceeding or any set-off or appropriation or application at any time or from time to time in reduction of or in payment of the Obligations shall be deemed to modify, reduce, release or otherwise affect the liability of any Guarantor hereunder which shall, notwithstanding any such payment (other than any payment made by such Guarantor in respect of the Obligations or any payment received or collected from such Guarantor in respect of the Obligations), remain liable for the Obligations up to the maximum liability of such Guarantor hereunder until the Termination Date.

13.5Right of Contribution

(a) If in connection with any payment made by any Guarantor hereunder any rights of contribution arise in favor of such Guarantor against one or more other Guarantors, such rights of contribution shall be subject to the terms and conditions of Section 13.6. The provisions of this Section 13.5 shall in no respect limit the obligations and liabilities of any Guarantor pursuant to the Loan Documents, and each Guarantor shall remain liable for the full amount guaranteed by such Guarantor hereunder.

(b) Notwithstanding any payment made by any Guarantor hereunder or any set-off or application of funds of any Guarantor by any Secured Party, no Guarantor shall be entitled to be subrogated to any of the rights of any Secured Party against any Loan Party or any collateral security or guarantee or right of offset held by any Secured Party for the payment of the Obligations, nor shall any Guarantor seek or be entitled to seek any contribution or reimbursement from any Loan Party in respect of payments made by such Guarantor hereunder, in each case, until the Termination Date. If any amount shall be paid to any Guarantor on account of such subrogation rights at any time prior to the Termination Date, such amount shall be held by such Guarantor in trust for the ratable benefit of the Secured Parties, shall be segregated from other funds of such Guarantor, and shall, forthwith upon receipt by such Guarantor, be turned over to Administrative Agent in the exact form received by such Guarantor (duly indorsed by such Guarantor to Administrative Agent, if required), to be applied to the Obligations, irrespective of the occurrence or the continuance of any Event of Default.

13.6Amendments, etc. with respect to the Obligations. Each Guarantor shall remain obligated hereunder notwithstanding that, without any reservation of rights against any Guarantor and without notice to or further assent by any Guarantor, any demand for payment of any of the Obligations made by any Secured Party may be rescinded and any of the Obligations continued, and the Obligations, or the liability of any other Person upon or for any part thereof, or any collateral security or guarantee therefor or right of offset with respect thereto, may, from time to time, in whole or in part, be renewed, extended, amended, modified, accelerated, compromised, waived, surrendered or released by any Secured Party, and this Agreement, the other Loan Documents and any other documents executed and delivered in connection therewith may be amended, modified, supplemented or terminated, in whole or in part, in accordance with their respective terms, and any collateral security, guarantee or right of offset at any time held by any Secured Party for the payment of the Obligations may be sold, exchanged, waived, surrendered or released. No Secured Party shall have any obligation to protect, secure, perfect or insure any Lien at any time held by it as security for the Obligations or for the guarantee pursuant to this Section 13 or any property subject thereto.

13.7Guarantee Absolute and Unconditional; Guarantor Waivers; Guarantor Consent. Each Guarantor waives (to the fullest extent permitted by applicable law) any and all notice of the creation, renewal, extension or accrual of any of the Obligations and notice of or proof of reliance by any Secured Party upon the guaranty

contained in this Section 13 or acceptance of this guaranty. The Obligations shall conclusively be deemed to have been created, contracted or incurred, or renewed, extended, amended or waived, in reliance upon this guaranty. All dealings between Borrowers, Guarantors and any Secured Party shall be conclusively presumed to have been had or consummated in reliance upon this guaranty. Each Guarantor further waives (to the fullest extent permitted by applicable law):

(a) diligence, presentment, protest, demand for payment and notice of default or nonpayment to or upon any Borrower or any of the other Guarantors with respect to the Obligations;

(b) the defense of the statute of limitations in any action hereunder or for the collection or performance of the Obligations;

(c) any defense arising by reason of any lack of corporate or other authority or any other defense of any Borrower, such Guarantor or any other Person;

(d) any defense based upon errors or omissions by any Secured Party in the administration of the Obligations;

(e) any rights to set-offs and counterclaims;

(f) any defense based upon an election of remedies (including, if available, an election to proceed by nonjudicial foreclosure) which destroys or impairs the subrogation rights of such Guarantor or the right of such Guarantor to proceed against any Borrower or any other obligor of the Obligations for reimbursement; and

(g) without limiting the generality of the foregoing, to the fullest extent permitted by law, any defenses or benefits that may be derived from or afforded by applicable law that limit the liability of or exonerate guarantors or sureties, or which may conflict with the terms of this Agreement.

(h) To the extent applicable, the ISR Guarantor waives the benefits and any rights afforded to it under the Israeli Guaranty Law, 5727-1967, as may be amended from time to time (the "**Guaranty Law**"), and including any successor law or similar applicable law of a non-Israeli jurisdiction which defenses or rights would have been available to the undersigned and the ISR Guarantor hereby confirms that such rights and defenses set forth in the Guaranty Law, shall not apply to the ISR Guarantor, including but not limited to Sections 5, 6, 8, 9, 11 and 12 thereto. Furthermore, to the extent applicable, the ISR Guarantor, for the purposes of Section 8 of the Israeli Transfer of Obligations Law, 5729-1969, as may be amended from time to time and including any successor law, hereby irrevocably and unconditionally consents to any assignment made by the ISR Collateral Agent and/or Lenders regarding any of the obligations of the Borrower towards the Lenders under any Indebtedness, provided such assignment was made in accordance with the terms of the loan documents and that any such assignment shall not render void or otherwise operate to discharge, impair or otherwise affect any of the obligations of the ISR Guarantor contained herein.

Each Guarantor understands and agrees that the guarantee contained in this Section 13 shall be construed as a continuing, absolute and unconditional guarantee of payment without regard to (i) the validity or enforceability of this Agreement or any other Loan Document, any of the Obligations or any other collateral security therefor or guaranty or right of offset with respect thereto at any time or from time to time held by any Secured Party, (ii) any defense, set-off or counterclaim (other than a defense of payment or performance) which may at any time be available to or be asserted by any Borrower or any other Person against any Secured Party, or (iii) any other circumstance whatsoever (with or without notice to or knowledge of any Loan Party) which constitutes, or might be construed to constitute, an equitable or legal discharge of any Borrower for the Obligations, or of such Guarantor under this guaranty, in bankruptcy or in any other instance, (iv) any Insolvency Proceeding with respect to any Loan Party or any other Person, (v) any amalgamation, merger, acquisition, consolidation or change in structure of any Loan Party or any other Person, or any sale, lease, transfer or other disposition of any or all of the assets or Equity Interests of any Loan Party or any other Person, (vi) any assignment or other transfer, in whole or in part, of Secured Parties' interests

in and rights under this Agreement or the other Loan Documents, including the right to receive payment of the Obligations, or any assignment or other transfer, in whole or in part, of any Secured Party's interests in and to any of the Collateral, (vii) any Secured Party's vote, claim, distribution, election, acceptance, action or inaction in any Insolvency Proceeding related to any of the Obligations, and (viii) any other guaranty, whether by such Guarantor or any other Person, of all or any part of the Obligations or any other indebtedness, obligations or liabilities of any Guarantor to Secured Parties. When making any demand hereunder or otherwise pursuing its rights and remedies hereunder against any Guarantor, Secured Parties may, but shall be under no obligation to, make a similar demand on or otherwise pursue such rights and remedies as it may have against any Loan Party or any other Person or against any collateral security or guarantee for the Obligations or any right of offset with respect thereto. Any failure by any Secured Party to make any such demand, to pursue such other rights or remedies or to collect any payments from any Loan Party or any other Person or to realize upon any such collateral security or guarantee or to exercise any such right of offset, or any release of any Loan Party or any other Person or any such collateral security, guarantee or right of offset, shall not relieve any Guarantor of any obligation or liability hereunder, and shall not impair or affect the rights and remedies, whether express, implied or available as a matter of law, of any Secured Party against any Guarantor. For the purposes hereof "demand" shall include the commencement and continuance of any legal proceedings.

13.8Modifications of Obligations. Each Guarantor further unconditionally consents and agrees that, without notice to or further assent from any Guarantor: (a) the principal amount of the Obligations may be increased or decreased and additional indebtedness or obligations of a Borrower or any other Persons under the Loan Documents may be incurred, by one or more amendments, modifications, renewals or extensions of any Loan Document or otherwise; (b) the time, manner, place or terms of any payment under any Loan Document may be extended or changed, including by an increase or decrease in the interest rate on any Obligation or any fee or other amount payable under such Loan Document, by an amendment, modification or renewal of any Loan Document or otherwise; (c) the time for a Borrower's (or any other Loan Party's) performance of or compliance with any term, covenant or agreement on its part to be performed or observed under any Loan Document may be extended, or such performance or compliance waived, or failure in or departure from such performance or compliance consented to, all in such manner and upon such terms as the applicable Secured Party may deem proper; (d) in addition to the Collateral, Secured Parties may, subject to applicable law, take and hold other security (legal or equitable) of any kind, at any time, as collateral for the Obligations, and may, from time to time, in whole or in part, exchange, sell, surrender, release, subordinate, modify, waive, rescind, compromise or extend such security and may permit or consent to any such action or the result of any such action, and may apply such security and direct the order or manner of sale thereof; (e) Secured Parties may discharge or release, in whole or in part, any other Guarantor or any other Loan Party or other Person liable for the payment and performance of all or any part of the Obligations, and may permit or consent to any such action or any result of such action, and shall not be obligated to demand or enforce payment upon any of the Collateral, nor shall any Secured Party be liable to any Guarantor for any failure to collect or enforce payment or performance of the Obligations from any Person or to realize upon the Collateral, and (f) Secured Parties may request and accept other guaranties of the Obligations and any other indebtedness, obligations or liabilities of a Borrower or any other Loan Party to any Secured Party and may, from time to time, in whole or in part, surrender, release, subordinate, modify, waive, rescind, compromise or extend any such guaranty and may permit or consent to any such action or the result of any such action; in each case (a) through (f), as the applicable Secured Parties may deem advisable, and without impairing, abridging, releasing or affecting this Agreement.

13.9Reinstatement. The guaranty shall continue to be effective, or be reinstated, as the case may be, if at any time payment, or any part thereof, of any of the Obligations is rescinded or must otherwise be restored or returned by any Secured Party upon the insolvency, bankruptcy, dissolution, liquidation or reorganization of a Loan Party, or upon or as a result of the appointment of a receiver, intervenor or conservator of, or trustee or similar officer for, a Loan Party or any substantial part of its property, or otherwise, all as though such payments had not been made.

13.10No Waiver by Course of Conduct; Cumulative Remedies. No Secured Party shall by any act (except in writing in accordance with Section 12.8), delay, indulgence, omission or otherwise be deemed to have waived any right or remedy hereunder or to have acquiesced in any Default or Event of Default, as applicable. No failure to exercise, nor any delay in exercising, on the part of any Secured Party, any right, power or privilege

hereunder shall operate as a waiver thereof. No single or partial exercise of any right, power or privilege hereunder shall preclude any other or further exercise thereof or the exercise of any other right, power or privilege. A waiver by any Secured Party of any right or remedy hereunder on any one occasion shall not be construed as a bar to any right or remedy which any Secured Party would otherwise have on any future occasion. The rights and remedies herein provided are cumulative, may be exercised singly or concurrently and are not exclusive of any other rights or remedies provided by law.

13.11Enforcement Expenses; Indemnification. Each Guarantor agrees to pay or reimburse Secured Parties for all its costs and expenses incurred in collecting against such Guarantor under this guaranty or otherwise enforcing or preserving any rights under this Agreement and the other Loan Documents to which such Guarantor is a party, including, without limitation, the reasonable fees and disbursements of counsel.

[***] = CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY BRACKETS, HAS BEEN OMITTED BECAUSE THE INFORMATION (I) IS NOT MATERIAL AND (II) IS THE TYPE OF INFORMATION THAT THE REGISTRANT BOTH CUSTOMARILY AND ACTUALLY TREATS AS PRIVATE AND CONFIDENTIAL.

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[SIGNATURE PAGE TO LOAN AND SECURITY AGREEMENT]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the Closing Date.

BORROWER:

89BIO, INC.

By__
Name:___
Title:____

GUARANTORS:

89BIO MANAGEMENT, INC.

By__
Name:___
Title:____

89BIO LTD

By__
Name:___
Title:____

[***] = CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY BRACKETS, HAS BEEN OMITTED BECAUSE THE INFORMATION (I) IS NOT MATERIAL AND (II) IS THE TYPE OF INFORMATION THAT THE REGISTRANT BOTH CUSTOMARILY AND ACTUALLY TREATS AS PRIVATE AND CONFIDENTIAL.

[SIGNATURE PAGE TO LOAN AND SECURITY AGREEMENT]

COLLATERAL TRUSTEE:

ANKURA TRUST COMPANY, LLC

By__
Name: ~~Beth Micena~~ _____
Title: ~~Senior Director~~ _____

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[SIGNATURE PAGE TO LOAN AND SECURITY AGREEMENT]

ADMINISTRATIVE AGENT AND ISR
COLLATERAL AGENT:

K2 HEALTHVENTURES LLC

By__
Name:___
Title:____

LENDER:

K2 HEALTHVENTURES LLC

By__
Name:___
Title:____

[***] = CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY BRACKETS, HAS BEEN OMITTED BECAUSE THE INFORMATION (I) IS NOT MATERIAL AND (II) IS THE TYPE OF INFORMATION THAT THE REGISTRANT BOTH CUSTOMARILY AND ACTUALLY TREATS AS PRIVATE AND CONFIDENTIAL.

EXHIBIT A

DEFINITIONS

As used in this Agreement, the following capitalized terms have the following meanings:

"**Account**" means any "account" as defined in the Code with such additions to such term as may hereafter be made, and includes, without limitation, all accounts receivable and other sums owing to a Loan Party.

"**Account Control Agreement**" means any control agreement entered into among the depository institution at which a Loan Party maintains a Deposit Account or the securities intermediary or commodity intermediary at which a Loan Party maintains a Securities Account or a Commodity Account, one or more Loan Parties, and Collateral Trustee pursuant to which Collateral Trustee, for the benefit of Secured Parties, obtains control (within the meaning of the Code) over such Deposit Account, Securities Account, or Commodity Account.

"**Account Debtor**" means any "account debtor" as defined in the Code with such additions to such term as may hereafter be made.

"**Administrative Agent**" has the meaning set forth in the preamble.

"**Affiliate**" means, with respect to any Person, each other Person that owns or controls, directly or indirectly the Person, any Person that controls or is controlled by or is under common control with the Person, and each of that Person's senior executive officers, directors, partners and, for any Person that is a limited liability company, that Person's managers and members.

"**Agreement**" has the meaning set forth in the preamble.

~~"**Amortization Date**" means February 1, 2025, provided that if the Extension Milestone is achieved prior to February 1, 2025, the Amortization Date shall be February 1, 2026.~~

"**Anti-Terrorism Order**" means Executive Order No. 13,224 as of September 24, 2001, Blocking Property and Prohibiting Transactions with Persons Who Commit, Threaten to Commit or Support Terrorism, 66 U.S. Fed. Reg. 49,079 (2001), as amended.

"**Applicable Rate**" means a variable annual rate equal to the greater of (i) ~~8.45~~8.95%, and (ii) the sum of (A) the Prime Rate, plus (B) ~~2.25~~1.75%.

"**Automatic Payment Authorization**" means the Automatic Payment Authorization in substantially the form of Exhibit F.

"**Board**" means, with respect to any Person, the board of directors, board of managers, managers or other similar bodies or authorities performing similar governing functions for such Person. Unless the context otherwise requires, each reference to a Board herein shall be a reference to the Board of Parent.

"**Books**" are all of each applicable Loan Party's books and records including ledgers, federal and state tax returns, records regarding such Loan Party's assets or liabilities, the Collateral, business operations or financial condition, and all computer programs or storage or any equipment containing such information.

"**Borrower**" and "**Borrowers**" has the meaning set forth in the preamble.

"**Borrower Representative**" has the meaning set forth in the preamble.

"**Business Day**" means any day that is not a Saturday, Sunday or a day on which banking institutions in the City of New York or the Commonwealth of Massachusetts are authorized by law, regulation or executive order to remain closed.

"**Cash Equivalents**" means (a) marketable direct obligations issued or unconditionally guaranteed by the United States or any agency or any State thereof having maturities of not more than one (1) year from the date of acquisition; (b) commercial paper maturing no more than one (1) year after its creation and having the highest rating from either Standard & Poor's Ratings Group or Moody's Investors Service, Inc.; (c) certificates of deposit issued by any bank with assets of at least $500,000,000 maturing no more than one year from the date of investment therein; and (d) money market funds at least ninety-five percent (95%) of the assets of which constitute Cash Equivalents of the kinds described in clauses (a) through (c) of this definition.

"**Change in Control**" means any of the following (or any combination of the following) whether arising from any single transaction event or series of related transactions or events that, individually or in the aggregate, result in:

(a) any "person" or "group" (within the meaning of Section 13(d) and 14(d)(2) of the Exchange Act) becoming the "beneficial owner" (as defined in Rule 13d-3 under the Exchange Act), directly or indirectly, of a sufficient number of Equity Interests of Parent ordinarily entitled to vote in the election of directors, empowering such "person" or "group" to elect a majority of the members of the Board of Parent, who did not have such power before such transaction;

(b) the Transfer of all or substantially all assets of Borrowers or of a material business line of Borrowers; or

(c) Parent ceasing to own and control, free and clear of any Liens (other than Permitted Liens), directly or indirectly, all of the Equity Interests in each of its Subsidiaries (other than, in the case of any Foreign Subsidiaries, any nominal Equity Interests held by directors to comply with local law) or failing to have the power to direct or cause the direction of the management and policies of each such Subsidiary.

"**Charged Property**" is defined in the ISR Collateral Documents.

"**Claims**" has the meaning set forth in Section 12.3.

"**Closing Date**" has the meaning set forth in the preamble.

"**Code**" means the Uniform Commercial Code, as the same may, from time to time, be enacted and in effect in the State of New York; provided, that, to the extent that the Code is used to define any term herein or in any Loan Document and such term is defined differently in different Articles or Divisions of the Code, the definition of such term contained in Article or Division 9 shall govern; provided further, that in the event that, by reason of mandatory provisions of law, any or all of the attachment, perfection, or priority of, or remedies with respect to, Collateral Trustee's Lien on any Collateral is governed by the Uniform Commercial Code in effect in a jurisdiction other than the State of New York, the term "**Code**" shall mean the Uniform Commercial Code as enacted and in effect in such other jurisdiction solely for purposes of the provisions thereof relating to such attachment, perfection, priority, or remedies and for purposes of definitions relating to such provisions.

"**Collateral**" means any and all properties, rights and assets of each Loan Party described on Exhibit B, and any collateral securing the Obligations pursuant to any Guaranty or pursuant to any other Loan Document.

"**Collateral Access Agreement**" means an agreement with respect to a Loan Party's leased location or bailee location, in each case in form and substance reasonably satisfactory to Administrative Agent and Collateral Trustee.

"**Collateral Account**" means any Deposit Account, Securities Account, or Commodity Account of a Loan Party.

"**Collateral Trust Agreement**" means that certain Collateral Trust Agreement, dated as of the Closing Date, between Collateral Trustee and Administrative Agent, as amended, restated, supplemented or otherwise modified from time to time.

"**Collateral Trustee**" has the meaning set forth in the preamble.

"**Commitment**" means, as to any Lender, the aggregate principal amount of Loans committed to be made by such Lender, as set forth on Schedule 1 hereto.

"**Commodity Account**" means any "commodity account" as defined in the Code with such additions to such term as may hereafter be made.

"**Common Stock**" means shares of common stock of Issuer, par value $0.001 per share.

"**Compliance Certificate**" means that certain certificate in the form attached hereto as Exhibit D.

"**Consolidated Change in ~~Cash and Cash Equivalents~~Liquid Assets**" means for any period, an amount equal to (i) ~~Liquidity~~total cash and marketable securities (as shown on the company's financial statements) as of the last day of such period, less (ii) ~~Liquidity~~ total cash and marketable securities (as shown on the company's financial statements) as of the first day of such period, less (iii) any net cash proceeds received by Loan Parties from the issuance of Equity Interests or Indebtedness or other financing activities, one-time grants, sales of assets outside of the Ordinary Course of Business, or business development (including, without limitation, upfront or milestone payments) received during such period, plus (or minus) (iv) any loss (or gain) in value of marketable securities during such period.

"**Contingent Obligation**" means, for any Person, any direct or indirect liability, contingent or not, of that Person for (a) any indebtedness, lease, dividend, letter of credit or other obligation of another such as an obligation, in each case, directly or indirectly guaranteed, endorsed, co-made, discounted or sold with recourse by that Person, or for which that Person is directly or indirectly liable; (b) any obligations for undrawn letters of credit for the account of that Person; and (c) all obligations from any interest rate, currency or commodity swap agreement, interest rate cap or collar agreement, or other agreement or arrangement designated to protect a Person against fluctuation in interest rates, currency exchange rates or commodity prices. The amount of a Contingent Obligation is the stated or determined amount of the primary obligation for which the Contingent Obligation is made or, if not determinable, the maximum reasonably anticipated liability for it determined by the Person in good faith; but the amount may not exceed the maximum of the obligations under any guarantee or other support arrangement.

"**Conversion Amount**" has the meaning set forth in Section 2.2(e)(i).

"**Conversion Election Notice**" means a notice in the form attached hereto as Exhibit H.

"**Conversion Price**" means, with respect to a Lender Conversion of any portion of the Restatement First Tranche Term Loan – Part A, the Conversion Price – Part A, and with respect to a Lender Conversion of any portion of the Restatement First Tranche Term Loan – Part B, the Conversion Price – Part B.

"**Conversion Price – Part A**" means $12.6943, subject to adjustment in accordance with Section 2.2(e)(vii).

"**Conversion Price – Part B**" means ~~a price equal to 130% of the lowest Trailing Three-Day VWAP for the period commencing December 15, 2022 through and including the fifteenth (15th) VWAP Trading Day following the Closing Date~~$9.5835, subject to adjustment in accordance with Section 2.2(e)(vii).

"**Conversion Shares**" has the meaning set forth in Section 2.2(e)(i).

"**Copyrights**" means any and all copyright rights, copyright applications, copyright registrations and like protections of a Person in each work of authorship and derivative work thereof, whether published or unpublished and whether or not the same also constitutes a trade secret.

"**Default**" means any circumstance, event or condition that, with the giving of any notice, the passage of time, or both, would be an Event of Default.

"**Default Rate**" has the meaning set forth in Section 2.3(b).

"**Deposit Account**" means any "deposit account" as defined in the Code with such additions to such term as may hereafter be made, and includes any checking account, savings account or certificate of deposit.

"**Designated Holder**" means a Lender or any Affiliate designated by a Lender in the Conversion Election Notice or with respect to any exercise of any Warrant, provided that the Designated Holder for K2 HealthVentures LLC and any successor, transferee or assignee thereof as Lender, which is an Affiliate of K2 HealthVentures LLC, shall be K2 HealthVentures Equity Trust LLC.

"**Disqualified Stock**" means, with respect to any Person, any Equity Interest in such Person that, by its terms (or by the terms of any security or other equity interests into which it is convertible or for which it is exchangeable), or upon the happening of any event or condition, less than 91 days after the final maturity of any Loan made hereunder (a) matures or is mandatorily redeemable (other than solely for Permitted Indebtedness or other Equity Interests in such Person or that do not constitute Disqualified Stock and cash in lieu of fractional shares of such Equity Interests), pursuant to a sinking fund obligation or otherwise, (b) is redeemable at the option of the holder thereof, in whole or in part (other than solely for Permitted Indebtedness or other Equity Interests in such Person that do not constitute Disqualified Stock and cash in lieu of fractional shares of such Equity Interests), (c) provides for the scheduled payments of dividends or distributions in cash, or (d) is or becomes convertible into or exchangeable for Indebtedness or any other Equity Interests that would constitute Disqualified Stock; provided that (i) if such Equity Interest is issued pursuant to a plan for the benefit of employees of any Loan Party or any Subsidiaries, such Equity Interests shall not constitute Disqualified Stock solely because it may be required to be repurchased by any Loan Party or any Subsidiary in order to satisfy applicable statutory or regulatory obligations or as a result of such Person's termination, death or disability and (ii) any Equity Interests that are subject to any provision thereof that requires the redemption thereof upon the occurrence of a change of control, assets ale or other similar event at any time on or prior to the date that is 91 days after the final maturity of any Loan made hereunder shall not constitute Disqualified Stock hereunder if such Equity Interests expressly provide that such redemption is subject to the prior payment in full of the Obligations hereunder.

"**Dollars**," "**dollars**" or use of the sign "**$**" means only lawful money of the United States and not any other currency, regardless of whether that currency uses the "$" sign to denote its currency or may be readily converted into lawful money of the United States.

"**Domestic Subsidiary**" means any Subsidiary that is organized under the laws of the United States or any state or the District of Columbia.

"**Equipment**" means all "equipment" as defined in the Code with such additions to such term as may hereafter be made, and includes without limitation all machinery, fixtures, goods, vehicles (including motor vehicles and trailers), and any interest in any of the foregoing.

"**Equity Interests**" means, with respect to any Person, any of the shares of capital stock of (or other ownership, membership or profit interests in) such Person, any of the warrants, options or other rights for the purchase or acquisition from such Person of shares of capital stock of (or other ownership, membership or profit interests in) such Person, any of the securities convertible into or exchangeable for shares of capital stock of (or other ownership, membership or profit interests in) such Person or warrants, rights or options for the purchase or acquisition from such Person of such shares (or such other interests), and any of the other ownership, membership or profit interests in such

Person (including partnership, member or trust interests therein), whether voting or nonvoting, and whether or not such shares, warrants, options, rights or other interests are outstanding on any date of determination.

"**ERISA**" means the Employee Retirement Income Security Act of 1974, and its regulations.

"**Event of Default**" has the meaning set forth in Section 8.

"**Exchange Act**" means the Securities Exchange Act of 1934, as amended.

"**Excluded Locations**" means the following locations where Collateral may be located from time to time: (a) locations where mobile office equipment (e.g. laptops, mobile phones and the like) may be located with employees in the Ordinary Course of Business, and (b) other locations where, in the aggregate for all such locations, less than $250,000 of Collateral is located.

~~"**Extension Milestone**" means (i) no Event of Default has occurred and is continuing, and (ii) the Second Tranche Term Commitments and Third Tranche Term Commitments have been fully funded in accordance with the terms of this Agreement, and Borrowers have received net cash proceeds from equity financings and/or in the form of upfront and milestone payments from business development transactions, which, in the aggregate are sufficient to fund the operations of Parent and its Subsidiaries through completion of the first Phase 3 study of pegozafermin ("**PGZ**") in Severe Hypertriglyceridemia ("**SHTG**"), based on an operating plan approved by the Parent's Board subject to Administrative Agent's reasonable review and approval thereof.~~

"**FDA**" means the U.S. Food and Drug Administration or any successor thereto.

"**Federal Reserve Board**" means the Board of Governors of the Federal Reserve System, or any successor thereto.

"**Fee Letter**" means that certain letter agreement, dated as of the ~~date hereof~~Restatement Effective Date, by and among Borrowers, Administrative Agent and Lenders, as amended, restated, supplemented or otherwise modified from time to time.

"**Financial Covenant Start Date**" means initially January 1, 2026, provided that such date shall be deferred until January 1, 2027 if no Event of Default has occurred and is continuing and Administrative Agent has received evidence reasonably satisfactory to it that Borrower Representative has received net cash proceeds of at least $300,000,000 (not including proceeds from conversion or cancellation of Indebtedness) from the issuance of Equity Interests, Subordinated Indebtedness or upfront payments from business development transactions.

~~"**First Tranche Term Loan**" has the meaning set forth in Section 2.2(a)(i).~~

~~"**First Tranche Term Loan Commitment**" means, as to any Lender, the aggregate principal amount of First Tranche Term Loans committed to be made by such Lender, as set forth on Schedule 1 hereto.~~

"**Foreign Subsidiary**" means any Subsidiary other than a Domestic Subsidiary.

~~"**Fourth Tranche Term Loan**" has the meaning set forth in Section 2.2(a)(iv).~~

~~"**Fourth Tranche Term Loan Amount**" means, as to any Lender, the aggregate principal amount of Fourth Tranche Term Loans that may be made by such Lender, as set forth on Schedule 1 hereto.~~

"**Funding Date**" means any date on which a Loan is made to or for the account of a Borrower which shall be a Business Day.

"**GAAP**" means generally accepted accounting principles set forth in the opinions and pronouncements of the Accounting Principles Board of the American Institute of Certified Public Accountants and statements and pronouncements of the Financial Accounting Standards Board or in such other statements by such other Person as may be approved by a significant segment of the accounting profession, which are applicable to the circumstances as of the date of determination, provided, however, that if there occurs after the Closing Date any change in GAAP that affects in any respect the calculation of any covenant or threshold in this Agreement, Lenders and Borrower Representative shall negotiate in good faith amendments to the provisions of this Agreement that relate to the calculation of such covenant or threshold with the intent of having the respective positions of Lender and Borrowers after such change in GAAP conform as nearly as possible to their respective positions as of the Closing Date, and, until any such amendments have been agreed upon, such covenants and thresholds shall be calculated as if no such change in GAAP has occurred.

"**General Intangibles**" means all "general intangibles" as defined in the Code in effect on the Closing Date with such additions to such term as may hereafter be made, and includes without limitation, all Intellectual Property, claims, income and other tax refunds, security and other deposits, payment intangibles, contract rights, options to purchase or sell real or personal property, rights in all litigation presently or hereafter pending (whether in contract, tort or otherwise), insurance policies (including without limitation key man, property damage, and business interruption insurance), payments of insurance and rights to payment of any kind.

"**Governmental Approval**" means any consent, authorization, approval, order, license, franchise, permit, certificate, accreditation, registration, filing or notice, of, issued by, from or to, or other act by or in respect of, any Governmental Authority, including for the testing, manufacturing, marketing and sales of its Product.

"**Governmental Authority**" means any nation or government, any state or other political subdivision thereof, any agency, authority, instrumentality, regulatory body, court, central bank or other entity exercising executive, legislative, judicial, taxing, regulatory or administrative functions of or pertaining to government, any securities exchange and any self-regulatory organization.

"**Guarantor**" has the meaning set forth in the preamble.

"**Guaranty**" means any guarantee of all or any part of the Obligations, including pursuant to Section 13 hereof, as the same may from time to time be amended, restated, modified or otherwise supplemented.

"**IIA**" is the Israel Innovation Authority of the Israeli Ministry of the Economy.

"**Indebtedness**" means (a) indebtedness for borrowed money or the deferred price of property or services, (b) any reimbursement and other obligations for surety bonds and letters of credit, (c) obligations evidenced by notes, bonds, debentures or similar instruments, (d) capital lease obligations, (e) Contingent Obligations, (f) obligations in respect of Disqualified Stock, and (g) obligations in respect of Royalty and Milestone Payments.

"**Indemnified Person**" has the meaning set forth in Section 12.3.

"**Insolvency Proceeding**" means any proceeding by or against any Person under the United States Bankruptcy Code, or any other bankruptcy or insolvency law, including under the Israeli Insolvency and Economic Rehabilitation Law, 5778-2018 (the "**Israeli Insolvency Law**") or the Companies Ordinance 5743-1983, including but not limited to a freeze order "*hakpaat halichim*", an order for the initiation of proceedings, or an order for rehabilitation under the Israeli Insolvency Law, including assignments for the benefit of creditors, compositions, extensions generally with its creditors, or proceedings seeking reorganization, arrangement, or other relief.

"**Intellectual Property**" means, with respect to any Loan Party (or, as applicable, any of its Subsidiaries), all of such Loan Party's or Subsidiary's right, title, and interest in and to the following:

(d) its Copyrights, Trademarks and Patents;

(e) any and all trade secrets and trade secret rights, including, without limitation, any rights to unpatented inventions, know-how, operating manuals;

(f) any and all source code;

(g) any and all design rights which may be available to such Person;

(h) any and all claims for damages by way of past, present and future infringement of any of the foregoing, with the right, but not the obligation, to sue for and collect such damages for said use or infringement of the Intellectual Property rights identified above; and

(i) all amendments, renewals and extensions of any of the Copyrights, Trademarks or Patents.

"**Inventory**" means all "inventory" as defined in the Code in effect on the Closing Date with such additions to such term as may hereafter be made.

"**Investment**" means any beneficial ownership interest in any Person (including stock, partnership interest or other securities or Equity Interests), and any loan, advance or capital contribution to any Person, or the acquisition of all or substantially all of the assets or properties of another Person.

"**Issuer**" means Parent.

"**ISR Collateral**" means, any and all properties, rights and assets of ISR Guarantor in which a security interest, charge or other Lien is created pursuant to the ISR Collateral Documents in favor of ISR Collateral Agent for the benefit of Secured Parties.

"**ISR Collateral Agent**" has the meaning set forth in the preamble.

"**ISR Collateral Documents**" means, collectively, (i) the ISR Fixed Debenture (as defined under Schedule 2A), (ii) the ISR Floating Debenture (as defined under Schedule 2A), and (iii) the pledge over the Borrower's shares in the ISR Guarantor, all in favor of the ISR Collateral Agent.

"**ISR Guarantor**" means 89BIO LTD, a limited company organized under the laws of Israel.

"**ISR Guarantor Documents**" means the ISR Collateral Documents and any other Loan Documents and any other documents to be delivered by or with respect to ISR Guarantor, set forth on Schedule 2A

"**Israeli Insolvency Law**" has the meaning set forth in the defined term "Insolvency Proceeding".

"**Key Person**" means the Chief Executive Officer, Chief Medical Officer and Chief Financial Officer of Parent.

"**Lender**" has the meaning set forth in the preamble.

"**Lender Conversion**" has the meaning set forth in Section 2.2(e).

"**Lien**" means a mortgage, deed of trust, levy, charge, pledge, security interest or other encumbrance of any kind, whether voluntarily incurred or arising by operation of law or otherwise against any property.

"**Liquidity**" means, as of any date of determination, the aggregate amount of Unrestricted Cash, Cash Equivalents and other investment assets approved by Administrative Agent to be included in the calculation of "Liquidity" in its reasonable discretion, in each case, maintained in Collateral Accounts subject to an Control Agreement in favor of Collateral Trustee.

"**Loan Documents**" means, collectively, this Agreement and any schedules, exhibits, certificates, notices, and any other documents related to this Agreement, the Warrant, the Fee Letter, the Collateral Trust Agreement, the ISR Guarantor Documents, the Automatic Payment Authorization, the Account Control Agreements, the Collateral Access Agreements, any Subordination Agreement, any note, or notes or guaranties executed by a Loan Party, and any other present or future agreement by a Loan Party with or for the benefit of any Secured Party in connection with this Agreement, all as amended, modified, supplemented, extended or restated from time to time.

"**Loan Party**" or "**Loan Parties**" has the meaning set forth in the preamble.

"**Loan Request**" means a request for a Loan pursuant to this Agreement in substantially the form attached hereto as Exhibit C.

"**Loans**" means, collectively, the Term Loans, and any other loan from time to time made under this Agreement, and "**Loan**" means any of the foregoing.

~~"**Lowest Trailing Three-Day VWAP**" means, for any reference period, the lowest of the average VWAP for each consecutive three VWAP Trading Days in such reference period.~~

"**Margin Stock**" has the meaning set forth in Section 5.11(b).

"**Material Adverse Effect**" means (a) a material impairment in the perfection or priority of the Lien in the Collateral pursuant to the Loan Documents to which the Loan Parties are a party or in the value of the Collateral; or (b) a material adverse effect upon: (i) the business, operations, properties, assets or condition (financial or otherwise) of the Loan Parties as a whole; (ii) the prospect of repayment of any part of the Obligations or (iii) the ability to enforce any rights or remedies with respect to any Obligations, as reasonably determined by Administrative Agent.

"**Maximum Rate**" has the meaning set forth in Section 2.3(d) hereof.

"**Minimum RML Amount**" means, as of any date of determination, the average monthly Consolidated Change in ~~Cash and Cash Equivalents~~Liquid Assets for the most recent consecutive three month period for which financial statements are due to have been delivered in accordance with Section 6.2 hereof, multiplied by 5.0~~.~~, provided that after the announcement of topline data from the ongoing Phase 3 study of PGZ in F2/F3 MASH, the amount shall be

(i) if Administrative Agent has received satisfactory evidence of an announcement of Positive Phase 3 SHTG Data and Positive Phase 3 MASH Data, 50% of Obligations outstanding from time to time, or

(ii) in all other cases, 115% of Obligations outstanding from time to time.

"**NASH**" has the meaning set forth in the defined term "Second Tranche Milestone".

"**Obligations**" means all of Borrowers' and each other Loan Party's obligations to pay the Loans when due, including principal, interest, fees, Secured Party Expenses, the fees pursuant to the Fee Letter and any other amounts due to be paid by a Loan Party, and each Loan Party's obligation to perform its duties under the Loan Documents (other than the Warrant), and any other debts, liabilities and other amounts any Loan Party owes to any Lender at any time, whether under the Loan Documents or otherwise (but excluding obligations arising under the Warrant), including, without limitation, interest or Secured Party Expenses accruing after Insolvency Proceedings begin (whether or not allowed), and any debts, liabilities, or obligations of any Loan Party assigned to any Secured Party, which shall be treated as secured or administrative expenses in the Insolvency Proceedings to the extent permitted by applicable law.

"**OFAC**" has the meaning set forth in Section 5.11(c).

"**Operating Documents**" means, for any Person, such Person's formation documents, as certified by the Secretary of State (or equivalent agency) of such Person's jurisdiction of formation, organization or incorporation on a date that is no earlier than thirty (30) days prior to the Closing Date, or as amended from time to time thereafter, consistent with the terms hereof, and, (a) if such Person is a corporation, its bylaws in current form, (b) if such Person is a limited liability company, its limited liability company agreement or operating agreement (or similar agreement), and (c) if such Person is a partnership, its partnership agreement (or similar agreement), each of the foregoing with all current amendments, restatements and modifications thereto.

"**Ordinary Course of Business**" means, in respect of any transaction involving any Person, the ordinary course of such Person's business as conducted by any such Person in accordance with (a) the usual and customary customs and practices in the kind of business in which such Person is engaged, and (b) the past practice and operations of such Person, and in each case, undertaken by such Person in good faith and not for purposes of evading any covenant or restriction in any Loan Document.

"**Parent**" has the meaning set forth in the preamble hereto.

"**Patents**" means all patents, patent applications and like protections of a Person including without limitation improvements, divisions, continuations, renewals, reissues, extensions and continuations-in-part of the same and all rights therein provided by international treaties or conventions.

"**Payment Date**" means the first calendar day of each month.

"**Perfection Certificate**" has the meaning set forth in Section 5.1.

"**Permitted Indebtedness**" means:

(j) each Loan Party's Indebtedness under this Agreement and the other Loan Documents;

(k) Indebtedness existing on the Closing Date and shown on the Perfection Certificate, provided that (i) to the extent the amount of such type of Indebtedness is limited pursuant to a clause of this defined term, amounts existing on the Closing Date or any permitted refinancing thereof shall count towards such limit, (ii) to the extent such Indebtedness is required to be repaid on the Closing Date, in accordance with a payoff letter delivered as a condition to closing, such Indebtedness shall not constitute Permitted Indebtedness after such repayment, and (iii) to the extent any such Indebtedness is required to be made subject to the terms of a Subordination Agreement as of the Closing Date or thereafter, pursuant to the terms of this Agreement, such Indebtedness shall be permitted only to the extent the applicable Subordination Agreement is in effect;

(l) Subordinated Debt;

(m) unsecured Indebtedness and accrued liabilities to trade creditors incurred in the Ordinary Course of Business;

(n) Indebtedness incurred as a result of endorsing negotiable instruments received in the Ordinary Course of Business;

(o) Indebtedness secured by Permitted Liens, provided that the applicable amount thereof does not exceed the limit, if any, specified in the applicable clause of the defined term "Permitted Liens";

(p) Indebtedness consisting of Royalty and Milestone Payments, as set forth on Schedule 5, as the same may be updated in accordance with this Agreement;

(q) Intercompany Indebtedness arising in connection with an Investment permitted by clause (d) of the defined term "Permitted Investments";

(r) Indebtedness incurred in connection with cash management services, including corporate credit cards, incurred in the Ordinary Course of Business, in an aggregate amount not to exceed $575,000 at any time;

(s) Indebtedness consisting of capitalized lease obligations and purchase money Indebtedness in an outstanding principal amount not to exceed $250,000;

(t) Indebtedness in respect of letters of credit, bank guarantees, bonds and similar instruments issued for the account of any Loan Party or any Subsidiary in the Ordinary Course of Business supporting obligations under (i) workers' compensation, unemployment insurance and other social security laws and (ii) bids, trade contracts, leases, statutory obligations, surety and appeal bonds, performance bonds and obligations of a like nature, in an aggregate principal amount for (i) and (ii) not to exceed $250,000 at any time;

(u) unsecured Indebtedness representing deferred compensation or similar arrangements to employees of the Borrower or their Subsidiaries, in each case, incurred in the Ordinary Course of Business;

(v) Indebtedness in an aggregate amount outstanding not to exceed $250,000; and

(w) extensions, refinancings, modifications, amendments and restatements of any items of Permitted Indebtedness described in clause (b) above, provided that the principal amount thereof is not increased or the terms thereof are not modified to impose more burdensome terms upon a Borrower or any of its Subsidiaries, as the case may be.

"**Permitted Investments**" means:

(x) Investments (including, without limitation, Subsidiaries) existing on the Closing Date and shown on the Perfection Certificate;

(y) (i) Investments consisting of Cash Equivalents, and (ii) any Investments permitted by Parent's investment policy, as amended from time to time, provided that such investment policy (and any such amendment thereto) has been approved in writing by Lenders;

(z) Investments consisting of repurchases of Parent's Equity Interests from former employees, officers and directors of Parent to the extent permitted under Section 7.7;

(aa) Investments (i) among Loan Parties, (ii) among Subsidiaries that are not Loan Parties, (iii) by Subsidiaries that are not Loan Parties in Loan Parties, (iv) by Loan Parties in Subsidiaries which are not Loan Parties in an aggregate amount per fiscal year not to exceed $250,000, and (v) by Loan Parties in Subsidiaries which are not Loan Parties for the payment of ordinary course operating expenses of such Subsidiaries (provided that each such Subsidiary that is not a Loan Party shall hold funds in excess of $~~50,000~~150,000 for not more than ten (10) consecutive Business Days before such funds are used to pay whatever invoices or other amounts are owed by such Subsidiary);

(bb) Investments not to exceed $~~250,000~~500,000 outstanding in the aggregate at any time consisting of (i) travel advances and employee relocation loans and other employee loans and advances in the Ordinary Course of Business, and (ii) loans not involving the net transfer of cash proceeds to employees, officers or directors relating to the purchase of Equity Interests of Parent pursuant to employee stock purchase plans or other similar agreements approved by Parent's Board;

(cc) Investments (including debt obligations) received in connection with the bankruptcy or reorganization of customers or suppliers and in settlement of delinquent obligations of, and other disputes with, customers or suppliers arising in the Ordinary Course of Business;

(dd) Investments consisting of Deposit Accounts in which Collateral Trustee has a perfected security interest or otherwise maintained in accordance with Section 6.6;

(ee) Investments consisting of the endorsement of negotiable instruments for deposit or collection or similar transactions in the Ordinary Course of Business;

(ff) Investments consisting of accounts receivable of, or prepaid royalties and other credit extensions, to customers and suppliers who are not Affiliates, in the Ordinary Course of Business; provided that this subsection (j) shall not apply to Investments of a Loan Party in any Subsidiary;

(gg) Investments consisting of deposits and pledges of cash permitted under clause (h) of the definition of "Permitted Liens";

(hh) non-cash Investments in joint ventures or strategic alliance in the Ordinary Course of Business consisting of non-exclusive licensing of technology, the development of technology or the providing of technical support; ~~and~~

(ii) Investments in an aggregate amount not to exceed $~~250,000~~500,000 per fiscal year~~.~~; and

(jj) Royalty and Milestone Payments set forth in Schedule 5 (as the same may be updated in accordance with the terms of this Agreement) to the extent constituting Investments.

"**Permitted Liens**" means:

(kk) Liens arising under this Agreement and the other Loan Documents;

(ll) Liens existing on the Closing Date and shown on the Perfection Certificate, provided that (i) to the extent the amount of Indebtedness secured by such type of Lien is limited pursuant to a clause of this defined term, amounts existing on the Closing Date or any permitted refinancing thereof shall count towards such limit, (ii) to the extent the Indebtedness secured by such a Lien is required to be repaid on the Closing Date, in accordance with a payoff letter delivered as a condition to closing, such Lien shall not constitute Permitted Lien after the repayment of the associated Indebtedness, and (iii) to the extent any such Lien is required to be made subject to the terms of a Subordination Agreement as of the Closing Date or thereafter, pursuant to the terms of this Agreement, such Lien shall be permitted only to the extent the applicable Subordination Agreement is in effect;

(mm) purchase money Liens (i) on Equipment acquired or held by a Loan Party or Subsidiary thereof incurred for financing the acquisition of the Equipment, or (ii) existing on Equipment when acquired, if the Lien is confined to the property and improvements and the proceeds of the Equipment, in each case, securing no more than $250,000 in the aggregate amount outstanding;

(nn) Liens for taxes, fees, assessments or other government charges or levies, either (i) not yet delinquent or (ii) being contested in good faith and for which such Loan Party or Subsidiary maintains adequate reserves on its books;

(oo) leases or subleases of real property granted in the Ordinary Course of Business of such Person, and leases, subleases, non-exclusive licenses or sublicenses of personal property (other than Intellectual Property) granted in the Ordinary Course of Business of such Person;

(pp) Liens of carriers, warehousemen, suppliers, or other Persons that are possessory in nature arising in the Ordinary Course of Business, which are not delinquent or remain payable without penalty or which are being contested in good faith and by appropriate proceedings which proceedings have the effect of preventing the forfeiture or sale of the property subject thereto;

(qq) Liens to secure payment of workers' compensation, employment insurance, old-age pensions, social security and other like obligations incurred in the Ordinary Course of Business (other than Liens imposed by ERISA);

(rr) deposits or pledges of cash to secure bids, tenders, contracts (other than contracts for the payment of money), leases, surety and appeal bonds and other obligations of a like nature arising in the Ordinary Course of Business, in an aggregate amount not exceeding $250,000 at any time;

(ss) Liens arising from attachments or judgments, orders, or decrees in circumstances not constituting an Event of Default;

(tt) Liens in favor of other financial institutions arising in connection with a Deposit Account or Securities Account of a Loan Party or Subsidiary thereof held at such institutions, provided that Collateral Trustee has a perfected security interest in such Deposit Account, or the securities maintained therein and Collateral Trustee has received an Account Control Agreement with respect thereto to the extent required pursuant to Section 6.6 of this Agreement;

(uu) licenses of Intellectual Property which constitute a Permitted Transfer;

(vv) Liens granted in the Ordinary Course of Business on the unearned portion of the premium and on the proceeds of the financed insurance securing the payment of financed insurance premiums;

(ww) Liens on cash collateral maintained in a separate Collateral Account identified as such in the Perfection Certificate, or from time to time after the Closing Date, in a Compliance Certificate, (i) in an amount not to exceed $250,000 to secure contingent reimbursement obligations in respect of letters of credit or (ii) to secure cash management obligations of a Loan Party owed to Silicon Valley Bank, as set forth in that certain payoff letter to Silicon Valley Bank dated as of January 4, 2023; and

(xx) Liens incurred in the extension, renewal or refinancing of the indebtedness secured by Liens described in clause (b), but any extension, renewal or replacement Lien must be limited to the property encumbered by the existing Lien and the principal amount of the indebtedness may not increase.

"**Permitted Transfers**" means

(yy) sales of Inventory by a Loan Party or any of its Subsidiaries in the Ordinary Course of Business;

(zz) non-exclusive licenses and similar arrangements for the use of Intellectual Property of a Loan Party or any of its Subsidiaries in the Ordinary Course of Business; and licenses that could not result in a legal transfer of title of the licensed property but that may be exclusive with respect to territory only as to specific geographical regions outside of the United States and/or Europe, and so long as after giving effect to such license, Borrowers and their Subsidiaries retain sufficient rights to use the subject Intellectual Property so as to enable them to continue to conduct their business in the Ordinary Course of Business and without material impairment of the value of the subject Intellectual Property;

(aaa) dispositions of worn-out, obsolete or surplus Equipment in the Ordinary Course of Business that is, in the reasonable judgment of such Loan Party or Subsidiary, no longer economically practicable to maintain or useful;

(bbb) Transfers consisting of the granting of Permitted Liens and the making of Permitted Investments;

(ccc) the use or transfer of money or Cash Equivalents for (i) the payment of expenses in the Ordinary Course of Business and in a manner that is not prohibited by the Loan Documents, (ii) in connection with transactions that (A) are approved by a Loan Party's Board (or equivalent) (to the extent such approval is required by such Loan Party's policies or other organizational documents), (B) are customary for such Loan Party's industry and (C) not otherwise prohibited by the Loan Documents and (iii) payment of taxes;

(ddd) Transfers from any Subsidiary to a Loan Party or among Loan Parties;

(eee) abandonment, forfeiture or dedication to the public of any Intellectual Property in the Ordinary Course of Business that is not material to the Loan Parties' business to the extent permitted by Section 6.7;

(fff) other Transfers of assets having a fair market value of not more than $250,000 per fiscal year of Parent.

"**Person**" means any individual, sole proprietorship, partnership, limited liability company, joint venture, company, trust, unincorporated organization, association, corporation, institution, public benefit corporation, firm, joint stock company, estate, entity or government agency.

"**PGZ**" has the meaning set forth in the defined term "Restatement Extension Milestone".

"**Positive Phase 3 SHTG Data**" has the meaning set forth in the defined term "Restatement Second Tranche Milestone".

"**Positive Phase 3 MASH Data**" has the meaning set forth in the defined term "Restatement Extension Milestone.

"**Prime Rate**" means, at any time, the rate of interest noted in The Wall Street Journal, Money Rates section, as the "Prime Rate". In the event that The Wall Street Journal quotes more than one rate, or a range of rates, as the Prime Rate, then the Prime Rate shall mean the average of the quoted rates. In the event that The Wall Street Journal ceases to publish a Prime Rate, then the Prime Rate shall be the average of the three (3) largest U.S. money center commercial banks, as determined by Lenders.

"**Pro Rata Share**" means, with respect to any Lender and as of any date of determination, the percentage obtained by dividing (i) the aggregate Commitments of such Lender by (ii) the aggregate Commitments of all Lenders provided, that to the extent any Commitment has expired or been terminated, with respect to such Commitment, the applicable outstanding balance of the Loans made pursuant to such Commitment held by such Lender and all the Lenders, respectively, shall be used in lieu of the amount of such Commitment, provided further, that with respect to all matters relating to a particular Loan, the Commitment or outstanding balance of the applicable Loan, shall be used in lieu of the aggregate Commitment or outstanding balance of all Loans in the foregoing calculation. "Ratable" and related terms shall mean, determined by reference to such Lender's Pro Rata Share.

"**Products**" means any products manufactured, sold, developed, tested or marketed by a Loan Party or any of its Subsidiaries.

"**Registered Organization**" means any "registered organization" as defined in the Code with such additions to such term as may hereafter be made.

"**Required Lenders**" means, as of any date of determination, Lenders holding more than 50% of the sum of aggregate principal amount of all Loans outstanding and the aggregate amount of all unfunded commitments to make Loans, at such date of determination.

"**Requirement of Law**" means as to any Person, the organizational or governing documents of such Person, and any law (statutory or common), treaty, rule or regulation or determination of an arbitrator or a court or other Governmental Authority, in each case applicable to or binding upon such Person or any of its property or to which such Person or any of its property is subject.

"**Responsible Officer**" means with respect to any Person, any of the Chief Executive Officer, President or Chief Financial Officer of such Person. Unless the context otherwise requires, each reference to a Responsible Officer herein shall be a reference to a Responsible Officer of Parent.

"**Restatement Amortization Date**" means January 1, 2027, provided that if the Restatement Extension Milestone is achieved prior to January 1, 2027, the Restatement Amortization Date shall be January 1, 2028.

"**Restatement Effective Date**" means September 30, 2024.

"**Restatement Extension Milestone**" means (i) no Event of Default has occurred and is continuing and (ii) Borrower Representative shall have delivered evidence satisfactory to Administrative Agent in its sole discretion that Loan Parties have announced positive data from the ongoing Phase 3 ENLIGHTEN study of PGZ in non-cirrhotic F2/F3 Metabolic Dysfunction-Associated Steatohepatitis supportive of FDA approval with a commercially viable product profile ("**Positive Phase 3 MASH Data**").

"**Restatement First Tranche Availability Period**" means the period commencing on the Restatement Effective Date through and including June 30, 2025.

"**Restatement First Tranche Term Loan**", "**Restatement First Tranche Term Loan – Part A**", "**Restatement First Tranche Term Loan – Part B**", "**Restatement First Tranche Term Loan – Part C**" and "**Restatement First Tranche Term Loan – Part D**", each, has the meaning set forth in Section 2.2(a)(i).

"**Restatement First Tranche Term Loan Commitment**" means, as to any Lender, collectively, the Restatement First Tranche Term Loan Commitment – Part A, Restatement First Tranche Term Loan Commitment – Part B, Restatement First Tranche Term Loan Commitment – Part C and Restatement First Tranche Term Loan Commitment – Part D

"**Restatement First Tranche Term Loan Commitment – Part A**" means, as to any Lender the aggregate principal amount of Restatement First Tranche Term Loans – Part A committed to be made by such Lender, as set forth on Schedule 1 hereto.

"**Restatement First Tranche Term Loan Commitment – Part B**" means, as to any Lender the aggregate principal amount of Restatement First Tranche Term Loans – Part B committed to be made by such Lender, as set forth on Schedule 1 hereto.

"**Restatement First Tranche Term Loan Commitment – Part C**" means, as to any Lender the aggregate principal amount of Restatement First Tranche Term Loans – Part C committed to be made by such Lender, as set forth on Schedule 1 hereto.

"**Restatement First Tranche Term Loan Commitment – Part D**" means, as to any Lender the aggregate principal amount of Restatement First Tranche Term Loans – Part D committed to be made by such Lender, as set forth on Schedule 1 hereto.

"**Restatement Second Tranche Availability Period**" means the period commencing on the date the Restatement Second Tranche Milestone is achieved through and including December 31, 2025.

"**Restatement Second Tranche Milestone**" means that Borrower Representative shall have delivered evidence satisfactory to Administrative Agent in its sole discretion that Loan Parties have announced positive data from the ongoing Phase 3 ENTRUST study of pegozafermin ("**PGZ**") in Severe Hypertriglyceridemia s a supportive of FDA approval with a commercially viable product profile ("**Positive Phase 3 SHTG Data**").

"**Restatement Second Tranche Term Loan Commitment**" means, as to any Lender the aggregate principal amount of Restatement Second Tranche Term Loans committed to be made by such Lender, as set forth on Schedule 1 hereto.

"**Restatement Term Loan**" has the meaning set forth in Section 2.2(a).

"**Restatement Term Loan Maturity Date**" means October 1, 2028.

"**Restatement Third Tranche Term Loan Amount**" means, as to any Lender the aggregate principal amount of Restatement Third Tranche Term Loans that may be made by such Lender, subject to discretionary approval, as set forth on Schedule 1 hereto.

"**Restatement Third Tranche Availability Period**" means the period commencing on the Restatement Effective Date through and including the Restatement Amortization Date.

"**Restricted License**" means any material in-bound license or other similar material agreement (other than ordinary course customer contracts, off the shelf software licenses, licenses that are commercially available to the public, and open source licenses) to which a Loan Party or Subsidiary is a party (a) that prohibits or otherwise restricts such Loan Party or Subsidiary from granting a security interest in its interest in such license or agreement or in any other property, or (b) for which a default under, or termination of which, could reasonably be expected to interfere with Collateral Trustee's right to sell any Collateral.

"**Royalty and Milestone Payments**" means milestone payments, royalty payments, upfront payments and other similar payments pursuant to research and development, licensing, collaboration or development agreements or similar agreements.

"**SEC**" has the meaning set forth in Section 2.2(e)(iii).

~~"**Second Tranche Availability Period**" means the period commencing on the date the Second Tranche Milestone is met and ending September 30, 2023.~~

~~"**Second Tranche Milestone**" means that Borrower Representative shall have delivered evidence satisfactory to Administrative Agent in its sole discretion that the Loan Parties have achieved (i) positive 24-week topline data from the ongoing Phase 2b ENLIVEN study of PGZ in Nonalcoholic Steatohepatitis ("**NASH**") supportive of continued clinical advancement with a commercially viable product profile, and (ii) initiation of a Phase 3 study of PGZ in SHTG.~~

~~"**Second Tranche Term Loan**" has the meaning set forth in Section 2.2(a)(ii).~~

~~"**Second Tranche Term Loan Commitment**" means, as to any Lender, the aggregate principal amount of Second Tranche Term Loans committed to be made by such Lender, as set forth on Schedule 1 hereto.~~

"**Secured Party**" means any of (i) Collateral Trustee, Administrative Agent, or either of their successors or assigns, and (ii) Lenders.

"**Secured Party Expenses**" means all audit fees and expenses, costs, and expenses (including reasonable and documented outside attorneys' fees and expenses) of any Secured Party for preparing, amending, negotiating, administering, defending and enforcing the Loan Documents (including, without limitation, those incurred in connection with appeals or Insolvency Proceedings) or otherwise incurred with respect to a Loan Party, including all costs, expenses and other amounts required to be paid by any Secured Party in accordance with the Collateral Trust Agreement.

"**Securities Account**" means any "securities account" as defined in the Code with such additions to such term as may hereafter be made.

"**Security Instrument**" means any security agreement, assignment, pledge agreement, financing or other similar statement or notice, continuation statement, other agreement or instrument, or any amendment or supplement to any thereof, creating, governing or providing for, evidencing or perfecting any security interest or Lien.

"**Shares**" means all of the issued and outstanding Equity Interests owned or held of record by a Loan Party in each of its Subsidiaries or in any other Person, in each case, which constitute Collateral.

~~"**SHTG**" has the meaning set forth in the defined term "Extension Milestone".~~

"**Specified Additional Amount**" means, as of any date of determination, the maximum expected liability to Borrower Representative and its Subsidiaries in connection with the matter disclosed in Section 10 of the Perfection Certificate delivered as of the Restatement Effective Date.

"**Subordinated Debt**" means Indebtedness on terms and to holders reasonably satisfactory to Administrative Agent and incurred by a Loan Party that is subordinated in writing to all of the Obligations, pursuant to a Subordination Agreement.

"**Subordination Agreement**" means any subordination agreement in form and substance reasonably satisfactory to Administrative Agent entered into from time to time with respect to Subordinated Debt.

"**Subsidiary**" means, with respect to any Person, any corporation, partnership, limited liability company or joint venture in which (i) any general partnership interest or (ii) more than fifty percent (50%) of the stock, limited liability company interest, joint venture interest or other Equity Interest which by the terms thereof has the ordinary voting power to elect the Board of that Person, at the time as of which any determination is being made, is owned or controlled by such Person, directly or indirectly. Unless the context otherwise requires, each reference to a Subsidiary herein shall be a reference to a Subsidiary of Parent.

"**Taxes**" means all present or future taxes, levies, imposts, duties, deductions, withholdings (including backup withholding), assessments, fees or other charges imposed by any Governmental Authority, including any interest, additions to tax or penalties applicable thereto.

"**Termination Date**" means the date that the Obligations (other than contingent indemnification obligations as to which no claim has been asserted or is known to exist) shall have been paid in full in cash (or, if applicable, converted in accordance with Section 2.2(e)), and any commitment of a Lender to extend credit to a Borrower shall have been terminated.

"**Term Loan**" and "**Term Loans**" ~~each, have the meaning set forth in Section 2.2 hereof~~shall mean any Term Loan made hereunder, including without limitation, the Restatement Term Loans.

~~"**Term Loan Maturity Date**" means January 1, 2027, provided that if the Extension Milestone is achieved, the Term Loan Maturity Date shall be extended to July 1, 2027 .~~

~~"**Third Tranche Availability Period**" means the period commencing on the date the Third Tranche Milestone is met and ending June 30, 2024.~~

~~"**Third Tranche Milestone**" means that Borrower Representative shall have delivered evidence satisfactory to Administrative Agent in its sole discretion that (i) a positive end-of-Phase-2 meeting with FDA confirming the Borrowers' pivotal trial plan for PGZ in NASH has been completed and (ii) the Phase 3 clinical program for PGZ in NASH has been initiated.~~

~~"**Third Tranche Term Loan**" has the meaning set forth in Section 2.2(a)(iii).~~

~~"**Third Tranche Term Loan Commitment**" means, as to any Lender, the aggregate principal amount of Third Tranche Term Loans committed to be made by such Lender, as set forth on Schedule 1 hereto.~~

"**Trademarks**" means any trademark and servicemark rights of a Person, whether registered or not, applications to register and registrations of the same and like protections, and the entire goodwill of the business connected with and symbolized by such trademarks.

"**Trading Market**" means any of the following markets or exchanges on which the Common Stock is listed or quoted for trading on the date in question: the NYSE American, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market or the New York Stock Exchange (or any successors to any of the foregoing).

"**Transfer**" means defined in Section 7.1.

"**Unrestricted Cash**" means, as of any date of determination, the aggregate amount of unrestricted cash held by Borrowers ~~in Collateral Accounts subject to an Account Control Agreement in favor of Collateral Trustee~~.

"**Unrestricted Conditions**" has the meaning set forth in Section 2.2(e).

~~"**VWAP**" means VWAP means, for any date the price, determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the daily volume-weighted average price of the Common Stock for such date on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg L.P. (based on a trading day from the open of trading until the scheduled close of trading on the primary trading session on such VWAP Trading Day), (b) if the Common Stock is listed on OTCQB or OTCQX, and OTCQB or OTCQX, as applicable, is not a Trading Market, the volume-weighted average price of the Common Stock for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Common Stock is not then listed or quoted for trading on a Trading Market, OTCQB or OTCQX and if prices for the Common Stock are then reported in the "Pink Sheets" published by OTC Markets Group, Inc. (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by Administrative Agent and reasonably acceptable to Borrower Representative, the fees and expenses of which shall be paid by Borrowers.~~

~~"**VWAP Market Disruption Event**" means, with respect to any date, (A) the failure by the principal U.S. national or regional securities exchange on which the Common Stock is then listed, or, if the Common Stock is not then listed on a U.S. national or regional securities exchange, the principal other market on which the Common Stock is then traded, to open for trading during its regular trading session on such date; or (B) the occurrence or existence, for more than one half hour period in the aggregate, of any suspension or limitation imposed on trading (by reason of movements in price exceeding limits permitted by the relevant exchange or otherwise) in the Common Stock or in any options contracts or futures contracts relating to the Common Stock, and such suspension or limitation occurs or exists at any time before 1:00 p.m., New York City time, on such date.~~

~~"**VWAP Trading Day**" means a day on which (A) there is no VWAP Market Disruption Event; and (B) trading in the Common Stock generally occurs on the principal U.S. national or regional securities exchange on which the Common Stock is then listed or, if the Common Stock is not then listed on a U.S. national or regional securities~~

~~exchange, on the principal other market on which the Common Stock is then traded. If the Common Stock is not so listed or traded, then "VWAP Trading Day" means a Business Day.~~

"**Warrant**" means, collectively, each Warrant to Purchase Common Stock ~~dated 16 VWAP Trading Days after the Closing Date~~, executed by Issuer in favor of each Designated Holder~~, on terms substantially as set forth in Exhibit J hereto, as amended, modified, supplemented, extended or restated from time to time~~ in connection with the Commitments made available pursuant hereto.

[***] = CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY BRACKETS, HAS BEEN OMITTED BECAUSE THE INFORMATION (I) IS NOT MATERIAL AND (II) IS THE TYPE OF INFORMATION THAT THE REGISTRANT BOTH CUSTOMARILY AND ACTUALLY TREATS AS PRIVATE AND CONFIDENTIAL.

EXHIBIT B

COLLATERAL DESCRIPTION

The Collateral consists of all of each Loan Party's right, title and interest in and to the following personal property wherever located, whether now owned or existing or hereafter acquired, created or arising:

All goods, Accounts (including health-care receivables), Equipment, Inventory, contract rights or rights to payment of money, leases, license agreements, franchise agreements, General Intangibles, commercial tort claims, documents, instruments (including any promissory notes), chattel paper (whether tangible or electronic), cash, deposit accounts, fixtures, letters of credit rights (whether or not the letter of credit is evidenced by a writing), securities, and all other investment property, supporting obligations, and financial assets, whether now owned or hereafter acquired, wherever located; and all such Loan Party's Books relating to the foregoing, and any and all claims, rights and interests in any of the above and all substitutions for, additions, attachments, accessories, accessions and improvements to and replacements, products, proceeds (both cash and non-cash) and insurance proceeds of any or all of the foregoing.

Notwithstanding the foregoing, the Collateral does not include any Excluded Collateral.

"Excluded Collateral" shall mean (i) any Excluded IP Collateral; (ii) licenses, instruments, leases and agreements to the extent and so long as such a pledge thereof would violate the terms thereof, require the consent of a third-party or violate any requirements of law, but only to the extent, and for so long as, such consent is not obtained, prohibition is not terminated or rendered unenforceable or otherwise deemed ineffective by the UCC or any other requirement of law; (iii) any cash collateral accounts permitted under the definition of "Permitted Liens"; provided however, that at all times the Collateral shall include all Accounts and all proceeds of the foregoing and (iv) any assets agreed by the Administrative Agent to be excluded from Collateral, in its discretion, upon request by and after consultation with, Borrower Representative.

"Excluded IP Collateral" shall mean any registered Patent, Trademark or Copyright. If a judicial authority (including a U.S. Bankruptcy Court) would hold that a security interest in the underlying Patent, Trademark or Copyright is necessary to have a security interest in such Accounts and such property that are proceeds thereof, then the Collateral shall automatically, and effective as of the Closing Date, include the such Patent, Trademark or Copyright to the extent necessary to permit perfection of Collateral Trustee's security interest in such Accounts and such other property of such Loan Party that are proceeds thereof.

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EXHIBIT C

LOAN REQUEST

Date: ___

Reference is made to that certain Loan and Security Agreement, dated January 4, 2023 (as amended, restated, supplemented or otherwise modified, from time to time, the "**Agreement**"), among **89BIO, INC.**, a Delaware corporation ("**Borrower Representative**"), and each other Person party thereto as a borrower from time to time (collectively, "**Borrowers**", and each, a "**Borrower**"), **89BIO MANAGEMENT, INC.**, a Delaware corporation, **89BIO LTD**, a Israel limited company, and each other Person party hereto or any other Loan Documents as a guarantor from time to time (collectively, "**Guarantors**" and each, a "**Guarantor**", and together with Borrowers, collectively, "**Loan Parties**", and each, a "**Loan Party**"), the lenders from time to time party thereto (collectively, "**Lenders**", and each, a "**Lender**"), **K2 HEALTHVENTURES LLC**, as administrative agent for Lenders (in such capacity, and together with its successors, "**Administrative Agent**") and as collateral agent pursuant to the ISR Collateral Documents and with respect to the Shares of ISR Guarantor (in such capacity, together with its successors, "**ISR Collateral Agent**"), and **ANKURA TRUST COMPANY, LLC**, as collateral agent for Lenders (in such capacity, together with its successors, "**Collateral Trustee**"). Capitalized terms have meanings as defined in the Agreement.

Borrower Representative hereby requests a Loan in the amount of $[ ] on [ ] (the "**Funding Date**") pursuant to the Agreement, and authorizes Lenders to:

(a) Wire Funds to:

Bank:
Address:

ABA Number:
Account Number:
Account Holder:

(b) Deduct amounts from the foregoing advance to be applied to Secured Party Expenses and outstanding fees then due as set forth on the attached Schedule 1.

Borrower Representative represents that each of the conditions precedent to the Loans set forth in the Agreement are satisfied and shall be satisfied on the Funding Date, including but not limited to: (i) the representations and warranties set forth in the Agreement and in the other Loan Documents are and shall be true and correct in all material respects on and as of the Funding Date with the same effect as though made on and as of such date, except to the extent such representations and warranties expressly relate to an earlier date (in which case they remain true and correct in all material respects as of such earlier date); provided, however, that such materiality qualifiers shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof, (ii) no Default or Event of Default has occurred, and (iii) no event that has had or could reasonably be expected to have a Material Adverse Effect has occurred and is continuing. [The undersigned certifies that the [Second / Third] Tranche Milestone has been achieved and any supporting documents requested by Administrative Agent in connection therewith have been provided to Administrative Agent.]

Borrower Representative agrees to notify Lenders promptly before the Funding Date if any of the matters which have been represented above shall not be true and correct in all material respects on the Funding Date and if Lenders have received no such notice before the Funding Date then the statements set forth above shall be deemed to have been made and shall be deemed to be true and correct in all material respects as of the Funding Date.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

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[SIGNATURE PAGE TO LOAN REQUEST]

This Loan Request is hereby executed as of the date first written above.

BORROWER REPRESENTATIVE:

89BIO, INC.

By: ____
Name: ____
Title: ____

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SCHEDULE 1

Evidence of [Second][Third] Tranche Milestone

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EXHIBIT D

COMPLIANCE CERTIFICATE

TO: K2 HEALTHVENTURES LLC, as Administrative Agent Date:
FROM: 89BIO, INC.

Reference is made to that certain Loan and Security Agreement, dated January 4, 2023 (as amended, restated, supplemented or otherwise modified, from time to time, the "**Agreement**"), among **89BIO, INC.**, a Delaware corporation ("**Borrower Representative**"), and each other Person party thereto as a borrower from time to time (collectively, "**Borrowers**", and each, a "**Borrower**"), **89BIO MANAGEMENT, INC.**, a Delaware corporation, **89BIO LTD**, a Israel limited company, and each other Person party hereto or any other Loan Documents as a guarantor from time to time (collectively, "**Guarantors**" and each, a "**Guarantor**", and together with Borrowers, collectively, "**Loan Parties**", and each, a "**Loan Party**"), the lenders from time to time party thereto (collectively, "**Lenders**", and each, a "**Lender**"), **K2 HEALTHVENTURES LLC**, as administrative agent for Lenders (in such capacity, and together with its successors, "**Administrative Agent**") and as collateral agent pursuant to the ISR Collateral Documents and with respect to the Shares of ISR Guarantor (in such capacity, together with its successors, "**ISR Collateral Agent**"), and **ANKURA TRUST COMPANY, LLC**, as collateral agent for Lenders (in such capacity, together with its successors, "**Collateral Trustee**"). Capitalized terms have meanings as defined in the Agreement.

The undersigned authorized officer of Borrower Representative, hereby certifies in accordance with the terms of the Agreement as follows:

(1) Each Borrower is in compliance for the period ending _____ with all covenants set forth in the Agreement; (2) no Event of Default has occurred and is continuing; and (3) the representations and warranties in the Agreement are true and correct in all material respects on this date; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof; and provided, further that those representations and warranties expressly referring to a specific date shall be true, accurate and complete in all material respects as of such date.

Appendix 1 sets forth true and accurate calculations with respect to the financial covenant in Section 6.10 of the Loan Agreement.

The undersigned certifies that all financial statements delivered herewith are prepared in accordance with GAAP (other than, with respect to unaudited financials for the absence of footnotes and being subject to normal year-end adjustments), consistently applied from one period to the next.

Please indicate compliance status by circling Yes/No under "Complies" column.

Reporting Covenants	**Required**	**Complies**
Monthly financial statements and Compliance Certificate	Monthly, within 30 days (excluding for the last month of each fiscal quarter)	Yes No
A/R and A/P Aging Reports	Monthly, within 30 days	Yes No
Quarterly financial statements and Compliance Certificate	Quarterly, within 30 days	Yes No
Annual Projections	Annually, within 30 days of fiscal year end	Yes No
Annual audited financial statements and any management letters	Annually, within 90 days of fiscal year end	Yes No

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Statements, reports and notices to stockholders or holders of Subordinated Debt	Within 5 days of delivery	Yes No
SEC filings	Within 5 days after filing with SEC	Yes No
Legal action notices and updates (over $250,000)	Promptly	Yes No
Board, committee and subcommittee or advisory board materials	As and when delivered to Board	Yes No
Board minutes	Promptly after Board meetings	Yes No
IP report	At the end of each fiscal quarter	Yes No
Bank account statements (with transaction detail)	Together with monthly financial statements	Yes No
Product related material correspondence, reports, documents and other filings	Within 5 Business Days	Yes No
Updates re ISR Tax Matter	Together with monthly financial statements (to the extent any material development or change in potential liability	Yes No

Financial Covenant	**Required**	**Complies**
Minimum RML	See Schedule 1 hereto	Yes No

Other Covenants	**Required**	**Actual**	**Complies**
Equipment financing Indebtedness	Not to exceed $250,000 outstanding	**$**	Yes No
Indebtedness from cash management services	Not to exceed $575,000 outstanding	**$**	Yes No
Indebtedness (general basket)	Not to exceed $250,000 per fiscal year	**$**	Yes No
Repurchases of stock from former employees, officers and directors	Not to exceed $250,000 per fiscal year	**$**	Yes No
Investments (general basket)	Not to exceed $~~250,000~~500,000 per fiscal year	**$**	Yes No
Investments in non-Loan Party Subsidiaries	Not to exceed $250,000 per fiscal year	**$**	Yes No

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Deposits or pledges for bids, tenders, contracts, leases, surety or appeal bonds	Not to exceed $250,000 at any time[1]	**$**	Yes No
ISR Guarantor cash, Cash Equivalents and Investments	Not to exceed lesser of $7,000,000 and 20% of aggregate cash, Cash Equivalents and Investments of Parent and Subsidiaries on a consolidated basis	**$**	Yes No

Other Matters

Please list any SEC filings made since the most recently delivered Compliance Certificate:

Has any Loan Party changed its legal name, jurisdiction of organization or chief executive office? If yes, please complete details below: Yes No

Have any new Subsidiaries been formed? If yes, please provide complete schedule below. Yes No

Legal Name of Subsidiary	**Jurisdiction of Organization**	**Holder of Subsidiary Equity Interests**	**Equity Interests Certificated? (Y/N)**	**Jurisdiction**

Have any new Deposit Accounts or Securities Accounts been opened by any Loan Party? If yes, please complete schedule below. Yes No

Accountholder	**Deposit Account / Intermediary**	**Address**	**Account Number**	**Account Control Agreement in place? (Y/N)[2]**

[1] Except for investments to fund ordinary operating expenses (subject to cap on cash held by each non-Loan Party Subsidiary of $~~50,000~~150,000, other than funds to be applied to pay invoices and other expenses in next 10 Business Days)

[2] If No, please indicate if any basis for exclusion from the requirement to provide Account Control Agreements.

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Is there any new Product not previously disclosed on the Perfection Certificate or any prior Compliance Certificate? If yes, please complete details below: Yes No

Has there been any material change to anticipated or scheduled Royalty and Milestone Payments? If yes, please attach updated Schedule 5. Yes No

Has any Loan Party added any new lease location, bailee location or other location where Collateral is maintained? If yes, please describe below: Yes No

Has any Loan Party entered into a Restricted License? If yes, please describe below: Yes No

The following are the exceptions with respect to the certification above: (If no exceptions exist, state "No exceptions to note.")

BORROWER REPRESENTATIVE:

89BIO, INC.

By: ____
Name: __
Title: ___

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SCHEDULE 1

FINANCIAL COVENANT CALCULATIONS

[Attached.]

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EXHIBIT E

REQUIREMENTS FOR INSURANCE DOCUMENTATION

Contact Information for Insurance Documentation:

Ankura Trust Company, LLC, as Collateral Trustee
140 Sherman Street, Fourth Floor
Fairfield, CT 06824
Attention: Beth Micena

Document Requirements:

DOCUMENT	REQUIREMENT
1. Certificate of Liability Insurance (ACORD FORM 25)	• Ankura Trust Company, LLC and its successors and/or assigns, as collateral agent, to be designated as "**Additional Insured**". • Ankura Trust Company, LLC name and address to be listed as Certificate Holder.
2. General Liability Endorsement (Additional Insured Endorsement)	• Ankura Trust Company, LLC and its successors and/or assigns, as collateral agent, to be named in additional insured endorsement.
3. Evidence of Commercial Property Insurance (ACORD FORM 28)	• All-risk commercial property insurance incurring all of each Loan Party's property • Ankura Trust Company, LLC and its successors and/or assigns, as collateral agent, to be designated as "**Lender's Loss Payable**," with **Lender's Loss Payable** provision designated. • Ankura Trust Company, LLC and above address to be designated in Name and Address of Additional Interest. • Insured locations to include all locations of Loan Parties listed in the Perfection Certificate
4. Commercial Property Endorsement (Lender's Loss Payable Endorsement)	• Ankura Trust Company, LLC, and its successors and/or assigns, as collateral agent, to be scheduled and designated as "Lender Loss Payable" by endorsement • Lender loss payable clause with stipulation that coverage will not be cancelled without a minimum of 10 days' prior written notice for non-payment of premium, or 30 days for any other cancellation.

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EXHIBIT F

AUTOMATIC PAYMENT AUTHORIZATION

Effective as of January 4, 2023, **89BIO, INC.**, a Delaware corporation ("**Borrower Representative**") hereby authorizes K2 HEALTHVENTURES LLC ("**K2**"), or any affiliate acting on its behalf pursuant to the Loan Agreement and the bank or financial institution named below ("**Bank**") to automatically debit through the Automatic Clearing House (ACH) from, and initiate variable debit and/or credit entries to, the deposit, checking or savings accounts as designated below maintained in the name of a Borrower, and to cause electronic funds transfers to an account of K2 to be applied to the payment of any and all amounts due under the Loan and Security Agreement, dated January 4, 2023 (as amended, restated, supplemented or otherwise modified, from time to time, the "**Agreement**"), among Borrower Representative, and any other borrowers party thereto from time to time, K2, and any other lender from time to time party thereto (collectively, "**Lenders**"), and Ankura Trust Company, LLC, as collateral agent for Lenders, including without limitation, principal, interest, fees, expenses and charges (including Secured Party Expenses). Capitalized terms not otherwise defined herein, have the meanings given in the Agreement.

This Authorization shall remain in effect until the Loan Agreement has been terminated.

Bank:
Address:

ABA Number:
Account Number:
Account Holder:

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[SIGNATURE PAGE TO AUTOMATIC PAYMENT AUTHORIZATION]

This Authorization is executed as of the date set forth above by the undersigned authorized representative of Borrower Representative:

89BIO, INC.

By: ____
Name: ____
Title: ____

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EXHIBIT G

FORM OF
CONVERTIBLE SECURED PROMISSORY NOTE

[THE SECURITY REPRESENTED BY THIS NOTE HAS NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, OR APPLICABLE STATE SECURITIES LAWS. THIS NOTE AND THE SECURITIES ISSUABLE UPON CONVERSION THEREOF MAY NOT BE SOLD, TRANSFERRED OR ASSIGNED IN THE ABSENCE OF AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT, EXCEPT PURSUANT TO AN EXEMPTION FROM REGISTRATION, INCLUDING PURSUANT TO RULE 144 OF THE SECURITIES ACT OR PURSUANT TO A PRIVATE SALE EFFECTED UNDER SECTION 4(A)7) OF THE SECURITIES ACT.][3]

$**[_____]** **[_____ __, 20_]**

FOR VALUE RECEIVED, the undersigned, **89BIO, INC.**, a Delaware corporation ("**Borrower Representative**"), and each Person party thereto as a borrower from time to time (collectively, "**Borrowers**", and each, a "**Borrower**"), hereby unconditionally, jointly and severally, promise to pay to [_____] (together with its successors and assigns, the "**Holder**") at the times, in the amounts and at the address set forth in the Loan and Security Agreement, dated as of January 4, 2023 (as amended, restated, supplemented or otherwise modified from time to time, the "**Loan Agreement**"; capitalized terms used herein without definition have the meanings assigned to such terms in the Loan Agreement), among Borrowers, the Holder, any other lender from time to time party thereto (collectively, "**Lenders**"), K2 HEALTHVENTURES LLC, as Administrative Agent (in such capacity, "**Administrative Agent**") and as collateral agent pursuant to the ISR Collateral Documents and with respect to the Shares of ISR Guarantor (in such capacity, together with its successors, "**ISR Collateral Agent**"), and ANKURA TRUST COMPANY, LLC, as collateral agent for Lenders (in such capacity, "**Collateral Trustee**"), the lesser of (i) the principal amount of [_____] Dollars ($[_____**]**) and (ii) the aggregate outstanding principal amount of Loans made by the Holder to Borrowers according to the terms of Section 2.2 of the Loan Agreement. Borrowers further, jointly and severally, promise to pay interest in accordance with Section 2.3 of the Loan Agreement. This Note is subject to conversion in accordance with the terms of Section 2.2(e) of the Loan Agreement. In no event shall interest hereunder exceed the maximum rate permitted under applicable law. All payments of principal, interest and any other amounts due shall be made as set forth in Section 2.5 of the Loan Agreement.

The Obligations evidenced by this Secured Promissory Note (as amended, restated, supplemented or otherwise modified from time to time, this "**Note**") are subject to acceleration in accordance with Section 9.1 of the Loan Agreement. Each Borrower hereby waives presentment, demand, notice of default or dishonor, notice of payment and nonpayment, protest and all other demands and notices in connection with the execution, delivery, acceptance, performance, default or enforcement of this Note.

This Note is secured by a security interest in the Collateral granted to Collateral Trustee, for the ratable benefit of Lenders, pursuant to certain other Loan Documents.

The terms of Section 11 of the Loan Agreement are incorporated herein, *mutatis mutandis*.

For purposes of Sections 1272, 1273 and 1275 of the IRC, this Note is being issued with "original issue discount." Please contact [_____], 142 Sansome Street, 2nd Floor San Francisco, CA 94104, or by telephone at [_____] to obtain information regarding the issue price, issue date, amount of original issue discount and yield to maturity.

[3] If no Unrestricted Condition has been met

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[SIGNATURE PAGE TO SECURED PROMISSORY NOTE]

IN WITNESS WHEREOF, Borrowers have caused this Note to be duly executed and delivered on the date set forth above by the duly authorized representative of each Borrower.

89BIO, INC.

By: ____
Name: ____
Title: ____

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EXHIBIT H

CONVERSION ELECTION NOTICE

Reference is made to that certain Loan and Security Agreement, dated January 4, 2023 (as amended, restated, supplemented or otherwise modified, from time to time, the "**Agreement**"), among **89BIO, INC.**, a Delaware corporation ("**Borrower Representative**"), and each other Person party thereto as a borrower from time to time (collectively, "**Borrowers**", and each, a "**Borrower**"), **89BIO MANAGEMENT, INC.**, a Delaware corporation, **89BIO LTD**, a limited company organized under the laws of Israel, and each other Person party hereto or any other Loan Documents as a guarantor from time to time (collectively, "**Guarantors**" and each, a "**Guarantor**", and together with Borrowers, collectively, "**Loan Parties**", and each, a "**Loan Party**"), the lenders from time to time party thereto (collectively, "**Lenders**", and each, a "**Lender**"), **K2 HEALTHVENTURES LLC**, as administrative agent for Lenders (in such capacity, and together with its successors, "**Administrative Agent**") and as collateral agent pursuant to the ISR Collateral Documents and with respect to the Shares of ISR Guarantor (in such capacity, together with its successors, "**ISR Collateral Agent**"), and **ANKURA TRUST COMPANY, LLC**, as collateral agent for Lenders (in such capacity, together with its successors, "**Collateral Trustee**"). Capitalized terms have meanings as defined in the Agreement.

The undersigned Lender hereby elects to convert $[_____] of the outstanding Term Loans into Conversion Shares.

Please issue the Conversion Shares in the following name and to the following address: Issue to the following Designated Holder: [_____]
[_____]
[_____]

[LENDER]

By: ____
Title: ___
Dated:___

DTC Participant Number and Name (if electronic book entry transfer):____
Account Number (if electronic book entry transfer):___

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ACKNOWLEDGMENT

Issuer hereby acknowledges this Conversion Notice and hereby directs [TRANSFER AGENT] to issue the above indicated number of shares of Common Stock of 89bio, Inc.

89BIO, INC.

By: _____
Name: __
Title: ___

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EXHIBIT I

CONFIRMATION OF INITIAL CONVERSION PRICE

Reference is made to that certain Loan and Security Agreement, dated January 4, 2023 (as amended, restated, supplemented or otherwise modified, from time to time, the "**Agreement**"), among **89BIO, INC.**, a Delaware corporation ("**Borrower Representative**"), **89BIO MANAGEMENT, INC.**, a Delaware corporation, and each other Person party thereto as a borrower from time to time (collectively, "**Borrowers**", and each, a "**Borrower**"), **89BIO LTD**, a Israel limited company, and each other Person party hereto or any other Loan Documents as a guarantor from time to time (collectively, "**Guarantors**" and each, a "**Guarantor**", and together with Borrowers, collectively, "**Loan Parties**", and each, a "**Loan Party**"), the lenders from time to time party thereto (collectively, "**Lenders**", and each, a "**Lender**"), **K2 HEALTHVENTURES LLC**, as administrative agent for Lenders (in such capacity, and together with its successors, "**Administrative Agent**") and as collateral agent pursuant to the ISR Collateral Documents and with respect to the Shares of ISR Guarantor (in such capacity, together with its successors, "**ISR Collateral Agent**"), and **ANKURA TRUST COMPANY, LLC**, as collateral agent for Lenders (in such capacity, together with its successors, "**Collateral Trustee**"). Capitalized terms have meanings as defined in the Agreement.

In accordance with this Section 2.2(c)(xii) of the Agreement, this confirms that the initial Conversion Price is $[_____].

Agreed and Acknowledged:

ISSUER:

89BIO, INC.

By: ____
Name: __
Title:

ADMINISTRATIVE AGENT:

K2 HEALTHVENTURES LLC

By: ____
Name: __
Title:

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~~**EXHIBIT J**~~

~~**FORM OF WARRANT TO PURCHASE COMMON STOCK**~~

~~[ATTACHED]~~

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SCHEDULE 1
COMMITMENTS

LENDER	K2 HEALTHVENTURES LLC
RESTATEMENT FIRST TRANCHE TERM LOAN COMMITMENT	Part A: $7,500,000[4] Part B: 5,000,000[5] Part C: 22,500,000 ~~$25,000,000~~Part D: $35,000,000
RESTATEMENT SECOND TRANCHE TERM LOAN COMMITMENT	$~~15,000,000~~30,000,000
RESTATEMENT THIRD TRANCHE TERM LOAN ~~COMMITMENT~~AMOUNT[6]	$~~10,000,000~~50,000,000
~~FOURTH TRANCHE TERM LOAN AMOUNT~~	~~$50,000,000~~[7]
TOTAL	**$~~100,000,000~~150,000,000**

[4] Corresponds to original conversion amount

[5] Corresponds to new conversion amount

[6] Subject to discretionary approval by Lenders

[7] ~~Subject to discretionary approval by Lenders~~

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SCHEDULE 2A
ISR GUARANTOR DOCUMENTS

1. First ranking Fixed Charge Debenture executed by the ISR Guarantor with wet ink, in favor of the ISR Collateral Agent, together with executed closing deliverables required pursuant to the terms thereof (the "**ISR Fixed Debenture**").

2. First ranking Floating Charge Debenture executed by the ISR Guarantor with wet ink, in favor of the ISR Collateral Agent, together with executed closing deliverables required pursuant to the terms thereof (the "**ISR Floating Debenture**").

3. Two Forms 10 of the Israeli Registrar of Companies, executed by an officer of the ISR Guarantor, with originals to follow within 5 Business Days of the Closing Date.

4. Copies of the notices executed by Silicon Valley Bank in order to effect the release of Liens No. 5 and 6 registered with the Israeli Registrar of Companies in favor of Silicon Valley Bank, and, to the extent required to effect such releases, a power of attorney executed by Silicon Valley Bank, with originals to follow within 5 Business Days of the Closing Date.

5. Certified officer's certificate with respect to Operating Documents, Board and shareholder resolutions approving, *inter alia*, the execution of this Agreement, the applicable ISR Collateral Documents and any other Loan Documents executed by the ISR Guarantor, and incumbency.

6. Copy of the pledge registration notice for the Israeli Registrar of Pledges (ROP), executed by an officer of the Parent, with originals to follow within 5 Business Days of the Closing Date.

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SCHEDULE 2B

~~POST-CLOSING~~POST-RESTATEMENT EFFECTIVE DATE DELIVERIES

7. ~~Within 16 VWAP Trading Days of the Closing Date, the Warrant, duly executed by Issuer, with the original executed Warrant delivered 3 Business Days thereafter to Administrative Agent~~

8. ~~Within 16 VWAP Trading Days of the Closing Date, the Confirmation of initial Conversion Price in the form attached hereto as Exhibit I~~

9. ~~Within 30 days of the Closing Date, evidence showing the issuance of lender loss payable provisions and endorsements, additional insured clauses and endorsements in favor of Collateral Trustee, in accordance with Section 6.5 hereof.~~

10. ~~Within 30 days of the Closing Date, duly executed signatures to the Collateral Access Agreement(s) for locations required under the Agreement.~~

11. Within ~~10 Business Days~~30 days of the ~~Closing~~Restatement Effective Date, ~~the duly executed~~deliver Account Control Agreements with respect to each Collateral ~~Accounts~~Account to the extent required ~~under the~~to be subject to an Account Control Agreement in accordance with Section 6.6(b).

12. ~~Within 10 Business Days of the Closing Date, executed original share transfer deed with respect to the pledged shares, and original signature pages of the Loan Parties to this Agreement.Within 2 Business Days of receipt from the Israeli Registrar of Companies, confirmation from the Israeli Registrar of Companies that Liens No. 5 and 6 registered in favor of Silicon Valley Bank have been removed.Within 2 Business Days of receipt from the Israeli Registrar of Companies, copy of a registration certificate from the Israeli Registrar of Companies evidencing registration of the ISR Fixed and Floating Debentures, together with an updated extract from the Israeli Registrar of Companies.Within 2 Business Days of receipt from the Israeli Registrar of Pledges, copy of a registration certificate from the Israeli Registrar of Pledges evidencing registration of the pledge over the Parent's shares in the ISR Guarantor set forth in Schedule 6 hereto.Within 30 days of the Closing Date, confirmation from the Israeli Registrar of Companies with respect to the successful filing of the ISR Guarantor's Annual Report.Within 30 days of the Closing Date, amended Articles of Association of the ISR Guarantor.~~Within 30 days of the ~~Closing Date, a good standing certificate of the Secretary of State of the State of California with respect to 89bio Management, Inc.~~ Restatement Effective Date, Loan Parties shall comply with Section 6.12 of the Agreement with respect to any new locations not yet subject to Collateral Access Agreements.

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SCHEDULE 3

TAXES; INCREASED COSTS

1. Defined Terms. For purposes of this Schedule 3:

(a) "**Connection Income Taxes**" means Other Connection Taxes that are imposed on or measured by net income (however denominated) or that are franchise Taxes or branch profits Taxes.

(b) "**Excluded Taxes**" means any of the following Taxes imposed on or with respect to a Recipient or required to be withheld or deducted from a payment to a Recipient, (i) Taxes imposed on or measured by net income (however denominated), franchise Taxes, and branch profits Taxes, in each case, (A) imposed as a result of such Recipient being organized under the laws of, or having its principal office or, in the case of any Lender, its applicable lending office located in, the jurisdiction imposing such Tax (or any political subdivision thereof) or (B) that are Other Connection Taxes, (ii) in the case of a Lender, U.S. federal withholding Taxes imposed on amounts payable to or for the account of such Lender with respect to an applicable interest in a Term Loan or Commitment pursuant to a law in effect on the date on which (A) such Lender acquires such interest in such Term Loan or Commitment or (B) such Lender changes its lending office, except in each case to the extent that, pursuant to Section 2 or Section 4 of this Schedule 3, amounts with respect to such Taxes were payable either to such Lender's assignor immediately before such Lender became a party hereto or to such Lender immediately before it changed its lending office, (iii) Taxes attributable to such Recipient's failure to comply with Section 7 of this Schedule 3 and (iv) any withholding Taxes imposed under FATCA.

(c) "**FATCA**" means Sections 1471 through 1474 of the Internal Revenue Code, as of the date of this Agreement (or any amended or successor version that is substantively comparable and not materially more onerous to comply with), any current or future regulations or official interpretations thereof, any agreements entered into pursuant to Section 1471(b)(1) of the Internal Revenue Code, and any fiscal or regulatory legislation, rules or practices adopted pursuant to any intergovernmental agreement, treaty or convention among Governmental Authorities and implementing such Sections of the Internal Revenue Code.

(d) "**Foreign Lender**" means a Lender that is not a U.S. Person.

(e) "**Indemnified Taxes**" means (i) Taxes, other than Excluded Taxes, imposed on or with respect to any payment made by or on account of any obligation of the Loan Parties under any Loan Document and (ii) to the extent not otherwise described in clause (i), Other Taxes.

(f) "**Internal Revenue Code**" means the Internal Revenue Code of 1986, as amended.

(g) "**IRS**" means the United States Internal Revenue Service.

(h) "**Other Connection Taxes**" means, with respect to any Recipient, Taxes imposed as a result of a present or former connection between such Recipient and the jurisdiction imposing such Tax (other than connections arising from such Recipient having executed, delivered, become a party to, performed its obligations under, received payments under, received or perfected a security interest under, engaged in any other transaction pursuant to or enforced any Loan Document, or sold or assigned an interest in any Term Loan or Loan Document).

(i) "**Other Taxes**" means all present or future stamp, court or documentary, intangible, recording, filing or similar Taxes that arise from any payment made under, from the execution, delivery, performance, enforcement or registration of, from the receipt or perfection of a security interest under, or otherwise with respect to, any Loan Document, except any such Taxes that are Other Connection Taxes imposed with respect to an assignment.

(j) "**Recipient**" means Administrative Agent, the Collateral Trustee or any Lender, as applicable.

(k) "**U.S. Person**" means any Person that is a "United States person" as defined in Section 7701(a)(30) of the Internal Revenue Code.

(l) "**Withholding Agent**" means, any Loan Party and Administrative Agent.

2. Payments Free of Taxes. Any and all payments by or on account of any obligation of the Loan Parties under any Loan Document shall be made without deduction or withholding for any Taxes, except as required by applicable law. If any applicable law (as determined in the good faith discretion of an applicable Withholding Agent) requires the deduction or withholding of any Tax from any such payment by a Withholding Agent, then the applicable Withholding Agent shall be entitled to make such deduction or withholding and shall timely pay the full amount deducted or withheld to the relevant Governmental Authority in accordance with applicable law and, if such Tax is an Indemnified Tax, then the sum payable by the Loan Parties shall be increased as necessary so that after such deduction or withholding has been made (including such deductions and withholdings applicable to additional sums payable under this Section 2 or Section 4 of this Schedule 3) the applicable Recipient receives an amount equal to the sum it would have received had no such deduction or withholding been made.

3. Payment of Other Taxes by the Loan Parties. The Loan Parties shall timely pay to the relevant Governmental Authority in accordance with applicable law, or at the option of Administrative Agent, timely reimburse it for the payment of, any Other Taxes.

4. Indemnification by the Loan Parties. The Loan Parties shall indemnify each Recipient, within 10 days after written demand therefor, for the full amount of any Indemnified Taxes (including Indemnified Taxes imposed or asserted on or attributable to amounts payable under Section 2 of this Schedule 3 or this Section 4) payable or paid by such Recipient or required to be withheld or deducted from a payment to such Recipient and any reasonable expenses arising therefrom or with respect thereto, whether or not such Indemnified Taxes were correctly or legally imposed or asserted by the relevant Governmental Authority. A certificate as to the amount of such payment or liability delivered to Borrower Representative by a Lender (with a copy to Administrative Agent), or by Administrative Agent on its own behalf or on behalf of a Lender, shall be conclusive absent manifest error.

5. Indemnification by the Lenders. Each Lender shall severally indemnify Administrative Agent and Collateral Trustee, within 10 days after written demand therefor, for (a) any Indemnified Taxes attributable to such Lender (but only to the extent that the Loan Parties have not already indemnified Administrative Agent or Collateral Trustee for such Indemnified Taxes and without limiting the obligation of the Loan Parties to do so), (b) any Taxes attributable to such Lender's failure to comply with the provisions of Section 12.2 of the Agreement relating to the maintenance of a Participant Register and (c) any Excluded Taxes attributable to such Lender, in each case, that are payable or paid by Administrative Agent or Collateral Trustee in connection with any Loan Document, and any reasonable expenses arising therefrom or with respect thereto, whether or not such Taxes were correctly or legally imposed or asserted by the relevant Governmental Authority. A certificate as to the amount of such payment or liability delivered to any Lender by Administrative Agent or Collateral Trustee, as applicable, shall be conclusive absent manifest error. Each Lender hereby authorizes Administrative Agent and Collateral Trustee to set off and apply any and all amounts at any time owing to such Lender under any Loan Document or otherwise payable by Administrative Agent or Collateral Trustee, as applicable, to the Lender from any other source against any amount due to Administrative Agent or Collateral Trustee under this Section 5.

6. Evidence of Payments. As soon as practicable after any payment of Taxes by the Loan Parties to a Governmental Authority pursuant to the provisions of this Schedule 3, Borrower Representative shall deliver to Administrative Agent the original or a certified copy of a receipt issued by such Governmental Authority evidencing such payment, a copy of the return reporting such payment or other evidence of such payment reasonably satisfactory to Administrative Agent.

7. Status of Lenders.

(m) Any Lender that is entitled to an exemption from or reduction of withholding Tax with respect to payments made under any Loan Document shall deliver to Borrower Representative and Administrative Agent, at the

time or times reasonably requested by Borrower Representative or Administrative Agent, such properly completed and executed documentation reasonably requested by Borrower Representative or Administrative Agent as will permit such payments to be made without withholding or at a reduced rate of withholding. In addition, any Lender, if reasonably requested by Borrower Representative or Administrative Agent, shall deliver such other documentation prescribed by applicable law or reasonably requested by Borrower Representative or Administrative Agent as will enable the Loan Parties or Administrative Agent to determine whether or not such Lender is subject to backup withholding or information reporting requirements. Notwithstanding anything to the contrary in the preceding two sentences, the completion, execution and submission of such documentation (other than such documentation set forth in Sections 7(b)(i), 7(b)(ii) and 7(b)(iv) of this Schedule 3) shall not be required if in the Lender's reasonable judgment such completion, execution or submission would subject such Lender to any material unreimbursed cost or expense or would materially prejudice the legal or commercial position of such Lender.

(n) Without limiting the generality of the foregoing, in the event that any Loan Party is a U.S. Person,

(i) any Lender that is a U.S. Person shall deliver to Borrower Representative and Administrative Agent on or about the date on which such Lender becomes a Lender under this Agreement (and from time to time thereafter upon the reasonable written request of Borrower Representative or Administrative Agent), executed copies of IRS Form W-9 certifying that such Lender is exempt from U.S. federal backup withholding tax;

(ii) any Foreign Lender shall, to the extent it is legally entitled to do so, deliver to Borrower Representative and Administrative Agent (in such number of copies as shall be requested by the recipient) on or about the date on which such Foreign Lender becomes a Lender under this Agreement (and from time to time thereafter upon the reasonable written request of Borrower Representative or Administrative Agent), whichever of the following is applicable:

A. in the case of a Foreign Lender claiming the benefits of an income tax treaty to which the United States is a party (x) with respect to payments of interest under any Loan Document, executed copies of IRS Form W-8BEN or IRS Form W-8BEN-E establishing an exemption from, or reduction of, U.S. federal withholding Tax pursuant to the "interest" article of such tax treaty and (y) with respect to any other applicable payments under any Loan Document, IRS Form W-8BEN or IRS Form W-8BEN-E establishing an exemption from, or reduction of, U.S. federal withholding Tax pursuant to the "business profits" or "other income" article of such tax treaty;

B. executed copies of IRS Form W-8ECI;

C. in the case of a Foreign Lender claiming the benefits of the exemption for portfolio interest under Section 881(c) of the Internal Revenue Code, (x) a certificate, in form and substance reasonably acceptable to Borrower Representative and Administrative Agent, to the effect that such Foreign Lender (or other applicable Person) is not a "bank" within the meaning of Section 881(c)(3)(A) of the Internal Revenue Code, a "10 percent shareholder" of any Loan Party within the meaning of Section 871(h)(3)(B) of the Internal Revenue Code, or a "controlled foreign corporation" related to any Loan Party as described in Section 881(c)(3)(C) of the Internal Revenue Code (a "**U.S. Tax Compliance Certificate**") and (y) executed copies of IRS Form W-8BEN or IRS Form W-8BEN-E; or

D. to the extent a Foreign Lender is not the beneficial owner, executed copies of IRS Form W-8IMY, accompanied by IRS Form W-8ECI, IRS Form W-8BEN, IRS Form W-8BEN-E, a U.S. Tax Compliance Certificate, IRS Form W-9, and/or other certification documents from each beneficial owner, as applicable; provided that if the Foreign Lender is a partnership and one or more direct or indirect partners of such Foreign Lender are claiming the portfolio interest exemption, such Foreign Lender may provide a U.S. Tax Compliance Certificate on behalf of each such direct and indirect partner;

(iii) any Foreign Lender shall, to the extent it is legally entitled to do so, deliver to Borrower Representative and Administrative Agent (in such number of copies as shall be requested by the recipient) on or about the date on which such Foreign Lender becomes a Lender under this Agreement (and from time to time thereafter upon the reasonable written request of Borrower Representative or Administrative Agent), executed copies of any other form prescribed by applicable law as a basis for claiming exemption from or a reduction in U.S. federal withholding Tax, duly completed, together with such supplementary documentation as may be prescribed by applicable law to permit the applicable Loan Party or Administrative Agent to determine the withholding or deduction required to be made; and

(iv) if a payment made to a Lender under any Loan Document would be subject to U.S. federal withholding Tax imposed by FATCA if such Lender were to fail to comply with the applicable reporting requirements of FATCA (including those contained in Section 1471(b) or 1472(b) of the Internal Revenue Code, as applicable), such Lender shall deliver to Borrower Representative and Administrative Agent at the time or times prescribed by law and at such time or times reasonably requested in writing by Borrower Representative or Administrative Agent such documentation prescribed by applicable law (including as prescribed by Section 1471(b)(3)(C)(i) of the Internal Revenue Code) and such additional documentation reasonably requested in writing by Borrower Representative or Administrative Agent as may be necessary for the applicable Loan Party and Administrative Agent to comply with their obligations under FATCA and to determine that such Lender has complied with such Lender's obligations under FATCA or to determine the amount, if any, to deduct and withhold from such payment. Solely for purposes of this clause (iv), "FATCA" shall include any amendments made to FATCA after the date of this Agreement.

(o) Administrative Agent shall deliver to Borrower Representative on or prior to the date on which the Administrative Agent becomes a party to this Agreement (and from time to time thereafter upon the reasonable written request of Borrower Representative) executed copies of IRS Form W-9.

(p) Each Lender and Administrative Agent agrees that if any form or certification it previously delivered expires or becomes obsolete or inaccurate in any respect, it shall update such form or certification or promptly notify Borrower Representative and/or Administrative Agent, as applicable, in writing of its legal inability to do so.

8. Treatment of Certain Refunds. If any party determines, in its sole discretion exercised in good faith, that it has received a refund of any Taxes as to which it has been indemnified pursuant to the provisions of this Schedule 3 (including by the payment of additional amounts pursuant to the provisions of this Schedule 3), it shall pay to the indemnifying party an amount equal to such refund (but only to the extent of indemnity payments made under the provisions of this Schedule 3 with respect to the Taxes giving rise to such refund), net of all out-of-pocket expenses (including Taxes) of such indemnified party and without interest (other than any interest paid by the relevant Governmental Authority with respect to such refund). Such indemnifying party, upon the request in writing of such indemnified party, shall repay to such indemnified party the amount paid over pursuant to this Section 8 (plus any penalties, interest or other charges imposed by the relevant Governmental Authority) in the event that such indemnified party is required to repay such refund to such Governmental Authority. Notwithstanding anything to the contrary in this Section 8, in no event will the indemnified party be required to pay any amount to an indemnifying party pursuant to this Section 8 the payment of which would place the indemnified party in a less favorable net after-Tax position than the indemnified party would have been in if the Tax subject to indemnification and giving rise to such refund had not been deducted, withheld or otherwise imposed and the indemnification payments or additional amounts with respect to such Tax had never been paid. This Section 8 shall not be construed to require any indemnified party to make available its Tax returns (or any other information relating to its Taxes that it deems confidential) to the indemnifying party or any other Person.

9. Increased Costs. If any change in applicable law shall subject any Recipient to any Taxes (other than (A) Indemnified Taxes, (B) Taxes described in clauses (ii) through (iv) of the definition of Excluded Taxes and (C) Connection Income Taxes) on its loans, loan principal, commitments, or other obligations, or its deposits, reserves, other liabilities or capital attributable thereto, and the result shall be to increase the cost to such Recipient of making, converting to, continuing or maintaining any Term Loan or of maintaining its obligation to make any such Term Loan, or to reduce the amount of any sum received or receivable by such Recipient (whether of principal, interest or any other amount), then, upon the request in writing of such Recipient, the Loan Parties will pay to such Recipient such

additional amount or amounts as will compensate such Recipient for such additional costs incurred or reduction suffered. A certificate of a Lender setting forth the amount or amounts necessary to compensate such Lender and delivered to the Borrower Representative, shall be conclusive absent manifest error. The Loan Parties shall pay such Lender the amount shown as due on any such certificate within 10 days after receipt thereof.

10. Survival. Each party's obligations under the provisions of this Schedule 3 shall survive the resignation or replacement of Administrative Agent or Collateral Trustee or any assignment of rights by, or the replacement of, a Lender, the termination of the Commitments and the repayment, satisfaction or discharge of all obligations under any Loan Document.

11. Tax Treatment. Except as otherwise required by applicable law, the parties hereto agree to treat the Loans, for U.S. federal income tax purpose, as a convertible debt instrument that is not subject to the application of the rules of Treasury Regulation Section 1.1275-4.

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SCHEDULE 4
[RESERVED]

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Annex B

[_____]

Selling Stockholder Notice and Questionnaire

The undersigned beneficial owner of common stock, $[_____] par value per share (the "Common Stock"), of [_____] (the "Company", and such shares of Common Stock, the "Registrable Securities") understands that the Company has filed or intends to file with the Securities and Exchange SEC (the "SEC") a registration statement (the "Registration Statement") for the registration and resale under Rule 415 of the Securities Act of 1933, as amended (the "Securities Act"), of the Registrable Securities, in accordance with the terms of the Loan and Security Agreement, dated as of [_____], 2023 (the "Agreement"), by and among the Company, the other Loan Parties party thereto, the lenders from time to time party thereto, and K2 HEALTHVENTURES LLC, as administrative agent for the lenders. The purpose of this Questionnaire is to facilitate the filing of the Registration Statement under the Securities Act that will permit you to resell the Registrable Securities in the future. The information supplied by you will be used in preparing the Registration Statement. All capitalized terms not otherwise defined herein shall have the meanings ascribed thereto in the Agreement.

Certain legal consequences arise from being named as a selling stockholder in the Registration Statement and the related Prospectus. Accordingly, holders and beneficial owners of Registrable Securities are advised to consult their own securities law counsel regarding the consequences of being named or not being named as a selling stockholder in the Registration Statement and the related Prospectus.

NOTICE

The undersigned beneficial owner (the "Selling Stockholder") of Registrable Securities hereby elects to include the Registrable Securities owned by it and listed below in Item 3 (unless otherwise specified under such Item 3) in the Registration Statement.

QUESTIONNAIRE

12. Name:

(q) Full Legal Name of Selling Stockholder

____

(r) Full Legal Name of Registered Holder (if not the same as (a) above) through which Registrable Securities listed in Item 3 below are held:

____

(s) Full Legal Name of Natural Control Person (which means a natural person who directly or indirectly alone or with others has power to vote or dispose of the securities covered by this questionnaire):

____

13. Address for Notices to Selling Stockholder:

____
____
____
____

Telephone: __
Fax: ____
Contact Person: __
E-mail address of Contact Person: ____

14. Beneficial Ownership of Registrable Securities:

Type and Number of Registrable Securities beneficially owned:

____
____
____

15. Broker-Dealer Status:

(t) Are you a broker-dealer?

Yes No

Note: If yes, the SEC's staff has indicated that you should be identified as an underwriter in the Registration Statement.

(u) Are you an affiliate of a broker-dealer?

Yes No

Note: If yes, provide a narrative explanation below:

____
____

(v) If you are an affiliate of a broker-dealer, do you certify that you bought the Registrable Securities in the ordinary course of business, and at the time of the purchase of the Registrable Securities to be resold, you had no agreements or understandings, directly or indirectly, with any person to distribute the Registrable Securities?

Yes No

Note: If no, the SEC's staff has indicated that you should be identified as an underwriter in the Registration Statement.

16. Beneficial Ownership of Other Securities of the Company Owned by the Selling Stockholder.

Except as set forth below in this Item 5, the undersigned is not the beneficial or registered owner of any securities of the Company other than the Registrable Securities listed above in Item 3.

(w) As of _____, 20___, the Selling Stockholder owned outright (including shares registered in Selling Stockholder's name individually or jointly with others, shares held in the name of a bank, broker, nominee, depository or in "street name" for its account), _____ shares of the Company's capital stock (excluding the Registrable Securities). If "zero," please so state.

(x) In addition to the number of shares Selling Stockholder owned outright as indicated in Item 5(a) above, as of _____, 20___, the Selling Stockholder had or shared voting power or investment power, directly or indirectly, through a contract, arrangement, understanding, relationship or otherwise, with respect to

_____ shares of the Company's capital stock (excluding the Registrable Securities). If "zero," please so state.

If the answer to Item 5(b) is not "zero," please complete the following tables:

Sole Voting Power:

Number of Shares	**Nature of Relationship Resulting in Sole Voting Power**

Shared Voting Power:

Number of Shares	**With Whom Shared**	**Nature of Relationship**

Sole Investment power:

Number of Shares	**Nature of Relationship Resulting in Sole Investment Power**

Shared Investment power:

Number of Shares	**With Whom Shared**	**Nature of Relationship**

(y) As of _____, 20___, the Selling Stockholder had the right to acquire the following shares of the Company's common stock pursuant to the exercise of outstanding stock options, warrants or other rights (excluding the Registrable Securities). Please describe the number, type and terms of the securities, the method of ownership, and whether the undersigned holds sole or shared voting and investment power. If "none", please so state.

____
____

17. Relationships with the Company:

Except as set forth below, neither the undersigned nor any of its affiliates, officers, directors or principal equity holders (owners of 5% of more of the equity securities of the undersigned) has held any position or office or has had any other material relationship with the Company (or its predecessors or affiliates) during the past three years.

State any exceptions here:

____
____

18. Plan of Distribution:

The undersigned has reviewed the form of Plan of Distribution attached as Annex A, and hereby confirms that, except as set forth below, the information contained therein regarding the undersigned and its plan of distribution is correct and complete.

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State any exceptions here:

____

____

****

The undersigned agrees to promptly notify the Company of any inaccuracies or changes in the information provided herein that may occur subsequent to the date hereof and prior to the effective date of any applicable Registration Statement filed pursuant to the Agreement.

By signing below, the undersigned consents to the disclosure of the information contained herein in its answers to Items 1 through 7 and the inclusion of such information in each Registration Statement filed pursuant to the Agreement and each related Prospectus. The undersigned understands that such information will be relied upon by the Company in connection with the preparation or amendment of any such Registration Statement and the related Prospectus.

By signing below, the undersigned acknowledges that it understands its obligation to comply, and agrees that it will comply, with the provisions of the Exchange Act and the rules and regulations thereunder, particularly Regulation M. The undersigned also acknowledges that it understands that the answers to this Questionnaire are furnished for use in connection with Registration Statements filed pursuant to the Agreement and any amendments or supplements thereto filed with the SEC pursuant to the Securities Act.

The undersigned hereby acknowledges and is advised of the following Interpretation A.65 of the July 1997 SEC Manual of Publicly Available Telephone Interpretations regarding short selling:

"An Issuer filed a Form S-3 registration statement for a secondary offering of common stock which is not yet effective. One of the selling shareholders wanted to do a short sale of common stock "against the box" and cover the short sale with registered shares after the effective date. The issuer was advised that the short sale could not be made before the registration statement become effective, because the shares underlying the short sale are deemed to be sold at the time such sale is made. There would, therefore, be a violation of Section 5 if the shares were effectively sold prior to the effective date."

By returning this Questionnaire, the undersigned will be deemed to be aware of the foregoing interpretation.

I confirm that, to the best of my knowledge and belief, the foregoing statements (including without limitation the answers to this Questionnaire) are correct.

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IN WITNESS WHEREOF the undersigned, by authority duly given, has caused this Questionnaire to be executed and delivered either in person or by its duly authorized agent.

Dated:

Beneficial Owner:

By:

Name:

Title:

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SCHEDULE 5

ROYALTY AND MILESTONE

[***]

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SCHEDULE 6

PLEDGED SHARES

[***]

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SCHEDULE 1

AMENDMENT DOCUMENTS

1. First Amendment to Loan and Security Agreement
2. Amended and Restated Fee Letter
3. Perfection Certificate (updated)
4. Disbursement Letter (with respect to Term Loan to be advanced on or about the First Restatement Effective Date)
5. Certificate of 89bio, Inc. and 89bio Management, Inc., duly executed by a Responsible Officer, certifying and attaching (i) the Operating Documents (certified by the Secretary of State (or equivalent agency) on a date that is no earlier than thirty (30) days prior to the date hereof), (ii) resolutions duly approved by the Board, (iii) any resolutions, consent or waiver duly approved by the requisite holders of each such Loan Party's Equity Interests, if applicable (or certifying that no such resolutions, consent or waiver is required), and (iv) a schedule of incumbency
6. Warrant to Purchase Common Stock

89BIO, INC.

AMENDED AND RESTATED 2023 INDUCEMENT PLAN

ORIGINALLY ADOPTED BY THE BOARD: February 9, 2023

AMENDED AND RESTATED BY THE BOARD: SEPTEMBER 23, 2024

1. GENERAL.

(a) **Eligible Award Recipients**. New Employees are eligible to receive Awards as a material inducement to the commencement of employment within the meaning of the Listing Rule .

(b) **Available Awards**. This Plan provides for the grant of the following Awards: (i) Nonstatutory Stock Options; (ii) Stock Appreciation Rights; (iii) Restricted Stock Awards; (iv) Restricted Stock Unit Awards; and (v) Performance Stock Awards.

(c) **Purpose**. This Plan, through the granting of Awards, is intended to help the Company secure and retain the services of eligible award recipients, provide incentives for such persons to exert maximum efforts for the success of the Company and any Affiliate and provide a means by which the eligible award recipients may benefit from increases in the value of the Common Stock.

2. ADMINISTRATION.

(a) **Administration by Board**. The Board will administer this Plan. The Board may delegate administration of this Plan to a Committee or Committees, as provided in Section 2(c).

(b) **Powers of Board**. The Board will have the power, subject to, and within the limitations of, the express provisions of this Plan:

(i) To determine: (A) who will be granted Awards (which Awards shall be intended as a material inducement to the individual becoming an Employee); (B) when and how each Award will be granted; (C) what type of Award will be granted; (D) the provisions of each Award (which need not be identical), including when a person will be permitted to exercise or otherwise receive cash or Common Stock under the Award; (E) the number of shares of Common Stock subject to, or the cash value of, an Award; and (F) the Fair Market Value applicable to a Stock Award. In accordance with the Listing Rule, any exercise of the Board's authority under this Section 2(b)(i) must be exercised solely by the Board's independent Directors within the meaning of Rule 5605(a)(2) of the Nasdaq Listing Rules.

(ii) To construe and interpret this Plan and Awards granted under it, and to establish, amend and revoke rules and regulations for administration of this Plan and Awards. The Board, in the exercise of these powers, may correct any defect, omission or inconsistency in this Plan or in any Award Document, in a manner and to the extent it will deem necessary or expedient to make this Plan or Award fully effective.

(iii) To settle all controversies regarding this Plan and Awards granted under it.

(iv) To accelerate, in whole or in part, or to extend, in whole or in part, the time during which an Award may be exercised or vest, or at which cash or shares of Common Stock may be issued.

(v) To suspend or terminate this Plan at any time. Except as otherwise provided in this Plan or an Award Document, suspension or termination of this Plan will not materially impair a Participant's rights under his or her then-outstanding Award without his or her written consent except as provided in subsection (viii) below.

(vi) To amend this Plan in any respect the Board deems necessary or advisable, including, without limitation, adopting amendments relating to nonqualified deferred compensation under Section 409A of the Code and/or making this Plan or Awards granted under this Plan exempt from or compliant with the requirements for nonqualified deferred compensation under Section 409A of the Code, subject to the limitations, if any, of applicable law. If required by applicable law or listing requirements, and except as provided in Section 9(a) relating to

Capitalization Adjustments, the Company will seek stockholder approval of any amendment of this Plan that (A) materially increases the number of shares of Common Stock available for issuance under this Plan, (B) materially expands the class of individuals eligible to receive Awards under this Plan, (C) materially increases the benefits accruing to Participants under this Plan, (D) materially reduces the price at which shares of Common Stock may be issued or purchased under this Plan, (E) materially extends the term of this Plan, or (F) materially expands the types of Awards available for issuance under this Plan. Except as otherwise provided in this Plan (including subsection (viii) below) or an Award Document, no amendment of this Plan will materially impair a Participant's rights under an outstanding Award without the Participant's written consent.

(vii) To submit any amendment to this Plan for stockholder approval, including, but not limited to, amendments to this Plan intended to satisfy the requirements of Rule 16b-3 of the Exchange Act or any successor rule, if applicable.

(viii) To approve forms of Award Documents for use under this Plan and to amend the terms of any one or more outstanding Awards, including, but not limited to, amendments to provide terms more favorable to the Participant than previously provided in the Award Documents for such Awards. A Participant's rights under any Award will not be impaired by any such amendment unless the Company requests the consent of the affected Participant, and the Participant consents in writing. However, a Participant's rights will not be deemed to have been impaired by any such amendment if the Board, in its sole discretion, determines that the amendment, taken as a whole, does not materially impair the Participant's rights. In addition, subject to the limitations of applicable law, if any, the Board may amend the terms of any one or more Awards without the affected Participant's consent (A) to clarify the manner of exemption from, or to bring the Award into compliance with, Section 409A of the Code or (B) to comply with other applicable laws or listing requirements.

(ix) Generally, to exercise such powers and to perform such acts as the Board deems necessary or expedient to promote the best interests of the Company and that are not in conflict with the provisions of this Plan and/or Award Documents.

(x) To adopt such procedures and sub-plans as are necessary or appropriate (A) to permit or facilitate participation in this Plan by persons eligible to receive Awards under this Plan who are not citizens of, subject to taxation by, or employed outside, the United States or (B) to allow Awards to qualify for special tax treatment in a jurisdiction other than the United States. Board approval will not be necessary for immaterial modifications to this Plan or any Award Document that are required for compliance with the laws of the relevant jurisdiction.

(xi) To effect, with the consent of any adversely affected Participant, (A) the reduction of the exercise, purchase or strike price of any outstanding Stock Award; (B) the cancellation of any outstanding Stock Award and the grant in substitution therefore of a new (1) Option or SAR, (2) Restricted Stock Award, (3) Restricted Stock Unit Award, (4) cash award and/or (5) award of other valuable consideration determined by the Board, in its sole discretion, with any such substituted award (x) covering the same or a different number of shares of Common Stock as the cancelled Stock Award and (y) granted under this Plan or another equity or compensatory plan of the Company; or (C) any other action that is treated as a repricing under generally accepted accounting principles.

(c) **Delegation to Committee**.

(i) General. The Board may delegate some or all of the administration of this Plan to a Committee or Committees, except that the Board's authority under Section 2(b)(i) above may only be delegated to the Compensation Committee of the Board. If administration of this Plan is delegated to a Committee, the Committee will have, in connection with the administration of this Plan, the powers theretofore possessed by the Board that have been delegated to the Committee, including the power to delegate to a subcommittee of the Committee any of the administrative powers the Committee is authorized to exercise (and references in this Plan to the Board will thereafter be to the Committee or subcommittee). Any delegation of administrative powers will be reflected in the charter of the Committee to which the delegation is made, or resolutions, not inconsistent with the provisions of this Plan, adopted from time to time by the Board or Committee (as applicable). The Committee may, at any time, abolish the subcommittee and/or revest in the Committee any powers delegated to any subcommittee. Unless otherwise provided by the Board, delegation of authority by the Board to a Committee, or to an Officer or employee pursuant to Section 2(d), does not limit the authority of the Board, which may continue to exercise any authority so delegated and may concurrently administer this Plan with the Committee and may, at any time, revest in the Board some or all of the powers previously delegated.

(ii) Rule 16b-3 Compliance. The Committee may consist solely of two or more Non-Employee Directors, in accordance with Rule 16b-3 of the Exchange Act.

(d) **Delegation to an Officer**. The Board (or a Committee, if within the scope of the Committee's delegated authority) may delegate to one (1) or more Officers the day to day administration of the Plan, and such administrator(s) may have the authority to execute and distribute agreements or other documents evidencing or relating to Awards granted under this Plan, to maintain records relating to the grant, vesting, exercise, forfeiture, or expiration of Awards, to process or oversee the issuance of shares of Common Stock upon the exercise, vesting, and/or settlement of an Award, to interpret the terms of Awards and to take such other actions as the Board may specify.

(e) **Effect of Board's Decision**. All determinations, interpretations and constructions made by the Board (or a duly authorized Committee, subcommittee or Officer exercising powers delegated by the Board under this Section 2) in good faith will not be subject to review by any person and will be final, binding and conclusive on all persons.

3. SHARES SUBJECT TO THIS PLAN.

(a) **Share Reserve**.

(i) Subject to Section 9(a) relating to Capitalization Adjustments, the aggregate maximum number of shares of Common Stock that may be issued pursuant to Stock Awards from and after the Effective Date will not exceed 2,500,000 shares of Common Stock (the "**Share Reserve**").

(ii) For clarity, the Share Reserve is a limitation on the number of shares of Common Stock that may be issued under this Plan. As a single share may be subject to grant more than once (e.g., if a share subject to a Stock Award is forfeited, it may be made subject to grant again as provided in Section 3(b) below), the Share Reserve is not a limit on the number of Stock Awards that can be granted.

(b) **Reversion of Shares to the Share Reserve**. If a Stock Award or any portion of a Stock Award (i) expires, is cancelled or forfeited or otherwise terminates without all of the shares covered by the Stock Award having been issued or (ii) is settled in cash (i.e., the Participant receives cash rather than stock), such expiration, cancellation, forfeiture, termination or settlement will not reduce (or otherwise offset) the number of shares of Common Stock that are available for issuance under this Plan. If any shares of Common Stock issued under a Stock Award are forfeited back to, reacquired at no cost by, or repurchased at cost by the Company, whether or not because of the failure to meet a contingency or condition required to vest such shares in the Participant, then the shares that are forfeited, reacquired or repurchased will revert to and again become available for issuance under this Plan. Any shares retained and not issued by the Company in satisfaction of tax withholding obligations on a Stock Award or as consideration for the exercise or purchase price of a Stock Award will not reduce (or otherwise offset) the number of shares of Common Stock that are available for issuance under this Plan. Any shares reacquired by the Company (as distinguished from being retained without issuance by the Company) in satisfaction of tax withholding obligations on a Stock Award, as consideration for the exercise or purchase price of a Stock Award, or with the proceeds paid by the Participant under the terms of a Stock Award, will again become available for issuance under this Plan. Under all circumstances, the Share Reserve shall only be reduced upon the issuance of shares covered by a Stock Award.

(c) **Source of Shares**. The stock issuable under this Plan will be shares of authorized but unissued or reacquired Common Stock, including shares repurchased by the Company on the open market or otherwise or shares classified as treasury shares.

4. ELIGIBILITY.

Awards under the Plan may be granted only to New Employees who satisfy the standards for inducement grants under the Listing Rule, and only when the Award is an inducement material to the individual's entering into employment with the Company within the meaning of the Listing Rule.

5. PROVISIONS RELATING TO OPTIONS AND STOCK APPRECIATION RIGHTS.

Each Option or SAR will be in such form and will contain such terms and conditions as the Board deems appropriate. All Options will be granted as Nonstatutory Stock Options. The provisions of separate Options or SARs need not be identical; provided, however, that each Award Document will conform to (through incorporation of

provisions hereof by reference in the applicable Award Document or otherwise) the substance of each of the following provisions:

(a) **Term**. No Option or SAR will be exercisable after the expiration of 10 years from the date of its grant or such shorter period specified in the Award Document.

(b) **Exercise Price**. The exercise or strike price of each Option or SAR will be not less than 100% of the Fair Market Value of the Common Stock subject to the Option or SAR on the date the Award is granted. Notwithstanding the foregoing, an Option or SAR may be granted with an exercise or strike price lower than 100% of the Fair Market Value of the Common Stock subject to the Award if such Award is granted pursuant to an assumption of or substitution for another option or stock appreciation right pursuant to a corporate transaction and in a manner consistent with the provisions of Section 409A of the Code and, if applicable, Section 424(a) of the Code. Each SAR will be denominated in shares of Common Stock equivalents.

(c) **Purchase Price for Options**. The purchase price of Common Stock acquired pursuant to the exercise of an Option may be paid, to the extent permitted by applicable law and as determined by the Board in its sole discretion, by any combination of the methods of payment set forth below. The Board will have the authority to grant Options that do not permit all of the following methods of payment (or otherwise restrict the ability to use certain methods) and to grant Options that require the consent of the Company to use a particular method of payment. The purchase price shall be denominated in U.S. dollars. The permitted methods of payment are as follows:

(i) by cash, check, bank draft or money order payable to the Company;

(ii) pursuant to a program developed under Regulation T as promulgated by the United States Federal Reserve Board or a successor regulation, or a similar rule in a foreign jurisdiction of domicile of a Participant, that, prior to or contemporaneously with the issuance of the stock subject to the Option, results in either the receipt of cash (or check) by the Company or the receipt of irrevocable instructions to pay the aggregate exercise price to the Company from the proceeds of sale of such stock;

(iii) by delivery to the Company (either by actual delivery or attestation) of shares of Common Stock;

(iv) by a "net exercise" arrangement pursuant to which the Company will reduce the number of shares of Common Stock issuable upon exercise by the largest whole number of shares with a Fair Market Value that does not exceed the aggregate exercise price; provided, however, that the Company will accept cash or other payment from the Participant to the extent of any remaining balance of the aggregate exercise price not satisfied by such reduction in the number of whole shares to be issued. Shares of Common Stock will no longer be subject to an Option and will not be exercisable thereafter to the extent that (A) shares issuable upon exercise are used to pay the exercise price pursuant to the "net exercise," (B) shares are delivered to the Participant as a result of such exercise, and (C) shares are withheld to satisfy tax withholding obligations; or

(v) in any other form of legal consideration that may be acceptable to the Board and specified in the applicable Award Document.

(d) **Exercise and Payment of a SAR**. To exercise any outstanding SAR, the Participant must provide written notice of exercise to the Company in compliance with the provisions of the Stock Appreciation Right Award Document evidencing such SAR. The appreciation distribution payable on the exercise of a SAR will be not greater than an amount equal to the excess of (A) the aggregate Fair Market Value (on the date of the exercise of the SAR) of a number of shares of Common Stock equal to the number of Common Stock equivalents in which the Participant is vested under such SAR (with respect to which the Participant is exercising the SAR on such date), over (B) the aggregate strike price of the number of Common Stock equivalents with respect to which the Participant is exercising the SAR on such date. The appreciation distribution may be paid in Common Stock, in cash, in any combination of the two or in any other form of consideration, as determined by the Board and contained in the Award Document evidencing such SAR.

(e) **Transferability of Options and SARs**. The Board may, in its sole discretion, impose such limitations on the transferability of Options and SARs as the Board determines. In the absence of such a determination by the Board to the contrary, the following restrictions on the transferability of Options and SARs will apply:

(i) Restrictions on Transfer. An Option or SAR will not be transferable except by will or by the laws of descent and distribution (or pursuant to subsections (ii) and (iii) below), and will be exercisable during the lifetime of the Participant only by the Participant. The Board may permit transfer of the Option or SAR in a manner that is

not prohibited by applicable tax and securities laws. Except as explicitly provided herein, neither an Option nor a SAR may be transferred for consideration.

(ii) Domestic Relations Orders. Subject to the approval of the Board or a duly authorized Officer, an Option or SAR may be transferred pursuant to the terms of a domestic relations order, official marital settlement agreement or other divorce or separation instrument as permitted by applicable law.

(iii) Beneficiary Designation. Subject to the approval of the Board or a duly authorized Officer, a Participant may, by delivering written notice to the Company, in a form approved by the Company (or the designated broker), designate a third party who, on the death of the Participant, will thereafter be entitled to exercise the Option or SAR and receive the Common Stock or other consideration resulting from such exercise. In the absence of such a designation, the executor or administrator of the Participant's estate will be entitled to exercise the Option or SAR and receive the Common Stock or other consideration resulting from such exercise. However, the Company may prohibit designation of a beneficiary at any time, including due to any conclusion by the Company that such designation would be inconsistent with the provisions of applicable laws.

(f) **Vesting Generally**. The total number of shares of Common Stock subject to an Option or SAR may vest and therefore become exercisable in periodic installments that may or may not be equal. The Option or SAR may be subject to such other terms and conditions on the time or times when it may or may not be exercised (which may be based on the satisfaction of performance goals or other criteria) as the Board may deem appropriate. The vesting provisions of individual Options or SARs may vary. The provisions of this Section 5(f) are subject to any Option or SAR provisions governing the minimum number of shares of Common Stock as to which an Option or SAR may be exercised.

(g) **Termination of Continuous Service**. Except as otherwise provided in the applicable Award Document, or other agreement between the Participant and the Company, if a Participant's Continuous Service terminates (other than for Cause and other than upon the Participant's death or Disability), the Participant may exercise his or her Option or SAR (to the extent that the Participant was entitled to exercise such Award as of the date of termination of Continuous Service) within the period of time ending on the earlier of (i) the date three (3) months following the termination of the Participant's Continuous Service and (ii) the expiration of the term of the Option or SAR as set forth in the applicable Award Document. If, after termination of Continuous Service, the Participant does not exercise his or her Option or SAR within the applicable time frame, the Option or SAR will terminate.

(h) **Extension of Termination Date**. Except as otherwise provided in the applicable Award Document, or other agreement between the Participant and the Company, if the exercise of an Option or SAR following the termination of the Participant's Continuous Service (other than for Cause and other than upon the Participant's death or Disability) would be prohibited at any time solely because the issuance of shares of Common Stock would violate the registration requirements under the Securities Act, then the Option or SAR will terminate on the earlier of (i) the expiration of a total period of three (3) months (that need not be consecutive) after the termination of the Participant's Continuous Service during which the exercise of the Option or SAR would not be in violation of such registration requirements, and (ii) the expiration of the term of the Option or SAR as set forth in the applicable Award Document. In addition, unless otherwise provided in a Participant's applicable Award Document, or other agreement between the Participant and the Company, if the sale of any Common Stock received upon exercise of an
Option or SAR following the termination of the Participant's Continuous Service (other than for Cause) would violate the Company's insider trading policy, and the Company does not waive the potential violation of the policy or otherwise permit the sale, or allow the Participant to surrender shares of Common Stock to the Company in satisfaction of any exercise price and/or any withholding obligations under Section 9(h), then the Option or SAR will terminate on the earlier of (i) the expiration of a period of months (that need not be consecutive) equal to the applicable post-termination exercise period after the termination of the Participant's Continuous Service during which the sale of the Common Stock received upon exercise of the Option or SAR would not be in violation of the Company's insider trading policy, or (ii) the expiration of the term of the Option or SAR as set forth in the applicable Award Document.

(i) **Disability of Participant**. Except as otherwise provided in the applicable Award Document, or other agreement between the Participant and the Company, if a Participant's Continuous Service terminates as a result of the Participant's Disability, the Participant may exercise his or her Option or SAR (to the extent that the Participant was entitled to exercise such Option or SAR as of the date of termination of Continuous Service), but only within such period of time ending on the earlier of (i) the date 12 months following such termination of Continuous

Service, and (ii) the expiration of the term of the Option or SAR as set forth in the applicable Award Document. If, after termination of Continuous Service, the Participant does not exercise his or her Option or SAR within the applicable time frame, the Option or SAR (as applicable) will terminate.

(j) **Death of Participant**. Except as otherwise provided in the applicable Award Document, or other agreement between the Participant and the Company, if (i) a Participant's Continuous Service terminates as a result of the Participant's death, or (ii) the Participant dies within the period (if any) specified in this Plan or the applicable Award Document, or other agreement between the Participant and the Company, for exercisability after the termination of the Participant's Continuous Service (for a reason other than death), then the Option or SAR may be exercised (to the extent the Participant was entitled to exercise such Option or SAR as of the date of death) by the Participant's estate, by a person who acquired the right to exercise the Option or SAR by bequest or inheritance or by a person designated to exercise the Option or SAR upon the Participant's death, but only within the period ending on the earlier of (i) the date 18 months following the date of death, and (ii) the expiration of the term of such Option or SAR as set forth in the applicable Award Document. If, after the Participant's death, the Option or SAR is not exercised within the applicable time frame, the Option or SAR will terminate.

(k) **Termination for Cause**. Except as explicitly provided otherwise in a Participant's Award Document or other individual written agreement between the Company or any Affiliate and the Participant, if a Participant's Continuous Service is terminated for Cause, the Option or SAR will terminate upon the date on which the event giving rise to the termination for Cause first occurred, and the Participant will be prohibited from exercising his or her Option or SAR from and after the date on which the event giving rise to the termination for Cause first occurred (or, if required by law, the date of termination of Continuous Service). If a Participant's Continuous Service is suspended pending an investigation of the existence of Cause, all of the Participant's rights under the Option or SAR will also be suspended during the investigation period.

(l) **Non-Exempt Employees**. If an Option or SAR is granted to an Employee who is a non-exempt employee for purposes of the U.S. Fair Labor Standards Act of 1938, as amended, the Option or SAR will not be first exercisable for any shares of Common Stock until at least 6 months following the date of grant of the Option or SAR (although the Award may vest prior to such date). Consistent with the provisions of the U.S. Worker Economic Opportunity Act, (i) if such non-exempt Employee dies or suffers a Disability, (ii) upon a Change in Control in which such Option or SAR is not assumed, continued, or substituted, or (iii) upon the non-exempt Employee's retirement (as such term may be defined in the non-exempt Employee's applicable Award Document, in another agreement between the non-exempt Employee and the Company, or, if no such definition, in accordance with the Company's then current employment policies and guidelines), the vested portion of any Options and SARs may be exercised earlier than 6 months following the date of grant. The foregoing provision is intended to operate so that any income derived by a non-exempt Employee in connection with the exercise or vesting of an Option or SAR will be exempt from his or her regular rate of pay. To the extent permitted and/or required for compliance with the U.S. Worker Economic Opportunity Act to ensure that any income derived by a non-exempt Employee in connection with the exercise, vesting or issuance of any shares under any other Stock Award will be exempt from such employee's regular rate of pay, the provisions of this paragraph will apply to all Stock Awards and are hereby incorporated by reference into such Stock Award Documents.

6. PROVISIONS OF STOCK AWARDS OTHER THAN OPTIONS AND SARS.

(a) **Restricted Stock Awards**. Each Restricted Stock Award Document will be in such form and will contain such terms and conditions as the Board deems appropriate. To the extent consistent with the Company's bylaws, at the Board's election, shares of Common Stock may be (x) held in book entry form subject to the Company's instructions until any restrictions relating to the Restricted Stock Award lapse, or (y) evidenced by a certificate, which certificate will be held in such form and manner as determined by the Board. The terms and conditions of Restricted Stock Award Documents may change from time to time, and the terms and conditions of separate Restricted Stock Award Documents need not be identical. Each Restricted Stock Award Document will conform to (through incorporation of the provisions hereof by reference in the agreement or otherwise) the substance of each of the following provisions:

(i) Consideration. A Restricted Stock Award may be awarded in consideration for (A) cash, check, bank draft or money order payable to the Company or (B) any other form of legal consideration (including future services) that may be acceptable to the Board, in its sole discretion, and permissible under applicable law.

(ii) Vesting. Shares of Common Stock awarded under the Restricted Stock Award Document may be subject to forfeiture to the Company in accordance with a vesting schedule and subject to such conditions as may be determined by the Board.

(iii) Termination of Participant's Continuous Service. If a Participant's Continuous Service terminates, the Company may receive through a forfeiture condition or a repurchase right, any or all of the shares of Common Stock held by the Participant that have not vested as of the date of termination of Continuous Service under the terms of the Restricted Stock Award Document.

(iv) Transferability. Common Stock issued pursuant to an Award, and rights to acquire shares of Common Stock under the Restricted Stock Award Document, will be transferable by the Participant only upon such terms and conditions as are set forth in the Restricted Stock Award Document, as the Board determines in its sole discretion, so long as such Common Stock remains subject to the terms of the Restricted Stock Award Document.

(v) Dividends. Any dividends paid on Restricted Stock will be subject to the same vesting and forfeiture restrictions as apply to the shares subject to the Restricted Stock Award to which they relate.

(b) **Restricted Stock Unit Awards**. Each Restricted Stock Unit Award Document will be in such form and will contain such terms and conditions as the Board deems appropriate. The terms and conditions of Restricted Stock Unit Award Documents may change from time to time, and the terms and conditions of separate Restricted Stock Unit Award Documents need not be identical. Each Restricted Stock Unit Award Document will conform to (through incorporation of the provisions hereof by reference in the Agreement or otherwise) the substance of each of the following provisions:

(i) Consideration. At the time of grant of a Restricted Stock Unit Award, the Board will determine the consideration, if any, to be paid by the Participant upon delivery of each share of Common Stock subject to the Restricted Stock Unit Award. The consideration to be paid (if any) by the Participant for each share of Common Stock subject to a Restricted Stock Unit Award may be paid in any form of legal consideration that may be acceptable to the Board, in its sole discretion, and permissible under applicable law.

(ii) Vesting. At the time of the grant of a Restricted Stock Unit Award, the Board may impose such restrictions on or conditions to the vesting of the Restricted Stock Unit Award as it, in its sole discretion, deems appropriate.

(iii) Payment. A Restricted Stock Unit Award may be settled by the delivery of shares of Common Stock, their cash equivalent, any combination thereof or in any other form of consideration, as determined by the Board and contained in the Restricted Stock Unit Award Document.

(iv) Additional Restrictions. At the time of the grant of a Restricted Stock Unit Award, the Board, as it deems appropriate, may impose such restrictions or conditions that delay the delivery of the shares of Common Stock (or their cash equivalent) subject to a Restricted Stock Unit Award to a time after the vesting of such Restricted Stock Unit Award.

(v) Dividend Equivalents. Dividend equivalents may be credited in respect of shares of Common Stock covered by a Restricted Stock Unit Award, as determined by the Board and contained in the Restricted Stock Unit Award Document. At the sole discretion of the Board, such dividend equivalents may be converted into additional shares of Common Stock covered by the Restricted Stock Unit Award in such manner as determined by the Board. Any dividend equivalents and/or additional shares covered by the Restricted Stock Unit Award credited by reason of such dividend equivalents will be subject to all of the same terms and conditions of the underlying Restricted Stock Unit Award Document to which they relate.

(vi) Termination of Participant's Continuous Service. Except as otherwise provided in the applicable Restricted Stock Unit Award Document, or other agreement between the Participant and the Company, such portion of the Restricted Stock Unit Award that has not vested will be forfeited upon the Participant's termination of Continuous Service.

(c) **Performance Awards**.

(i) Performance Stock Awards. A Performance Stock Award is a Stock Award that is payable (including that may be granted, vest or exercised) contingent upon the attainment during a Performance Period of the achievement of certain performance goals. A Performance Stock Award may, but need not, require the

completion of a specified period of Continuous Service. The length of any Performance Period, the performance goals to be achieved during the Performance Period, and the measure of whether and to what degree such performance goals have been attained will be conclusively determined by the Committee, the Board, or an authorized Officer, in its sole discretion. In addition, to the extent permitted by applicable law and the applicable Award Document, the Board may determine that cash may be used in payment of Performance Stock Awards.

(ii) Board Discretion. The Committee, the Board, or an authorized Officer, as the case may be, retains the discretion to reduce or eliminate the compensation or economic benefit due upon attainment of performance goals and to define the manner of calculating the performance criteria it selects to use for a Performance Period.

7. COVENANTS OF THE COMPANY.

(a) **Availability of Shares**. The Company will keep available at all times the number of shares of Common Stock reasonably required to satisfy then-outstanding Stock Awards.

(b) **Securities Law Compliance**. The Company will seek to obtain from each regulatory commission or agency having jurisdiction over this Plan such authority as may be required to grant Stock Awards and to issue and sell shares of Common Stock upon exercise of the Stock Awards; provided, however, that this undertaking will not require the Company to register under the Securities Act this Plan, any Stock Award or any Common Stock issued or issuable pursuant to any such Stock Award. If, after reasonable efforts and at a reasonable cost, the Company is unable to obtain from any such regulatory commission or agency the authority that counsel for the Company deems necessary for the lawful issuance and sale of Common Stock under this Plan, the Company will be relieved from any liability for failure to issue and sell Common Stock upon exercise of such Stock Awards unless and until such authority is obtained. A Participant will not be eligible for the grant of an Award or the subsequent issuance of cash or Common Stock pursuant to the Award if such grant or issuance would be in violation of any applicable securities law.

(c) **No Obligation to Notify or Minimize Taxes**. The Company will have no duty or obligation to any Participant to advise such holder as to the time or manner of exercising such Stock Award. Furthermore, the Company will have no duty or obligation to warn or otherwise advise such holder of a pending termination or expiration of an Award or a possible period in which the Award may not be exercised. The Company has no duty or obligation to, and does not undertake to, provide tax advice or to minimize the tax consequences of an Award to the holder of such Award.

8. MISCELLANEOUS.

(a) **Use of Proceeds from Sales of Common Stock**. Proceeds from the sale of shares of Common Stock pursuant to Stock Awards will constitute general funds of the Company.

(b) **Corporate Action Constituting Grant of Awards**. Corporate action constituting a grant by the Company of an Award to any Participant will be deemed completed as of the latest date that all necessary corporate action has occurred and all material terms of the Award (including, in the case of stock options, the exercise price thereof) are fixed, unless otherwise determined by the Board, regardless of when the documentation evidencing the Award is communicated to, or actually received or accepted by, the Participant. In the event that the corporate records (e.g., Board consents, resolutions or minutes) documenting the corporate action constituting the grant contain terms (e.g., exercise price, vesting schedule or number of shares) that are inconsistent with those in the Award Document as a result of a clerical error in the papering of the Award Document, the corporate records will control and the Participant will have no legally binding right to the incorrect term in the Award Document.

(c) **Stockholder Rights**. No Participant will be deemed to be the holder of, or to have any of the rights of a holder with respect to, any shares of Common Stock subject to a Stock Award unless and until (i) such Participant has satisfied all requirements for exercise of, or the issuance of shares of Common Stock under, the Stock Award pursuant to its terms, and (ii) the issuance of the Common Stock subject to such Stock Award has been entered into the books and records of the Company.

(d) **No Employment or Other Service Rights**. Nothing in this Plan, any Award Document or any other instrument executed thereunder or in connection with any Award granted pursuant thereto will confer upon any Participant any right to continue to serve the Company or an Affiliate in the capacity in effect at the time the Award

was granted or any other capacity or will affect the right of the Company or an Affiliate to terminate the Participant's employment or other service with or without notice and with or without cause, including, but not limited to, Cause.

(e) **Change in Time Commitment**. In the event a Participant's regular level of time commitment in the performance of his or her services for the Company and any Affiliates is reduced (for example, and without limitation, if the Participant is an Employee of the Company and the Employee has a change in status from a full-time Employee to a part-time Employee or takes an extended leave of absence), or the Participant's role or primary responsibilities are changed to a level that, in the Board's determination does not justify the Participant's unvested Awards, and such reduction or change occurs after the date of grant of any Award to the Participant, the Board has the right in its sole discretion to (i) make a corresponding reduction in the number of shares or cash amount subject to any portion of such Award that is scheduled to vest or become payable after the date of such change in time commitment, and (ii) in lieu of or in combination with such a reduction, extend the vesting or payment schedule applicable to such Award. In the event of any such reduction, the Participant will have no right with respect to any portion of the Award that is so reduced or extended.

(f) **Investment Assurances**. The Company may require a Participant, as a condition of exercising or acquiring Common Stock under any Stock Award, (i) to give written assurances satisfactory to the Company as to the Participant's knowledge and experience in financial and business matters and/or to employ a purchaser representative reasonably satisfactory to the Company who is knowledgeable and experienced in financial and business matters and that he or she is capable of evaluating, alone or together with the purchaser representative, the merits and risks of exercising the Stock Award, and (ii) to give written assurances satisfactory to the Company stating that the Participant is acquiring Common Stock subject to the Stock Award for the Participant's own account and not with any present intention of selling or otherwise distributing the Common Stock. The foregoing requirements, and any assurances given pursuant to such requirements, will be inoperative if (i) the issuance of the shares upon the exercise of a Stock Award or acquisition of Common Stock under the Stock Award has been registered under a then currently effective registration statement under the Securities Act, or (ii) as to any particular requirement, a determination is made by counsel for the Company that such requirement need not be met in the circumstances under the then applicable securities laws. The Company may, upon advice of counsel to the Company, place legends on stock certificates issued under this Plan as such counsel deems necessary or appropriate in order to comply with applicable securities laws, including, but not limited to, legends restricting the transfer of the Common Stock.

(g) **Withholding Obligations**. Unless prohibited or restricted by the terms of an Award Document, the Company may, in its sole discretion, satisfy any national, state, local or other tax withholding obligation relating to an Award by any of the following means or by a combination of such means: (i) causing the Participant to tender a cash payment; (ii) withholding shares of Common Stock from the shares of Common Stock issued or otherwise issuable to the Participant in connection with the Award (only up to the amount permitted that will not cause an adverse accounting consequence or cost); (iii) withholding cash from an Award settled in cash; (iv) withholding payment from any amounts otherwise payable to the Participant, including proceeds from the sale of shares of Common Stock issued pursuant to a Stock Award; or (v) by such other method as may be set forth in the Award Document.

(h) **Electronic Delivery or Notice**. Any reference herein to a "written" agreement, document, or notice will include any agreement, document, or notice delivered electronically (including via the website of a designated broker), filed publicly at www.sec.gov (or any successor website thereto), or posted on the Company's intranet (or other shared electronic medium controlled by the Company to which the Participant has access).

(i) **Deferrals**. To the extent permitted by applicable law, the Board, in its sole discretion, may determine that the delivery of Common Stock or the payment of cash, upon the exercise, vesting or settlement of all or a portion of any Award may be deferred and may establish programs and procedures for deferral elections to be made by Participants. Deferrals by Participants will be made in accordance with Section 409A of the Code (to the extent applicable to a Participant). Consistent with Section 409A of the Code, the Board may provide for distributions while a Participant is still an employee or otherwise providing services to the Company. The Board is authorized to make deferrals of Awards and determine when, and in what annual percentages, Participants may receive payments, including lump sum payments, following the Participant's termination of Continuous Service, and implement such other terms and conditions consistent with the provisions of this Plan and in accordance with applicable law.

(j) **Compliance with Section 409A**. Unless otherwise expressly provided for in an Award Document, or other agreement between the Participant and the Company, this Plan and Award Documents will be interpreted to the greatest extent possible in a manner that makes this Plan and the Awards granted hereunder exempt from Section 409A of the Code, to the extent that Section 409A of the Code is applicable to an Award, and, to the extent not so exempt, in compliance with Section 409A of the Code. If the Board determines that any Award granted hereunder is subject to Section 409A of the Code, the Award Document evidencing such Award will incorporate the terms and conditions necessary to avoid the consequences specified in Section 409A(a)(1) of the Code, and to the extent an Award Document is silent on terms necessary for compliance, such terms are hereby incorporated by reference into the Award Document. Notwithstanding anything to the contrary in this Plan (and unless the Award Document specifically provides otherwise), if the shares of Common Stock are publicly traded, and if a Participant holding an Award that constitutes "deferred compensation" under Section 409A of the Code is a "specified employee" for purposes of Section 409A of the Code and the Participant is otherwise subject to Section 409A of the Code, no distribution or payment of any amount that is due because of a "separation from service" (as defined in Section 409A of the Code without regard to alternative definitions thereunder) will be issued or paid before the date that is six (6) months following the date of such Participant's "separation from service" or, if earlier, the date of the Participant's death, unless such distribution or payment can be made in a manner that complies with Section 409A of the Code, and any amounts so deferred will be paid in a lump sum on the day after such six (6) month period elapses, with the balance paid thereafter on the original schedule.

(k) **Clawback/Recovery**. All Awards granted under this Plan will be subject to recoupment in accordance with any clawback policy that the Company is required to adopt pursuant to the listing standards of any national securities exchange or association on which the Company's securities are listed or as is otherwise required by the Dodd-Frank Wall Street Reform and Consumer Protection Act or other applicable law. In addition, the Board may impose such other clawback, recovery or recoupment provisions in an Award Document as the Board determines necessary or appropriate, including, but not limited to, a reacquisition right in respect of previously acquired shares of Common Stock or other cash or property upon the occurrence of Cause. No recovery of compensation under such a clawback policy will be an event giving rise to a right to resign for "good reason" or "constructive termination" (or similar term) under any agreement with the Company or an Affiliate.

9. ADJUSTMENTS UPON CHANGES IN COMMON STOCK; OTHER CORPORATE EVENTS.

(a) **Capitalization Adjustments**. In the event of a Capitalization Adjustment, the Board will appropriately and proportionately adjust: (i) the class(es) and maximum number of securities subject to this Plan pursuant to Section 3(a); and (ii) the class(es) and number of securities or other property and value (including price per share of stock) subject to outstanding Stock Awards. The Board will make such adjustments, and its determination will be final, binding and conclusive.

(b) **Dissolution or Liquidation**. Except as otherwise provided in the Stock Award Document, or other agreement between the Participant and the Company, in the event of a dissolution or liquidation of the Company, all outstanding Stock Awards (other than Stock Awards consisting of vested and outstanding shares of Common Stock not subject to a forfeiture condition or the Company's right of repurchase) will terminate immediately prior to the completion of such dissolution or liquidation, and the shares of Common Stock subject to the Company's repurchase rights or subject to a forfeiture condition may be repurchased or reacquired by the Company notwithstanding the fact that the holder of such Stock Award is providing Continuous Service; provided, however, that the Board may, in its sole discretion, cause some or all Stock Awards to become fully vested, exercisable and/or no longer subject to repurchase or forfeiture (to the extent such Stock Awards have not previously expired or terminated) before the dissolution or liquidation is completed but contingent on its completion.

(c) **Change in Control**. The following provisions will apply to Awards in the event of a Change in Control unless otherwise provided in the instrument evidencing the Award or any other written agreement between the Company or any Affiliate and the Participant or unless otherwise expressly provided by the Board at the time of grant of an Award. In the event of a Change in Control, then, notwithstanding any other provision of this Plan, the Board will take one or more of the following actions with respect to each outstanding Award, contingent upon the closing or completion of the Change in Control:

(i) arrange for the surviving corporation or acquiring corporation (or the surviving or acquiring corporation's parent company) to assume or continue the Award or to substitute a similar award for the Award

(including, but not limited to, an award to acquire the same consideration per share paid to the stockholders of the Company pursuant to the Change in Control);

(ii) arrange for the assignment of any reacquisition or repurchase rights held by the Company in respect of Common Stock issued pursuant to the Award to the surviving corporation or acquiring corporation (or the surviving or acquiring corporation's parent company);

(iii) accelerate the vesting, in whole or in part, of the Award (and, if applicable, the time at which the Award may be exercised) to a date prior to the effective time of such Change in Control as the Board will determine (or, if the Board will not determine such a date, to the date that is 5 days prior to the effective date of the Change in Control), with such Award terminating if not exercised (if applicable) at or prior to the effective time of the Change in Control, and with such exercise reversed if the Change in Control does not become effective;

(iv) arrange for the lapse, in whole or in part, of any reacquisition or repurchase rights held by the Company with respect to the Award;

(v) cancel or arrange for the cancellation of the Award, to the extent not vested or not exercised prior to the effective time of the Change in Control, in exchange for such cash consideration, if any, as the Board, in its reasonable determination, may consider appropriate as an approximation of the value of the canceled Award, taking into account the value of the Common Stock subject to the canceled Award, the possibility that the Award might not otherwise vest in full, and such other factors as the Board deems relevant; and

(vi) cancel or arrange for the cancellation of the Award, to the extent not vested or not exercised prior to the effective time of the Change in Control, in exchange for a payment, in such form as may be determined by the Board equal to the excess, if any, of (A) the value in the Change in Control of the property the Participant would have received upon the exercise of the Award immediately prior to the effective time of the Change in Control, over (B) any exercise price payable by such holder in connection with such exercise.

The Board need not take the same action or actions with respect to all Awards or portions thereof or with respect to all Participants. The Board may take different actions with respect to the vested and unvested portions of an Award.

In the absence of any affirmative determination by the Board at the time of a Change in Control, each outstanding Award will be assumed or an equivalent Award will be substituted by such successor corporation or a parent or subsidiary of such successor corporation (the "**Successor Corporation**"), unless the Successor Corporation does not agree to assume the Award or to substitute an equivalent Award, in which case the vesting of such Award will accelerate in its entirety (along with, if applicable, the time at which the Award may be exercised) to a date prior to the effective time of such Change in Control as the Board will determine (or, if the Board will not determine such a date, to the date that is 5 days prior to the effective date of the Change in Control), with such Award terminating if not exercised (if applicable) at or prior to the effective time of the Change in Control, and with such exercise reversed if the Change in Control does not become effective.

(d) **Acceleration of Awards upon a Change in Control**. An Award may be subject to additional acceleration of vesting and exercisability upon or after a Change in Control as may be provided in the Award Document for such Award or as may be provided in any other written agreement between the Company or any Affiliate and the Participant, but in the absence of such provision, no such acceleration will occur.

10. TERMINATION OR SUSPENSION OF THIS PLAN.

The Board or the Compensation Committee may suspend or terminate this Plan at any time. This Plan will have no fixed expiration date. No Awards may be granted under this Plan while this Plan is suspended or after it is terminated.

11. EFFECTIVE DATE OF PLAN.

The 89bio, Inc. 2023 Inducement Plan originally came into existence on the Effective Date and this Plan, as most recently amended and restated, became effective as of September 23, 2024.

12. CHOICE OF LAW.

The laws of the State of Delaware will govern all questions concerning the construction, validity and interpretation of this Plan, without regard to that state's conflict of laws rules.

13. DEFINITIONS.

As used in this Plan, the following definitions will apply to the capitalized terms indicated below:

(a) "**Affiliate**" means, at the time of determination, any "parent" or "subsidiary" of the Company, as such terms are defined in Rule 405 of the Securities Act. The Board will have the authority to determine the time or times at which "parent" or "subsidiary" status is determined within the foregoing definition.

(b) "**Award**" means a Stock Award.

(c) "**Award Document**" means a written agreement between the Company and a Participant, or a written notice issued by the Company to a Participant, evidencing the terms and conditions of an Award.

(d) "**Board**" means the Board of Directors of the Company.

(e) "**Capitalization Adjustment**" means any change that is made in, or other events that occur with respect to, the Common Stock subject to this Plan or subject to any Stock Award after the Effective Date without the receipt of consideration by the Company through merger, consolidation, reorganization, recapitalization, reincorporation, stock dividend, dividend in property other than cash, large nonrecurring cash dividend, stock split, reverse stock split, liquidating dividend, combination of shares, exchange of shares, change in corporate structure or other similar equity restructuring transaction, as that term is used in Financial Accounting Standards Board Accounting Standards Codification Topic 718 (or any successor thereto). Notwithstanding the foregoing, the conversion of any convertible securities of the Company will not be treated as a Capitalization Adjustment.

(f) "**Cause**" will have the meaning ascribed to such term in any written agreement between the Participant and the Company or any Affiliate defining such term and, in the absence of such agreement, such term means, with respect to a Participant, the occurrence of any of the following events: (i) Participant's failure substantially to perform his or her duties and responsibilities to the Company or any Affiliate or violation of a policy of the Company or any Affiliate; (ii) Participant's commission of any act of fraud, embezzlement, dishonesty or any other misconduct that has caused or is reasonably expected to result in injury to the Company or any Affiliate; (iii) unauthorized use or disclosure by Participant of any proprietary information or trade secrets of the Company or any other party to whom the Participant owes an obligation of nondisclosure as a result of his or her relationship with the Company or any Affiliate; or (iv) Participant's breach of any of his or her obligations under any written agreement or covenant with the Company or any Affiliate. The determination as to whether a Participant is being terminated for Cause will be made in good faith by the Company and will be final and binding on the Participant. Any determination by the Company that the Continuous Service of a Participant was terminated with or without Cause for the purposes of outstanding Awards held by such Participant will have no effect upon any determination of the rights or obligations of the Company, any Affiliate or such Participant for any other purpose.

(g) "**Change in Control**" means the occurrence, in a single transaction or in a series of related transactions, of any one or more of the following events:

(i) any Exchange Act Person becomes the Owner, directly or indirectly, of securities of the Company representing more than 50% of the combined voting power of the Company's then outstanding securities other than by virtue of a merger, consolidation or similar transaction. Notwithstanding the foregoing, a Change in Control will not be deemed to occur (A) on account of the acquisition of securities of the Company directly from the Company, (B) on account of the acquisition of securities of the Company by an investor, any affiliate thereof or any other Exchange Act Person that acquires the Company's securities in a transaction or series of related transactions the primary purpose of which is to obtain financing for the Company through the issuance of equity securities or (C) solely because the level of Ownership held by any Exchange Act Person (the "**Subject Person**") exceeds the designated percentage threshold of the outstanding voting securities as a result of a repurchase or other acquisition of voting securities by the Company reducing the number of shares outstanding, provided that if a Change in Control would occur (but for the operation of this sentence) as a result of the acquisition of voting securities by the

Company, and after such share acquisition, the Subject Person becomes the Owner of any additional voting securities that, assuming the repurchase or other acquisition had not occurred, increases the percentage of the then outstanding voting securities Owned by the Subject Person over the designated percentage threshold, then a Change in Control will be deemed to occur;

(ii) there is consummated a merger, consolidation or similar transaction involving (directly or indirectly) the Company and, immediately after the consummation of such merger, consolidation or similar transaction, the stockholders of the Company immediately prior thereto do not Own, directly or indirectly, either (A) outstanding voting securities representing 50% or more of the combined outstanding voting power of the surviving Entity in such merger, consolidation or similar transaction or (B) 50% or more of the combined outstanding voting power of the parent of the surviving Entity in such merger, consolidation or similar transaction, in each case in substantially the same proportions as their Ownership of the outstanding voting securities of the Company immediately prior to such transaction;

(iii) there is consummated a sale, lease, license or other disposition of all or substantially all of the consolidated assets of the Company and its Subsidiaries, other than a sale, lease, license or other disposition of all or substantially all of the consolidated assets of the Company and its Subsidiaries to an Entity, more than 50% of the combined voting power of the voting securities of which are Owned by stockholders of the Company in substantially the same proportions as their Ownership of the outstanding voting securities of the Company immediately prior to such sale, lease, license or other disposition; or

(iv) individuals who, on the Effective Date, are members of the Board (the "**Incumbent Board**") cease for any reason to constitute at least a majority of the members of the Board; provided, however, that if the appointment or election (or nomination for election) of any new Board member was approved or recommended by a majority vote of the members of the Incumbent Board then still in office, such new member will, for purposes of this Plan, be considered as a member of the Incumbent Board.

Notwithstanding the foregoing definition or any other provision of this Plan, (A) the term Change in Control will not include a sale of assets, merger or other transaction effected exclusively for the purpose of changing the domicile of the Company, and (B) the definition of Change in Control (or any analogous term) in an individual written agreement between the Company or any Affiliate and the Participant will supersede the foregoing definition with respect to Awards subject to such agreement; provided, however, that if no definition of Change in Control or any analogous term is set forth in such an individual written agreement, the foregoing definition will apply.

If required for compliance with Section 409A of the Code, in no event will a Change in Control be deemed to have occurred if such transaction is not also a "change in the ownership or effective control of" the Company or "a change in the ownership of a substantial portion of the assets of" the Company as determined under U.S. Treasury Regulation Section 1.409A-3(i)(5) (without regard to any alternative definition thereunder). The Board may, in its sole discretion and without a Participant's consent, amend the definition of "Change in Control" to conform to the definition of "Change in Control" under Section 409A of the Code, and the regulations thereunder.

(h) "**Code**" means the U.S. Internal Revenue Code of 1986, as amended, including any applicable regulations and guidance thereunder.

(i) "**Committee**" means a committee of one (1) or more Directors to whom authority has been delegated by the Board in accordance with Section 2(c).

(j) "**Compensation Committee**" means the Compensation Committee of the Board.

(k) "**Common Stock**" means the common stock of the Company.

(l) "**Company**" 89bio, Inc., a Delaware corporation.

(m) "**Consultant**" means any person, including an advisor, who is (i) engaged by the Company or an Affiliate to render consulting or advisory services and is compensated for such services, or (ii) serving as a member of the board of directors of an Affiliate and is compensated for such services. However, service solely as a Director, or payment of a fee for such service, will not cause a Director to be considered a "Consultant" for purposes of this Plan. Notwithstanding the foregoing, a person is treated as a Consultant under this Plan only if a Form Registration Statement on Form S-8 or a successor form under the Securities Act is available to register either the offer or the sale of the Company's securities to such person.

(n) "**Continuous Service**" means that the Participant's service with the Company or an Affiliate, whether as an Employee, Director or Consultant, is not interrupted or terminated. A change in the capacity in which the Participant renders service to the Company or an Affiliate as an Employee, Consultant or Director or a change in the Entity for which the Participant renders such service, provided that there is no interruption or termination of the Participant's service with the Company or an Affiliate, will not terminate a Participant's Continuous Service. For example, a change in status from an Employee of the Company to a Consultant of an Affiliate or to a Director will not constitute an interruption of Continuous Service. If the Entity for which a Participant is rendering services ceases to qualify as an Affiliate, as determined by the Board in its sole discretion, such Participant's Continuous Service will be considered to have terminated on the date such Entity ceases to qualify as an Affiliate. To the extent permitted by law, the Board or the chief executive officer of the Company, in that party's sole discretion, may determine whether Continuous Service will be considered interrupted in the case of (i) any leave of absence approved by the Board or chief executive officer, including sick leave, military leave or any other personal leave, or (ii) transfers between the Company, an Affiliate, or their successors. In addition, if required for exemption from or compliance with Section 409A of the Code, the determination of whether there has been a termination of Continuous Service will be made, and such term will be construed, in a manner that is consistent with the definition of "separation from service" as defined under U.S. Treasury Regulation Section 1.409A-1(h) (without regard to any alternative definition thereunder). A leave of absence will be treated as Continuous Service for purposes of vesting in a Stock Award only to such extent as may be provided in the applicable Award Document, the Company's leave of absence policy, in the written terms of any leave of absence agreement or policy applicable to the Participant, or as otherwise required by law.

(o) "**Director**" means a member of the Board.

(p) "**Disability**" means, with respect to a Participant, the inability of such Participant to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment that can be expected to result in death or that has lasted or can be expected to last for a continuous period of not less than 12 months as provided in Sections 22(e)(3) and 409A(a)(2)(C)(i) of the Code, and will be determined by the Board on the basis of such medical evidence as the Board deems warranted under the circumstances.

(q) "**Effective Date**" means February 9, 2023.

(r) "**Employee**" means any person providing services as an employee of the Company or an Affiliate. For avoidance of doubt, service solely as a Director or Consultant, or payment of a fee for such services, will not cause a Director or Consultant to be considered an "Employee" for purposes of this Plan. Notwithstanding the foregoing, a person who already is serving as a Director prior to becoming an Employee will not be eligible to be granted an Award under the Plan unless permitted under the Listing Rule.

(s) "**Entity**" means a corporation, partnership, limited liability company or other entity.

(t) "**Exchange Act**" means the U.S. Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

(u) "**Exchange Act Person**" means any natural person, Entity or "group" (within the meaning of Section 13(d) or 14(d) of the Exchange Act), except that "Exchange Act Person" will not include (i) the Company or any Affiliate of the Company, (ii) any employee benefit plan of the Company or any Affiliate of the Company or any trustee or other fiduciary holding securities under an employee benefit plan of the Company or any Affiliate of the Company, (iii) an underwriter temporarily holding securities pursuant to a registered public offering of such securities, (iv) an Entity Owned, directly or indirectly, by the stockholders of the Company in substantially the same proportions as their Ownership of stock of the Company, or (v) any natural person, Entity or "group" (within the meaning of Section 13(d) or 14(d) of the Exchange Act) that, as of the Effective Date, is the Owner, directly or indirectly, of securities of the Company representing more than 50% of the combined voting power of the Company's then outstanding securities.

(v) "**Fair Market Value**" means, as of any date, the value of the Common Stock determined as follows:

(i) If the Common Stock is listed on any established stock exchange or traded on any established market, the Fair Market Value of a share of Common Stock as of any date of determination will be, unless otherwise determined by the Board, the closing sales price for such stock as quoted on such exchange or market (or the exchange or market with the greatest volume of trading in the Common Stock) on the date of determination, as reported in a source the Board deems reliable.

(ii) Unless otherwise provided by the Board, if there is no closing sales price for the Common Stock on the date of determination, then the Fair Market Value will be the closing selling price on the last preceding date for which such quotation exists.

(iii) In the absence of such markets for the Common Stock, the Fair Market Value will be determined by the Board in good faith and in a manner that complies with Sections 409A and 422 of the Code.

(w) "**Listing Rule**" means Rule 5635(c)(4) of the Nasdaq Listing Rules.

(x) "**New Employee**" means an Employee who commenced employment with the Company or any of its Affiliates on terms and conditions consistent with the Listing Rule.

(y) "**Non-Employee Director**" means a Director who either (i) is not a current employee or officer of the Company or an Affiliate, does not receive compensation, either directly or indirectly, from the Company or an Affiliate for services rendered as a consultant or in any capacity other than as a Director (except for an amount as to which disclosure would not be required under Item 404(a) of Regulation S-K promulgated pursuant to the Securities Act ("**Regulation S-K**")), does not possess an interest in any other transaction for which disclosure would be required under Item 404(a) of Regulation S-K, and is not engaged in a business relationship for which disclosure would be required pursuant to Item 404(b) of Regulation S-K; or (ii) is otherwise considered a "non-employee director" for purposes of Rule 16b-3 of the Exchange Act.

(z) "**Nonstatutory Stock Option**" means any option granted pursuant to Section 5 of this Plan that is not intended to be, and that does not qualify as, an "incentive stock option" within the meaning of Section 422 of the Code.

(aa) "**Officer**" means a person who is an officer of the Company within the meaning of Section 16 of the Exchange Act.

(bb) "**Option**" means a Nonstatutory Stock Option to purchase shares of Common Stock granted pursuant to this Plan.

(cc) "**Option Agreement**" means an Award Document evidencing the terms and conditions of an Option grant. Each Option Agreement will be subject to the terms and conditions of this Plan.

(dd) "**Optionholder**" means a person to whom an Option is granted pursuant to this Plan or, if applicable, such other person who holds an outstanding Option.

(ee) "**Own**," "**Owned**," "**Owner**," "**Ownership**" means a person or Entity will be deemed to "Own," to have "Owned," to be the "Owner" of, or to have acquired "Ownership" of securities if such person or Entity, directly or indirectly, through any contract, arrangement, understanding, relationship or otherwise, has or shares voting power, which includes the power to vote or to direct the voting, with respect to such securities.

(ff) "**Participant**" means a person to whom an Award is granted pursuant to this Plan or, if applicable, such other person who holds an outstanding Stock Award.

(gg) "**Performance Period**" means the period of time selected by the Board over which the attainment of one or more performance goals will be measured for the purpose of determining a Participant's right to and the payment of a Stock Award. Performance Periods may be of varying and overlapping duration, at the sole discretion of the Board.

(hh) "**Performance Stock Award**" means a Stock Award granted under the terms and conditions of Section 6(c)(i).

(ii) "**Plan**" means this Amended and Restated 2023 Inducement Plan of 89bio, Inc., as may be further amended and restated from time to time.

(jj) "**Restricted Stock Award**" means an award of shares of Common Stock which is granted pursuant to the terms and conditions of Section 6(a).

(kk) "**Restricted Stock Award Document**" means an Award Document evidencing the terms and conditions of a Restricted Stock Award grant. Each Restricted Stock Award Document will be subject to the terms and conditions of this Plan.

(ll) "**Restricted Stock Unit Award**" means a right to receive shares of Common Stock which is granted pursuant to the terms and conditions of Section 6(b).

(mm) "**Restricted Stock Unit Award Document**" means an Award Document evidencing the terms and conditions of a Restricted Stock Unit Award grant. Each Restricted Stock Unit Award Document will be subject to the terms and conditions of this Plan.

(nn) "**Securities Act**" means the U.S. Securities Act of 1933, as amended.

(oo) "**Stock Appreciation Right**" or "**SAR**" means a right to receive the appreciation on Common Stock that is granted pursuant to the terms and conditions of Section 5.

(pp) "**Stock Appreciation Right Award Document**" means an Award Document evidencing the terms and conditions of a Stock Appreciation Right grant. Each Stock Appreciation Right Award Document will be subject to the terms and conditions of this Plan.

(qq) "**Stock Award**" means any right to receive Common Stock granted under this Plan, including a Nonstatutory Stock Option, a Restricted Stock Award, a Restricted Stock Unit Award, a Stock Appreciation Right, or a Performance Stock Award.

(rr) "**Stock Award Document**" means an Award Document evidencing the terms and conditions of a Stock Award grant. Each Stock Award Document will be subject to the terms and conditions of this Plan.

END OF DOCUMENT

Exhibit 31.1

CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Rohan Palekar, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of 89bio, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 7, 2024

By: /s/ Rohan Palekar

Rohan Palekar
Chief Executive Officer
(principal executive officer)

Exhibit 31.2

CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Ryan Martins, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of 89bio, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 7, 2024

By: /s/ Ryan Martins

Ryan Martins
Chief Financial Officer
(principal financial and accounting officer)

Exhibit 32

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-Q of 89bio, Inc. (the "Company") for the period ended September 30, 2024, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned officers of the Company hereby certifies, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that to the best of his knowledge:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 7, 2024

By: /s/ Rohan Palekar

Rohan Palekar
Chief Executive Officer
(principal executive officer)

Date: November 7, 2024

By: /s/ Ryan Martins

Ryan Martins
Chief Financial Officer
(principal financial and accounting officer)

The foregoing certification is being furnished solely to accompany the Report pursuant to 18 U.S.C. §1350, and is not being filed for purposes of Section 18 of the Securities Exchange Act of 1934, and is not to be incorporated by reference into any filing of the Company, whether made before or after the date hereof, regardless of any general incorporation language in such filing.

Note: A signed original of this written statement required by §906 has been provided to 89bio, Inc. and will be retained by 89bio, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.