UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 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 March 31, 2023

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: 001-39397

INOZYME PHARMA, INC.
(Exact name of registrant as specified in its charter)

Delaware	**38-4024528**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
321 Summer Street, Suite 400 Boston, Massachusetts	**02210**
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code: (857) 330-4340

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 $0.0001 per share	INZY	Nasdaq Global Select 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 May 3, 2023, the registrant had 44,035,322 shares of common stock, $0.0001 par value per share, outstanding.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q contains forward-looking statements, which reflect our current views with respect to, among other things, our operations and financial performance. All statements, other than statements of historical fact, contained in this Quarterly Report on Form 10-Q, including statements regarding our strategy, future operations, future financial position, future revenue, projected costs, prospects, plans, objectives of management and expected market growth, are forward-looking statements. The words "anticipate," "believe," "continue," "could," "estimate," "expect," "intend," "may," "might," "outlook," "plan," "potential," "predict," "project," "should," "target," "will," "would," and the negative version of these words and other similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Such forward-looking statements are subject to various risks and uncertainties. Accordingly, there are or will be important factors that could cause actual outcomes or results to differ materially from those indicated in these statements. We believe these factors include but are not limited to those described in the "Risk Factors" section in our most recent Annual Report on Form 10-K and in this Quarterly Report on Form 10-Q and include, among other things:

- our ongoing Phase 1/2 clinical trials of INZ-701 for adults with ENPP1 and ABCC6 Deficiencies, including statements regarding the timing of enrollment and completion of the clinical trials and the period during which the results of the clinical trials will become available;
- the timing and conduct of our planned clinical trials of INZ-701 for patients with ENPP1 and ABCC6 Deficiencies;
- our plans to conduct research, preclinical testing and clinical testing of INZ-701 for additional indications;
- our plans to conduct research, preclinical testing and clinical testing of other product candidates;
- our plans to engage in regulatory meetings with the FDA and other regulatory authorities;
- the timing of, and our ability to obtain and maintain, marketing approvals of INZ-701, and the ability of INZ-701 and our other product candidates to meet existing or future regulatory standards;
- our expectations regarding our ability to fund our cash flow requirements with our cash, cash equivalents and short-term investments;
- the potential advantages of our product candidates;
- the rate and degree of market acceptance and clinical utility of our product candidates;
- our estimates regarding the potential market opportunity for our product candidates;
- our commercialization and manufacturing capabilities and strategy;
- our intellectual property position;
- our ability to identify additional products, product candidates or technologies with significant commercial potential that are consistent with our commercial objectives;
- our estimates regarding expenses, future revenue, capital requirements and needs for additional financing;
- our ability to comply with the covenants under our loan agreement;
- the impact of government laws and regulations;
- our competitive position; and
- our expectations regarding the time during which we will be an emerging growth company under the Jumpstart our Business Startups Act of 2012.

We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements we make. We have included important factors in the cautionary statements included in our most recent Annual Report on Form 10-K and in this Quarterly Report on Form 10-Q, particularly in the "Risk Factors" section, that we believe could cause actual results or events to differ materially from the forward-looking statements that we make. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, collaborations, joint ventures or investments we may make or enter into.

You should read this Quarterly Report on Form 10-Q and the documents that we have filed as exhibits to this Quarterly Report on Form 10-Q completely and with the understanding that our actual future results may be materially different from what we expect. The forward-looking statements contained in this Quarterly Report on Form 10-Q are made as of the date of this Quarterly Report on Form 10-Q, and we do not assume any obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by applicable law.

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PART I—FINANCIAL INFORMATION

Item 1. Financial Statements (Unaudited)

INOZYME PHARMA, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS
(amounts in thousands, except share and per share data)

	March 31, 2023	December 31, 2022
Assets		
Current assets:		
Cash and cash equivalents	$ 49,024	$ 32,915
Short-term investments	81,906	94,951
Prepaid expenses and other current assets	3,218	3,527
Total current assets	134,148	131,393
Property and equipment, net	1,981	2,018
Restricted cash	354	354
Right-of-use assets	1,503	1,620
Prepaid expenses, net of current portion	3,810	3,810
Total assets	$ 141,796	$ 139,195
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$ 1,815	$ 2,544
Accrued expenses	9,927	11,355
Operating lease liabilities	839	816
Total current liabilities	12,581	14,715
Operating lease liabilities, net of current portion	1,603	1,823
Long-term debt, net	24,219	4,139
Other long-term liabilities	46	124
Total liabilities	38,449	20,801
Commitments and contingencies (Note 7)		
Stockholders' equity:		
Preferred Stock, $0.0001 par value – 5,000,000 shares authorized at March 31, 2023 and December 31, 2022; no shares issued and outstanding at March 31, 2023 or December 31, 2022	—	—
Common Stock, $0.0001 par value – 200,000,000 shares authorized at March 31, 2023 and December 31, 2022; 43,765,485 shares issued and outstanding at March 31, 2023 and 40,394,363 shares issued and outstanding at December 31, 2022	4	4
Additional paid in-capital	335,544	333,356
Accumulated other comprehensive loss	(36)	(205)
Accumulated deficit	(232,165)	(214,761)
Total stockholders' equity	103,347	118,394
Total liabilities and stockholders' equity	$ 141,796	$ 139,195

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

INOZYME PHARMA, INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(amounts in thousands, except share and per share data)

	Three Months Ended March 31,	
	2023	**2022**
Operating expenses:		
Research and development	$ 11,857	$ 11,814
General and administrative	6,512	5,025
Total operating expenses	18,369	16,839
Loss from operations	(18,369)	(16,839)
Other income (expense):		
Interest income, net	999	60
Other expense, net	(34)	(105)
Other income (expense), net	965	(45)
Net loss	$ (17,404)	$ (16,884)
Other comprehensive income (loss):		
Unrealized gains (losses) on available-for-sale securities	150	(132)
Foreign currency translation adjustment	19	(15)
Total other comprehensive income (loss)	169	(147)
Comprehensive loss	$ (17,235)	$ (17,031)
Net loss attributable to common stockholders—basic and diluted	$ (17,404)	$ (16,884)
Net loss per share attributable to common stockholders—basic and diluted	$ (0.40)	$ (0.71)
Weighted-average common shares and pre-funded warrants outstanding—basic and diluted	43,720,578	23,686,351

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

INOZYME PHARMA, INC.
CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(amounts in thousands, except share data)
(Unaudited)

	Common Stock		Additional Paid-in	Accumulated Other Comprehensive	Accumulated	Total Stockholders'
	Shares	Amount	Capital	(Loss) Income	Deficit	Equity
Balance at December 31, 2022	40,394,363	$ 4	$ 333,356	$ (205)	$ (214,761)	$ 118,394
Stock-based compensation	—	—	2,092	—	—	2,092
Exercise of pre-funded warrants	3,325,644	—	—	—	—	—
Shares purchased in Employee Stock Purchase Plan	45,478	—	96	—	—	96
Comprehensive loss:						—
Unrealized gain on investments	—	—	—	150	—	150
Foreign currency translation adjustment	—	—	—	19	—	19
Net loss	—	—	—	—	(17,404)	(17,404)
Balance at March 31, 2023	43,765,485	$ 4	$ 335,544	$ (36)	$ (232,165)	$ 103,347
Balance at December 31, 2021	23,668,747	$ 2	$ 256,948	$ 18	$ (147,700)	$ 109,268
Stock-based compensation	—	—	1,752	—	—	1,752
Exercise of stock options	149,664	—	240	—	—	240
Comprehensive loss:						
Unrealized loss on investments	—	—	—	(132)	—	(132)
Foreign currency translation adjustment	—	—	—	(15)	—	(15)
Net loss	—	—	—	—	(16,884)	(16,884)
Balance at March 31, 2022	23,818,411	$ 2	$ 258,940	$ (129)	$ (164,584)	$ 94,229

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

INOZYME PHARMA, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(amounts in thousands)
(Unaudited)

	Three Months Ended March 31,	
	2023	**2022**
Operating activities		
Net loss	$ (17,404)	$ (16,884)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	207	178
Stock-based compensation expense	2,092	1,752
Amortization of premiums and discounts on marketable securities	(746)	(76)
Reduction in the carrying value of right-of-use assets	117	103
Non-cash interest expense and amortization of debt issuance costs	80	—
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	309	731
Accounts payable	(729)	(194)
Accrued expenses	(1,423)	808
Operating lease liabilities	(197)	(177)
Prepaid expenses - noncurrent	—	(401)
Other long-term liabilities	(78)	—
Net cash used in operating activities	(17,772)	(14,160)
Investing activities		
Purchases of marketable securities	(46,059)	(30,421)
Maturities of marketable securities	60,000	53,000
Purchases of property and equipment	(175)	(17)
Net cash provided by investing activities	13,766	22,562
Financing activities		
Net proceeds from issuance of long-term debt	20,000	—
Proceeds from exercise of stock options	—	240
Proceeds from issuance of common stock for cash under Employee Stock Purchase Plan	96	—
Net cash provided by financing activities	20,096	240
Net increase in cash, cash equivalents and restricted cash	16,090	8,642
Effect of foreign currency exchange rate on cash	19	(15)
Cash, cash equivalents and restricted cash at beginning of period	33,269	23,670
Cash, cash equivalents and restricted cash at end of period	$ 49,378	$ 32,297
Supplemental cash flow information:		
Cash and cash equivalents	$ 49,024	$ 31,943
Restricted cash	354	354
Cash, cash equivalents and restricted cash at end of period	$ 49,378	$ 32,297
Property and equipment unpaid at end of period	$ 5	$ 12

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

1. Organization and Basis of Presentation

Inozyme Pharma, Inc. (the "Company") is a clinical-stage rare disease biopharmaceutical company developing novel therapeutics for the treatment of diseases impacting the vasculature, soft tissue, and skeleton. Through the Company's in-depth understanding of a key biological pathway, the Company is pursuing the development of therapeutics to address the underlying causes of these debilitating diseases. It is well established that two genes, ENPP1 and ABCC6, play key roles in this critical pathway and that defects in these genes lead to low levels of plasma pyrophosphate, which drives pathologic mineralization, and low levels of adenosine, which drives intimal proliferation. The Company is initially focused on developing a novel therapy to treat rare genetic diseases of ENPP1 and ABCC6 Deficiencies.

The Company's lead product candidate, INZ-701, is a soluble, recombinant, or genetically engineered, fusion protein that is designed to correct a defect in a pathway involving ENPP1 and ABCC6 Deficiencies. This pathway is central to the regulation of calcium deposition throughout the body and is further associated with the inhibition of intimal proliferation, or narrowing and obstruction of blood vessels.

Basis of Presentation

The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with United States generally accepted accounting principles ("U.S. GAAP") for interim financial information. Accordingly, these unaudited condensed consolidated financial statements do not include all of the information and note disclosures required by U.S. GAAP for audited year-end financial statements. The accompanying unaudited condensed consolidated financial statements reflect all normal recurring adjustments that are, in the opinion of management, necessary for a fair presentation of the interim period results. The results for the three-month period ended March 31, 2023 are not necessarily indicative of results to be expected for the year ending December 31, 2023, any other interim periods, or any future year or period. These unaudited condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements and notes thereto included in the Company's Annual Report on Form 10-K for the year ended December 31, 2022.

Liquidity, Capital Resources, and Going Concern

Since the Company's incorporation in 2017 and through March 31, 2023, the Company has devoted substantially all of its efforts to raising capital, building infrastructure, developing intellectual property and conducting research and development activities. The Company incurred net losses of $17.4 million in the three months ended March 31, 2023 and $67.1 million in the year ended December 31, 2022 and had an accumulated deficit of $232.2 million as of March 31, 2023. The Company had cash, cash equivalents, and short-term investments of $130.9 million as of March 31, 2023.

The Company has incurred recurring losses and negative cash flows from operations since inception and has primarily funded its operations with proceeds from the issuance of convertible preferred stock, offerings of common stock and pre-funded warrants, and its loan and security agreement (the "Loan Agreement") with K2 HealthVentures LLC (see Note 8). The Company expects its operating losses and negative operating cash flows to continue into the foreseeable future as it continues to expand its research and development efforts.

The accompanying condensed consolidated financial statements have been prepared on the basis of continuity of operations, realization of assets, and the satisfaction of liabilities and commitments in the ordinary course of business. The Company believes its available cash, cash equivalents, and short-term investments as of March 31, 2023 will be sufficient to fund its cash flow requirements for at least 12 months from the filing date of this Quarterly Report on Form 10-Q. Management's expectations with respect to its ability to fund current and long-term planned operations are based on estimates that are subject to risks and uncertainties. If actual results are different from management's estimates, the Company may need to seek additional strategic or financing opportunities sooner than would otherwise be expected. However, there is no guarantee that any of these strategic or financing opportunities will be executed on favorable terms, or at all, and some could be dilutive to existing stockholders. If the Company is unable to obtain additional funding on a timely basis, it may be forced to delay, reduce, or eliminate some or all of its research and development programs, portfolio expansion, or commercialization efforts, which could adversely affect its business.

2. Summary of Significant Accounting Policies

Principles of Consolidation

The accompanying condensed consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries, Inozyme Securities Corp., which is a Massachusetts subsidiary created to buy, sell, and hold securities; Inozyme Ireland Limited; and Inozyme Pharma Switzerland GmbH. All intercompany transactions and balances have been eliminated.

Summary of Significant Accounting Policies

The significant accounting policies and estimates used in the preparation of the accompanying condensed consolidated financial statements are described in the Company's audited consolidated financial statements for the year ended December 31, 2022 included in the Company's Annual Report on Form 10-K for the year ended December 31, 2022. There have been no material changes in the Company's significant accounting policies during the three months ended March 31, 2023.

Use of Estimates

The preparation of the Company's financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of expenses during the reporting period. Estimates and judgments are based on historical information and other market-specific or various relevant assumptions, including, in certain circumstances, future projections that management believes to be reasonable under the circumstances. Actual results could differ materially from estimates. Significant estimates and assumptions are used for, but not limited to, the accruals for research and development expenses. The Company evaluates its estimates and assumptions on an ongoing basis. All revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected.

Concentration of Credit Risk and Off-Balance Sheet Risk

Financial instruments that potentially subject the Company to significant concentrations of credit risk consist primarily of cash, cash equivalents, and short-term investments and, from time to time, long-term investments. The Company maintains deposits in federally insured financial institutions in excess of federally insured limits and limits its exposure to credit risk by placing its cash with high credit quality financial institutions. The Company's investments are comprised of U.S. Treasury securities and commercial paper of corporations. The Company mitigates credit risk by maintaining a diversified portfolio and limiting the amount of investment exposure as to institution, maturity, and investment type.

The Company has no significant off-balance sheet risk such as foreign exchange contracts, option contracts, or other foreign hedging arrangements.

3. Recent Accounting Pronouncements

From time to time, new accounting pronouncements are issued by the Financial Accounting Standards Board ("FASB") or other standard setting bodies that are adopted by the Company as of the specified effective date. Unless otherwise discussed, the Company believes that the impact of recently issued standards that are not yet effective will not have a material impact on its financial position or results of operations upon adoption.

Recently Adopted Accounting Standards

In June 2016, the FASB issued Accounting Standards Update ("ASU") No. 2016-13, *Financial Instruments-Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*. ASU 2016-13 and its subsequent related updates establish a new forward-looking "expected loss model" that requires entities to estimate current expected credit losses on accounts receivable and financial instruments by using all practical and relevant information. The Company adopted this standard effective January 1, 2023. There was no impact to the Company's financial statements upon adoption.

4. Balance Sheet Details

Short-term investments consisted of the following:

		March 31, 2023			
Description	Maturity	Amortized Costs	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Commercial paper	1 year or less	$ 76,449	$ 5	$ (32)	$ 76,422
U.S. Treasury securities	1 year or less	5,494	—	(10)	5,484
		$ 81,943	$ 5	$ (42)	$ 81,906

		December 31, 2022			
Description	Maturity	Amortized Costs	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Commercial paper	1 year or less	$ 78,451	$ 4	$ (119)	$ 78,336
U.S. Treasury securities	1 year or less	16,698	—	(83)	16,615
		$ 95,149	$ 4	$ (202)	$ 94,951

The Company did not have any investments in a continuous unrealized loss position for more than 12 months as of March 31, 2023. As of March 31, 2023, the Company believes that the cost basis of its available-for-sale securities is recoverable. No allowance for credit losses was recorded as of March 31, 2023.

Accrued expenses consisted of the following:

	At March 31, 2023	At December 31, 2022
Payroll and related liabilities	$ 2,033	$ 2,799
Other professional fees	1,756	746
Research and development costs	5,579	7,066
Other	559	744
Total	$ 9,927	$ 11,355

5. Fair Value Measurement

Fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or liability. As a basis for considering such assumptions, the guidance establishes a three-tier fair value hierarchy, which prioritizes the inputs used in measuring fair value as follows:

- Level 1 - Unadjusted quoted prices in active markets that are accessible at the measurement date for identical assets or liabilities;
- Level 2 - Quoted prices for similar assets and liabilities in active markets, quoted prices in markets that are not active, or inputs which are observable, either directly or indirectly, for substantially the full term of the asset or liability; or
- Level 3 - Prices or valuation techniques that require inputs that are both significant to the fair value measurement and unobservable (i.e., supported by little or no market activity).

The following tables represent the Company's financial assets measured at fair value on a recurring basis and indicate the level of fair value hierarchy utilized to determine such fair values:

Description	March 31, 2023	Fair Value Measurements at Reporting Date Using Level 1	Level 2	Level 3
Assets:				
Money market funds (included in cash and cash equivalents)	$ 37,919	$ 37,919	$ —	$ —
Commercial paper (including amounts in cash and cash equivalents)	86,353	—	86,353	—
U.S. Treasury securities	5,484	5,484		—
Total assets	$ 129,756	$ 43,403	$ 86,353	$ —

Description	December 31, 2022	Fair Value Measurements at Reporting Date Using Level 1	Level 2	Level 3
Assets:				
Money market funds (included in cash and cash equivalents)	$ 26,587	$ 26,587	$ —	$ —
Commercial paper	78,336	—	78,336	—
U.S. Treasury securities	16,615	16,615	—	—
Total assets	$ 121,538	$ 43,202	$ 78,336	$ —

There have been no transfers between fair value levels during the three months ended March 31, 2023.

6. License and Sponsored Research Agreements

In January 2017, the Company entered into a license agreement with Yale University ("Yale"), which was amended in May 2020 and July 2020, under which the Company licensed certain intellectual property related to ectonucleotide pyrophosphatase/phosphodiesterase enzymes that is the basis for the Company's INZ-701 development program. Pursuant to the license agreement, as partial upfront consideration, the Company made a payment of approximately $0.1 million to Yale, which amount reflected unreimbursed patent expenses incurred by Yale prior to the date of the license agreement. The Company is responsible for paying Yale an annual license maintenance fee in varying amounts throughout the term ranging from the low tens of thousands of dollars to the high tens of thousands of dollars. As of March 31, 2023, the Company incurred a life-to-date total of $0.3 million in license maintenance fees to Yale. The Company is required to pay Yale up to $3.0 million, based on the achievement of a specified net product sales milestone or specified development and commercialization milestones, for each therapeutic and prophylactic licensed product developed. In January 2022, the Company paid Yale an approximately $0.3 million milestone payment following dosing of the first patient in the Company's Phase 1/2 clinical trial of INZ-701 in adult patients with ENPP1 Deficiency in November 2021. In March 2022, the Company paid Yale an approximately $0.3 million milestone payment following completion of the first cohort of the Company's Phase 1/2 clinical trial of INZ-701 in adult patients with ENPP1 Deficiency in January 2022. In addition, the Company is required to pay Yale an amount in the several hundreds of thousands of dollars, based on the achievement of a specified net product sales milestone or specified development and commercialization milestones, for each diagnostic licensed product developed. While the agreement remains in effect, the Company is required to pay Yale low single-digit percentage royalties on aggregate worldwide net sales of certain licensed products. Yale is guaranteed a minimum royalty payment amount (ranging in dollar amounts from the mid six figures to low seven figures) for each year after the first sale of a therapeutic or prophylactic-licensed product that results in net sales. Yale is guaranteed a minimum royalty payment amount (ranging from the low tens of thousands of dollars to the mid tens of thousands of dollars) for each year after the first sale of a diagnostic licensed product that results in net sales. The Company must also pay Yale a percentage in the twenties of certain types of income it receives from sublicensees. The Company is also responsible for costs relating to the prosecution and maintenance of the licensed patents. Finally, subject to certain conditions, all payments due by the Company to Yale will be tripled following any patent challenge or challenge to a claim by Yale that a product is a licensed product under the agreement, made by the Company against Yale if Yale prevails in such challenge.

7. Commitments and Contingencies

Operating Leases

The Company held the following significant operating leases of office and laboratory space as of March 31, 2023:

- An operating lease for 8,499 square feet of office space in Boston, Massachusetts that expires in 2025, with an option to extend the term for five years; and
- An operating lease for 6,244 square feet of laboratory space in Boston, Massachusetts that expires in 2025.

During the three months ended March 31, 2023, cash paid for amounts included in the measurement of lease liabilities was $0.3 million, and the Company recorded operating lease expense of $0.2 million.

Future lease payments under non-cancelable leases as of March 31, 2023 are as follows:

Year Ending December 31,		
2023 (remaining 9 months)	$	744
2024		1,016
2025		944
	$	2,704

Indemnification Agreements

In the ordinary course of business, the Company may provide indemnification of varying scope and terms to vendors, lessors, business partners, and other parties with respect to certain matters arising out of the relationship between such parties and the Company. In addition, the Company has entered into indemnification agreements with members of its board of directors and senior management that will require the Company, among other things, to indemnify them against certain liabilities that may arise by reason of their status or service as directors or officers. The maximum potential amount of future payments the Company could be required to make under these indemnification agreements is, in many cases, unlimited. To date, the Company has not incurred any material costs as a result of such indemnifications. The Company is not aware of any claims under indemnification arrangements, and it has not accrued any liabilities related to such obligations as of March 31, 2023 or December 31, 2022.

Legal Proceedings

The Company is not currently a party to any material legal proceedings. At each reporting date, the Company evaluates whether or not a potential loss amount or a potential range of loss is probable and reasonably estimable under the provisions of the authoritative guidance that addresses accounting for contingencies. The Company expenses the costs related to its legal proceedings as they are incurred. No such costs have been incurred during the three months ended March 31, 2023 and 2022.

8. Convertible Debt

Loan Agreement with K2 HealthVentures LLC

On July 25, 2022, the Company, as borrower, entered into the Loan Agreement with K2 HealthVentures LLC (“K2HV”, together with any other lender from time to time, the “Lenders”), as administrative agent for the Lenders, and Ankura Trust Company, LLC, as collateral agent for the Lenders. The Loan Agreement provides up to $70.0 million principal in term loans, subject to certain customary conditions. The Company received $5.0 million from the first tranche commitment upon closing. The first tranche commitment contained an additional $20.0 million available to be drawn at the Company’s option though March 31, 2023. The Company elected to borrow the remaining $20.0 million in February 2023. Two subsequent tranche commitments totaling $20.0 million in the aggregate are available to be drawn at the Company’s option during certain availability periods, subject to the achievement of certain clinical and regulatory milestones relating to INZ-701. A fourth tranche commitment of $25.0 million may be made available to be drawn down at the Company’s option through August 31, 2025, subject to use of proceeds limitations and Lender's consent in its discretion. The fourth tranche commitment is subject to an additional 0.75% facility fee. As security for its obligations under the Loan Agreement, the Company granted the Lenders a first priority security interest on substantially all of the Company’s assets (other than intellectual property), subject to certain exceptions.

The term loan matures on August 1, 2026, and the Company is obligated to make interest only payments for the first 36 months and then interest and equal principal payments through the maturity date. The term loan bears a variable interest rate equal to the greater of (i) 7.85%, and (ii) the sum of (A) the prime rate last quoted in The Wall Street Journal (or a comparable replacement rate if The Wall Street Journal ceases to quote such rate) and (B) 3.85%; provided that the interest rate cannot exceed 9.60%. The interest rate as of March 31, 2023 was 9.60%. The Company has the option to prepay all, but not less than, the outstanding principal balance and all accrued and unpaid interest with respect to the principal balance being repaid of the term loans, subject to a prepayment premium to which the Lenders are entitled. The prepayment fee is 3% prior to the second anniversary of the July 25, 2022 funding date, 2% after the second anniversary but prior to the third anniversary of the funding date, and 1% thereafter if prior to the maturity date. Upon final payment or prepayment of the loans, the Company must pay a final payment equal to 6.25% of the loans borrowed ("Final Fee"), which is being accrued as interest expense over the term of the loan using the effective interest method.

The Lenders may elect, prior to the full repayment of the term loans, to convert up to $5.0 million of outstanding principal of the term loans into shares of the Company's common stock, at a conversion price of $6.21 per share, subject to customary adjustments and 9.99% and 19.99% beneficial ownership limitations. The Company determined that the embedded conversion option was not required to be separated from the term loan. The embedded conversion option met the derivative accounting scope exception since the embedded conversion option is indexed to the Company's own common stock and qualifies for classification within stockholders' equity.

The Loan Agreement contains customary representations and warranties, events of default and affirmative and negative covenants, including covenants that limit or restrict the Company's ability to, among other things, dispose of assets, make changes to the Company's business, management, ownership or business locations, merge or consolidate, incur additional indebtedness, incur additional liens, pay dividends or other distributions or repurchase equity, make investments, and enter into certain transactions with affiliates, in each case subject to certain exceptions. Upon the occurrence of an event of default, a default interest rate of an additional 5.00% per annum may be applied to the outstanding loan balances, and the Lender may declare all outstanding obligations immediately due and payable and exercise all of its rights and remedies as set forth in the Loan Agreement and under applicable law. As of March 31, 2023, the Company was in compliance with all covenants under the Loan Agreement.

Subject to certain conditions, the Company granted the Lenders the right, prior to repayment of the term loans, to invest up to $5.0 million in the aggregate in future offerings of common stock, convertible preferred stock, or other equity securities of the Company that are broadly marketed and offered to multiple investors on the same terms, conditions, and pricing afforded to others participating in any such financing.

The Company incurred debt issuance costs of $0.5 million in connection with the term loan. In addition, at the time of closing, the Company paid to the Lenders a facility fee of $0.4 million, as well as $0.1 million of other expenses incurred by the Lenders and reimbursed by the Company ("Lender Expenses"). The debt issuance costs, Lender Expenses and the Final Fee are being amortized as additional interest expense over the term of the loan using the effective interest method. The Company recorded interest expense of $0.3 million during the three months ended March 31, 2023. At March 31, 2023, the carrying value of the Loan Agreement approximated the fair value of the term loan, considering that it bears interest that is similar to prevailing market rates.

The following table summarizes the impact of the term loan on the Company's condensed consolidated balance sheet at March 31, 2023:

		March 31, 2023
Gross proceeds	$	25,000
Unamortized debt issuance costs		(781)
Carrying value	$	24,219

Future principal payments, which include the Final Fee, in connection with the Loan Agreement as of March 31, 2023 are as follows:

Fiscal Year		
2023 (remaining 9 months)	$	—
2024		—
2025		8,062
2026		18,500
Total	$	26,562

9. Stockholders' Equity

April 2022 Underwritten Offering

On April 14, 2022, the Company entered into an underwriting agreement with Jefferies LLC and Cowen and Company, LLC, relating to an underwritten offering under the Company's registration statement on Form S-3 of 16,276,987 shares of the Company's common stock (the "Shares") and, in lieu of common stock to certain investors, pre-funded warrants to purchase 3,523,013 shares of common stock. The closing of the offering took place on April 19, 2022. The offering price of the Shares was $3.69 per share and the offering price of the pre-funded warrants was $3.6899 per share underlying each pre-funded warrant. Net proceeds from the offering were approximately $68.3 million, after deducting underwriting discounts and commissions and offering expenses.

On June 10, 2022, the Company and each holder of the pre-funded warrants entered into amended and restated pre-funded warrants solely to eliminate the seven-year expiration date of the pre-funded warrants. Each amended and restated pre-funded warrant is now exercisable for $0.0001 per share of common stock from the original date of issuance until the date the pre-funded warrant is exercised in full. All other terms of the pre-funded warrants remain unchanged. The pre-funded warrants contain standard adjustment provisions if certain corporate events were to happen.

The pre-funded warrants were classified as a component of permanent equity and were recorded at the issuance date using a relative fair value allocation method. The pre-funded warrants were equity classified because they were freestanding financial instruments that were legally detachable and separately exercisable from the equity instruments, were immediately exercisable, did not embody an obligation for the Company to repurchase its shares, and permitted the holders to receive a fixed number of shares of common stock upon exercise. In addition, such pre-funded warrants did not provide any guarantee of value or return. As of March 31, 2023, all 3,523,013 pre-funded warrants have been exercised by means of cashless exercise in exchange for the issuance of 3,522,884 shares of the Company's common stock.

Equity Incentive Plans

On July 17, 2020, the Company's stockholders approved the 2020 Stock Incentive Plan (the "2020 Plan"), which became effective on July 23, 2020. The 2020 Plan provides for the grant of incentive stock options, non-statutory stock options, stock appreciation rights, restricted stock awards, restricted stock units, and other stock-based awards.

On February 27, 2023, the Company's board of directors adopted the 2023 Inducement Stock Incentive Plan (the "Inducement Plan"). The Inducement Plan provides for the grant of non-statutory stock options, stock appreciation rights, restricted stock awards, restricted stock units and other stock-based awards to persons who (a) were not previously an employee or director or (b) are commencing employment with the Company following a bona fide period of non-employment, in either case, as an inducement material to such person's entry into employment with the Company and in accordance with the requirements of the Nasdaq Stock Market Rule 5635(c)(4). As of March 31, 2023, the maximum number of shares of the Company's common stock reserved for issuance under the Inducement Plan is 1,000,000 shares.

The Company estimates the fair value of stock options using the Black-Scholes option-pricing model. The underlying assumptions used to value stock options granted to participants using the Black-Scholes option-pricing model were as follows:

	For the Three Months Ended March 31,	
	2023	2022
Risk-free interest rate range	3.36% to 4.15%	1.59% to 2.37%
Dividend yield	—	—
Expected term of options (years)	5.73 to 6.48	5.08 to 6.48
Volatility rate range	87.68% to 88.77%	85.38% to 86.64%

The total compensation cost recognized in the statements of operations associated with all the stock-based compensation awards granted by the Company is as follows:

	Three Months Ended March 31,	
	2023	2022
Research and development	$ 818	$ 896
General and administrative	1,274	856
Total	$ 2,092	$ 1,752

The total unrecognized compensation cost related to outstanding awards as of March 31, 2023 was $9.3 million and is expected to be recognized over a weighted-average period of 2.5 years.

10. Net Loss per Share

Net Loss per Share Attributable to Common Stockholders

The following table sets forth the computation of basic and diluted net loss per share:

	Three Months Ended March 31,	
	2023	2022
Net loss attributable to common stockholders—basic and diluted	$ (17,404)	$ (16,884)
Net loss per share attributable to common stockholders—basic and diluted	$ (0.40)	$ (0.71)
Weighted-average common shares and pre-funded warrants outstanding—basic and diluted	43,720,578	23,686,351

The Company has generated a net loss in the periods presented; therefore, the basic and diluted net loss per share attributable to common stockholders are the same, as the inclusion of the potentially dilutive securities would be anti-dilutive. Since the shares underlying the pre-funded warrants were issuable for little or no consideration, they were considered outstanding for both basic and diluted earnings per share from the date of issuance. The Company excluded 5,505,608 and 4,506,858 options to purchase common stock from the computation of diluted net loss per share attributable to common stockholders for the three months ended March 31, 2023 and 2022, respectively.

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

The following discussion and analysis of our financial condition and results of operations should be read together with our condensed consolidated financial statements and the related notes appearing elsewhere in this Quarterly Report on Form 10-Q and our Annual Report on Form 10-K for the year ended December 31, 2022 filed with the Securities and Exchange Commission, or SEC, on March 22, 2023. This discussion contains forward-looking statements that involve risks and uncertainties. As a result of many factors, including those factors set forth in the "Risk Factors" section of our most recent Annual Report on Form 10-K and in this Quarterly Report on Form 10-Q, our actual results could differ materially from the results described in or implied by these forward-looking statements. For convenience of presentation some of the numbers have been rounded in the text below.

Overview

We are a clinical-stage rare disease biopharmaceutical company developing novel therapeutics for the treatment of diseases impacting the vasculature, soft tissue, and skeleton. Through our in-depth understanding of a key biological pathway, we are pursuing the development of therapeutics to address the underlying causes of these debilitating diseases. It is well established that two genes, ENPP1 and ABCC6, play key roles in this critical pathway and that defects in these genes lead to low levels of plasma pyrophosphate, or PPi, which drives pathologic mineralization, and low levels of adenosine, which drives intimal proliferation. We are initially focused on developing a novel therapy to treat the rare genetic diseases of ENPP1 and ABCC6 Deficiencies.

Our lead product candidate, INZ-701, is a soluble, recombinant, or genetically engineered, fusion protein that is designed to correct a defect in a pathway involving ENPP1 and ABCC6 Deficiencies. This pathway is central to the regulation of calcium deposition throughout the body and is further associated with the inhibition of intimal proliferation, or narrowing and obstruction of blood vessels. We have generated robust proof of concept data in preclinical models demonstrating that INZ-701 prevented pathological calcification and skeletal abnormalities, led to improvements in overall health and survival and prevented intimal proliferation. The U.S. Food and Drug Administration, or FDA, and the European Medicines Agency, or EMA, have granted orphan drug designation to INZ-701 for the treatment of ENPP1 Deficiency and ABCC6 Deficiency. The FDA has also granted fast track designation for INZ-701 for the treatment of ENPP1 Deficiency and rare pediatric disease designation for the treatment of ENPP1 Deficiency.

In November 2021, we initiated our Phase 1/2 clinical trial of INZ-701 in patients with ENPP1 Deficiency. The trial initially enrolled nine adult patients with ENPP1 Deficiency at sites in North America and Europe. The trial will primarily assess the safety and tolerability of INZ-701 in adult patients with ENPP1 Deficiency, as well as characterize the pharmacokinetic and pharmacodynamic profile of INZ-701, including evaluation of PPi and other biomarker levels. In the Phase 1 dose-escalation portion of the trial, we assessed INZ-701 for 32 days at doses of 0.2 mg/kg, 0.6 mg/kg, and 1.8 mg/kg administered via subcutaneous injection, with three patients per dose cohort. Patients received a single dose and then began twice weekly dosing one week later. In April 2022, we announced preliminary biomarker, safety, and pharmacokinetic data from the 0.2 mg/kg cohort of this trial. In November 2022, we announced the first self-administration of INZ-701 in the open-label Phase 2 portion of the trial.

In February 2023, we reported positive topline pharmacokinetic, pharmacodynamic, and safety data from this trial. A rapid, significant, and sustained increase in PPi was observed in all dose cohorts and in all patients, with a target PPi threshold achieved from the lowest dose of 0.2 mg/kg. PPi increased in all patients to levels comparable to those observed in a study of healthy subjects (n=10), which study showed PPi levels between 1002 nM and 2169 nM. INZ-701 activity increased in proportion to dose level and a long half-life of approximately 126 hours and drug accumulation as shown by a greater than dose proportional exposure suggests the potential for once weekly dosing. INZ-701 was generally well-tolerated and exhibited a favorable safety profile, with no serious or severe adverse events attributed to INZ-701 and no adverse events leading to study withdrawal. Three of the nine patients experienced mild adverse events related to INZ-701. All nine patients enrolled in the Phase 2 portion of the trial and two of them subsequently withdrew for personal reasons not related to adverse events. Seven patients continue in the trial in North America and Europe.

We plan to report interim data from the ongoing Phase 2 portion of the clinical trial of INZ-701 in adults with ENPP1 Deficiency in the third quarter of 2023. In February 2023, we dosed our first pediatric patient with ENPP1 Deficiency with INZ-701 under our expanded access program. We have also dosed the first adult patient with ENPP1 Deficiency in an additional dose cohort designed to investigate the potential for once-weekly dosing of INZ-701 in the ongoing Phase 1/2 clinical trial.

We plan to initiate a Phase 1b clinical trial of INZ-701, or the ENERGY-1 trial, to evaluate the safety, tolerability, pharmacokinetics, and pharmacodynamics of INZ-701 in infants with ENPP1 Deficiency in the second quarter of 2023. We initiated pivotal trial meetings with the FDA in the first quarter of 2023. We have reached agreement with the EMA on a Pediatric Investigational Plan. We anticipate initiating a scientific advice process regarding our comprehensive development plan covering all age groups with the EMA in the second quarter of 2023. We expect to initiate a pivotal trial of INZ-701 in pediatric patients with ENPP1 Deficiency in the third quarter of 2023, subject to receipt of regulatory approval.

In April 2022, we initiated our Phase 1/2 clinical trial of INZ-701 in adult patients with ABCC6 Deficiency. The trial initially enrolled nine patients with ABCC6 Deficiency at sites in the United States and Europe. The trial will primarily assess the safety and tolerability of INZ-701 in adult patients with ABCC6 Deficiency, as well as characterize the pharmacokinetic and pharmacodynamic profile of INZ-701, including the evaluation of levels of plasma PPi and other biomarkers. In the Phase 1 dose-escalation portion of the clinical trial, we assessed INZ-701 for 32 days at doses of 0.2 mg/kg, 0.6 mg/kg, and 1.8 mg/kg administered via subcutaneous injection, with three patients per dose cohort. Patients received a single dose and then began twice weekly dosing one week later. In July 2022, we announced preliminary biomarker, safety, and pharmacokinetic data from the 0.2 mg/kg cohort of the Phase 1 dose escalation portion of this trial. Beginning in 2023, self-administration of INZ-701 in the open-label Phase 2 portion of the trial was available.

In February 2023, we reported positive topline safety, pharmacodynamic and pharmacokinetic data from this trial. A dose-dependent response in PPi levels was observed, with a sustained increase in the highest dose cohort to levels comparable to those observed in our study of healthy subjects (n=10), which study showed PPi levels between 1002 nM and 2169 nM. INZ-701 activity in a greater than dose proportional manner was observed and drug accumulation as shown by a greater than dose proportional exposure suggests the potential for once weekly dosing. INZ-701 was generally well-tolerated and exhibited a favorable safety profile, with no serious or severe adverse events attributed to INZ-701. Seven of the nine patients experienced adverse events related to INZ-701. All adverse events were mild to moderate in severity. One patient from the highest dose cohort (1.8 mg/kg) was withdrawn from the Phase 1 portion of the trial at day 18 due to a moderate adverse event (erythema/urticaria) related to INZ-701. A replacement patient was enrolled in the Phase 1 portion of the trial and all nine patients continue in the Phase 2 portion of the trial in the United States and Europe.

We plan to report interim data from the ongoing Phase 2 portion of the trial on INZ-701 in adults with ABCC6 Deficiency in the fourth quarter of 2023. Subject to regulatory approval and sufficient funding, we plan to initiate a Phase 2/3 clinical trial in patients with ABCC6 Deficiency in 2024.

Subject to successfully completing clinical development of INZ-701 in ENPP1 and ABCC6 Deficiencies, we plan to seek marketing approvals for INZ-701 on a worldwide basis. Beyond our development focus on INZ-701, we believe that our therapeutic approach has the potential to benefit patients suffering from additional diseases of pathologic mineralization and intimal proliferation, including those without a clear genetic basis, such as calciphylaxis or calcifications as a result of end stage kidney disease. In December 2022, the FDA allowed our Investigational New Drug, or IND, to enable us to evaluate INZ-701 in a clinical trial in patients with end-stage kidney disease and calciphylaxis. We intend to initiate a Phase 1 clinical trial in end-stage kidney disease patients, and we expect data from this trial to inform our development plans in calciphylaxis. We are also exploring the potential for development of a gene therapy for ENPP1 Deficiency.

Our Operations

We have not yet commercialized any products or generated any revenue from product sales. Our operations to date have been limited to organizing and staffing our company, business planning, raising capital, securing intellectual property rights, conducting research and development activities, conducting preclinical studies and early-stage clinical trials, establishing arrangements for the manufacture of INZ-701, and longer-term planning for potential commercialization. To date, we have funded our operations primarily with proceeds from the sales of convertible preferred stock, offerings of common stock and pre-funded warrants, and borrowings under our loan and security agreement, or the Loan Agreement, with K2 HealthVentures LLC, or K2HV.

Since inception, we have incurred significant operating losses. Our ability to generate revenue from product sales sufficient to achieve profitability will depend heavily on the successful development and eventual commercialization of INZ-701 or one or more of our future product candidates and programs. Our net losses were $17.4 million for the three months ended March 31, 2023 and $16.9 million for the three months ended March 31, 2022.

Our operating expenses were $18.4 million for the three months ended March 31, 2023 and $68.7 million for the year ended December 31, 2022. We expect to continue to incur significant operating expenses for the foreseeable future. In addition, if we obtain marketing approval for INZ-701 or any other product candidate we develop, we expect to incur significant commercialization expenses related to product manufacturing, sales, marketing, and distribution. We have incurred and expect to continue to incur additional costs associated with operating as a public company.

As a result, we will need to obtain substantial additional funding to support our continuing operations. Until such time, if ever, as we can generate significant revenues from product sales, we expect to finance our cash needs through a combination of equity offerings, debt financings, collaborations, strategic alliances, and marketing, distribution and licensing arrangements. We do not have any committed external source of funds, other than under our Loan Agreement. Our ability to borrow under our Loan Agreement is subject to our satisfaction of specified conditions and lender discretion. If we are unable to raise capital or obtain adequate funds when needed or on acceptable terms, we may be required to delay, limit, reduce, or terminate our research and development programs or any

future commercialization efforts or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves. In addition, attempting to secure additional financing may divert the time and attention of our management from day-to-day activities and distract from our research and development efforts.

Because of the numerous risks and uncertainties associated with pharmaceutical product development, we are unable to accurately predict the timing or amount of increased expenses or when, or if, we will be able to achieve profitability. Even if we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to become and remain profitable would depress the value of our company and could impair our ability to raise capital, expand our business, maintain our research and development efforts, diversify our pipeline of product candidates, or even continue our operations.

We believe that our existing cash, cash equivalents, and short-term investments as of March 31, 2023, will enable us to fund our cash flow requirements into the fourth quarter of 2024. We based this estimate on assumptions that may prove to be wrong, and our operating plan may change as a result of many factors currently unknown to us. See "—Liquidity and Capital Resources."

To finance our operations beyond that point, we will need to raise additional capital, which cannot be assured.

We anticipate that our expenses will increase substantially if and as we:

- conduct our ongoing Phase 1/2 clinical trials of INZ-701 for ENPP1 Deficiency and ABCC6 Deficiency;
- prepare for, initiate, and conduct planned clinical trials of INZ-701 for patients with ENPP1 and ABCC6 Deficiencies;
- conduct research, preclinical, and clinical testing of INZ-701 for additional indications;
- conduct research, preclinical, and clinical testing of other product candidates;
- seek marketing approval for INZ-701 or any other product candidate if it successfully completes clinical trials;
- scale up our manufacturing processes and capabilities;
- establish a sales, marketing, and distribution infrastructure to commercialize any product candidate for which we may obtain marketing approval;
- in-license or acquire additional technologies or product candidates;
- make any payments to Yale University, or Yale, under our license agreement or sponsored research agreement with Yale;
- maintain, expand, enforce, and protect our intellectual property portfolio;
- hire additional clinical, regulatory, quality control, and scientific personnel;
- add operational, financial, and management information systems and personnel, including personnel to support our research, product development, and planned future commercialization efforts and our operations as a public company; and
- make any principal and interest payments when due under the terms of the Loan Agreement.

Financial Operations Overview

Revenue

To date, we have not generated any revenue from product sales and do not expect to generate any revenue from the sale of products in the foreseeable future. If development efforts for our product candidates are successful and result in regulatory approval or we enter into collaboration or similar agreements with third parties, we may generate revenue from those product candidates.

Research and Development Expenses

Research and development costs consist of direct and indirect costs related to specific projects as well as fees paid to other entities that conduct certain research and development activities on the Company's behalf and primarily relate to costs incurred in connection with the discovery and development of our lead product candidate, INZ-701.

We expense research and development costs as incurred. These expenses include:

- fees and expenses incurred in connection with the in-license of technology and intellectual property rights;
- expenses incurred under agreements with third parties, including contract research organizations, or CROs, and other third parties that conduct research, preclinical, and clinical activities on our behalf as well as third parties that manufacture our product candidates for use in our preclinical studies and planned clinical trials;
- manufacturing scale-up expenses and the costs of acquiring and manufacturing preclinical trial materials, including manufacturing validation batches;
- personnel-related expenses, including salaries, related benefits, travel and stock-based compensation expense for employees and consultants engaged in research and development functions;
- the costs and acquisition of laboratory supplies, and developing preclinical studies and clinical trial materials;
- costs related to compliance with regulatory requirements; and
- facilities costs, which include depreciation costs of equipment and allocated expenses for rent, utilities, and other operating costs.

We recognize external development costs based on an evaluation of the progress to completion of specific tasks using information provided to us by our service providers.

Research and development activities are central to our business model. We are still in the early stages of development of INZ-701. We are currently conducting our Phase 1/2 clinical trials of INZ-701 for ENPP1 Deficiency and ABCC6 Deficiency. Product candidates in later stages of clinical development generally have higher development costs than those in preclinical development or in earlier stages of clinical development, primarily due to the increased size and duration of later-stage clinical trials. We expect that our research and development costs will continue to increase substantially for the foreseeable future as we conduct the ongoing clinical trials of INZ-701, prepare for, initiate, and conduct planned clinical trials of INZ-701 for patients with ENPP1 and ABCC6 Deficiencies, further scale our manufacturing processes, and advance development of INZ-701 for additional indications and potentially additional product candidates.

The successful development of INZ-701 and other potential future product candidates is highly uncertain. Accordingly, at this time, we cannot reasonably estimate or know the nature, timing, and costs of the efforts that will be necessary to complete the development of any product candidate. We are also unable to predict when, if ever, we will generate revenue and material net cash inflows from the commercialization and sale of any of our product candidates for which we may obtain marketing approval. We may never succeed in achieving marketing approval for any of our product candidates. The success of INZ-701 and any other product candidate we develop will depend on a variety of factors, including:

- successfully completing preclinical studies and initiating clinical trials;
- successfully enrolling patients in and completing clinical trials;
- scaling up manufacturing processes and capabilities to support clinical trials of INZ-701 and any other product candidates;
- applying for and receiving marketing approvals from applicable regulatory authorities;
- obtaining and maintaining intellectual property protection and regulatory exclusivity for INZ-701 and any other product candidates;

- making arrangements for commercial manufacturing capabilities;
- establishing sales, marketing and distribution capabilities and launching commercial sales of our product candidates, if and when approved, whether alone or in collaboration with others;
- acceptance of our product candidates, if and when approved, by patients, the medical community and third-party payors;
- effectively competing with other therapies;
- obtaining and maintaining coverage, adequate pricing and adequate reimbursement from third-party payors, including government payors;
- maintaining, enforcing, defending and protecting our rights in our intellectual property portfolio;
- not infringing, misappropriating or otherwise violating others' intellectual property or proprietary rights; and
- maintaining a continued acceptable safety profile of our products following receipt of any marketing approvals.

A change in the outcome of any of these variables with respect to the development, manufacture or commercialization activities of any of our product candidates could mean a significant change in the costs, timing and viability associated with the development of that product candidate. For example, if we are required to conduct additional clinical trials or other testing beyond those that we anticipate will be required for the completion of clinical development of a product candidate, or if we experience significant delays in our clinical trials due to patient enrollment or other reasons, we would be required to expend significant additional financial resources and time on the completion of clinical development.

General and Administrative Expenses

General and administrative expenses consist primarily of salaries, related benefits, travel, and stock-based compensation expense for personnel in executive, finance, and administrative functions. General and administrative expenses also include professional fees for legal, consulting, accounting, tax, and audit services, and information technology infrastructure costs. We anticipate that our general and administrative expenses will increase in the future as we increase our headcount to support our continued research activities and development of our product candidates. We incur, and anticipate that we will continue to incur, costs associated with being a public company, including costs of accounting, audit, legal, regulatory, compliance and tax-related services related to maintaining compliance with requirements of Nasdaq and the Securities and Exchange Commission; director and officer insurance costs; and investor and public relations costs. Additionally, we may experience an increase in payroll and expense as a result of our preparation for potential commercial operations, especially as it relates to sales and marketing costs.

Interest Income, net

Interest income, net consists of income from bank deposits and investments and interest expense related to our Loan Agreement.

Other Expense, net

Other expenses primarily consists of interest income on marketable securities and foreign exchange gains or losses.

Results of Operations

Comparison of the Three Months Ended March 31, 2023 and 2022

The following table summarizes our results of operations for the three months ended March 31, 2023 and 2022 (in thousands):

	Three Months Ended March 31,		
	2023	2022	Increase
Operating expenses:			
Research and development	$ 11,857	$ 11,814	$ 43
General and administrative	6,512	5,025	1,487
Total operating expenses	18,369	16,839	1,530
Loss from operations	(18,369)	(16,839)	1,530
Other income (expense):			
Interest income, net	999	60	939
Other expense, net	(34)	(105)	71
Other income (expense), net	965	(45)	1,010
Net loss	$ (17,404)	$ (16,884)	$ 520

Research and Development Expense

Research and development expenses of approximately $11.9 million for the three months ended March 31, 2023 were relatively consistent with approximately $11.8 million for the three months ended March 31, 2022.

We expect that our research and development expenses will increase in the foreseeable future as we conduct clinical trials of INZ-701, prepare for, initiate and conduct planned clinical trials of INZ-701 for patients with ENPP1 and ABCC6 Deficiencies, further scale our manufacturing processes and advance development of INZ-701 for additional indications or potentially additional product candidates.

General and Administrative Expense

General and administrative expense increased by $1.5 million to $6.5 million for the three months ended March 31, 2023 from $5.0 million for the three months ended March 31, 2022. The increase in general and administrative expense was primarily related to expenses recorded for the transition and separation agreement entered into with our former chief executive officer. We expect that our general and administrative expenses will increase in future periods as we expand our operations and incur costs associated with being a public company.

Interest Income, net

Interest income, net for the three months ended March 31, 2023 increased by approximately $0.9 million compared to the three months ended March 31, 2022 due to a $1.2 million increase in interest income as a result of higher interest rates and a larger cash balance on which we are earning interest, which was partially offset by a $0.3 million increase in interest expense associated with the Loan Agreement.

Other Expense, net

Other expense, net increased by approximately $0.1 million for the three months ended March 31, 2023 compared to the three months ended March 31, 2022.

Liquidity and Capital Resources

Sources of Liquidity

Since our inception, we have not generated any revenue and have incurred significant operating losses and negative cash flows from our operations. To date, we have funded our operations primarily with proceeds from the sales of convertible preferred stock, offerings of common stock and pre-funded warrants and borrowings under our Loan Agreement.

On August 11, 2021, we filed a universal shelf registration statement on Form S-3, which was declared effective on August 23, 2021, or the Registration Statement. Under the Registration Statement, we may offer and sell up to $200.0 million of a variety of securities, including common stock, preferred stock, depositary shares, debt securities, warrants, subscription rights or units from time to time pursuant to one or more offerings at prices and terms to be determined at the time of the sale. In connection with the filing of the Registration Statement, we entered into an Open Market Sale Agreement with Jefferies LLC, as sales agent, pursuant to which we may offer and sell shares of our common stock with an aggregate offering price of up to $50.0 million under an "at-the-market" offering program. As of March 31, 2023, we had not sold any securities pursuant to the Open Market Sale Agreement.

In April 2022, we closed an underwritten offering in which we sold 16,276,987 shares of common stock and pre-funded warrants to purchase 3,523,013 shares of common stock under the Registration Statement. Net proceeds from the offering were approximately $68.3 million, after deducting underwriting discounts and commissions and offering expenses.

In July 2022, we entered into a Loan Agreement with K2 HealthVentures LLC ("K2HV", together with any other lender from time to time, the "Lenders"), which provides up to $70.0 million principal in term loans consisting of (subject to certain customary conditions): (i) a First Tranche Commitment of $25.0 million, of which $5.0 million was funded at closing and of which the remaining $20.0 million was funded at our election in February 2023, (ii) two subsequent tranche commitments totaling $20.0 million in the aggregate to be drawn at our option during certain availability periods, subject to the achievement, as determined by the administrative agent in its sole discretion, of certain time-based, financial, clinical, and regulatory milestones relating to INZ-701, and (iii) a fourth tranche commitment of $25.0 million available to be drawn at our option through August 31, 2025, subject to use of proceeds limitations and Lenders' consent in its discretion. Additional information on the Loan Agreement is described in Note 8 to our condensed consolidated financial statements appearing elsewhere in this Quarterly Report on Form 10-Q.

Cash in excess of immediate requirements is invested primarily with a view to liquidity and capital preservation. The following table provides information regarding our total cash, cash equivalents, and short-term investments at March 31, 2023 and December 31, 2022 (in thousands):

	March 31, 2023	December 31, 2022
Cash and cash equivalents	$ 49,024	$ 32,915
Short-term investments	81,906	94,951
Total cash, cash equivalents, and short-term investments	$ 130,930	$ 127,866

Cash Flows

The following table provides information regarding our cash flows for the three months ended March 31, 2023 and 2022 (in thousands):

	Three Months Ended March 31,	
	2023	2022
Net cash used in operating activities	$ (17,772)	$ (14,160)
Net cash provided by investing activities	13,766	22,562
Net cash provided by financing activities	20,096	240
Net increase in cash, cash equivalents, and restricted cash	$ 16,090	$ 8,642

Net Cash Used in Operating Activities

The increase in net cash used in operating activities of $3.6 million was primarily due to a $2.8 million increase in payments against accounts payable and accrued expenses.

Net Cash Provided by Investing Activities

Net cash provided by investing activities decreased approximately $8.8 million for the three months ended March 31, 2023 compared to the three months ended March 31, 2022, as a $15.6 million increase in purchases of marketable securities exceeded a $7.0 million increase in maturities of marketable securities in the three months ended March 31, 2023.

Net Cash Provided by Financing Activities

Net cash provided by financing activities increased $19.9 million for the three months ended March 31, 2023 primarily due to $20.0 million of cash proceeds from the issuance of long-term debt in February 2023.

Funding Requirements

We expect to devote substantial financial resources to our ongoing and planned activities, particularly as we conduct our ongoing Phase 1/2 clinical trials of INZ-701 for ENPP1 and ABCC6 Deficiencies, and as we continue research and development and initiate additional clinical trials of, and seek marketing approval for, INZ-701 and any other product candidate we develop. We expect our expenses to increase substantially in connection with our ongoing and planned activities. In addition, if we obtain marketing approval for INZ-701 or any other product candidates we develop, we expect to incur significant commercialization expenses related to product manufacturing, sales, marketing, and distribution. Accordingly, we will need to obtain substantial additional funding in connection with our continuing operations. If we are unable to raise capital or obtain adequate funds when needed or on acceptable terms, we may be required to delay, limit, reduce, or terminate our research and development programs or any future commercialization efforts or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves. In addition, attempting to secure additional financing may divert the time and attention of our management from day-to-day activities and distract from our research and development efforts.

Our future capital requirements will depend on many factors, including:

- the progress, costs, and results of our ongoing Phase 1/2 clinical trials of INZ-701 for ENPP1 and ABCC6 Deficiencies and any future clinical development of INZ-701 for these indications;
- the scope, progress, costs, and results of research, preclinical testing and clinical trials of INZ-701 for additional indications;
- the number of and development requirements for additional indications for INZ-701 or for any other product candidates we develop;
- our ability to scale up our manufacturing processes and capabilities;
- the costs, timing, and outcome of regulatory review of INZ-701 and any other product candidates we develop;
- potential changes in the regulatory environment and enforcement rules;
- our ability to establish and maintain strategic collaborations, licensing, or other arrangements and the financial terms of such arrangements;
- the payment of license fees and other costs of our technology license arrangements;
- the extent of our debt service obligations and our ability, if desired, to refinance any of our existing debt on terms that are more favorable to us;
- the costs and timing of future commercialization activities, including product manufacturing, sales, marketing, and distribution, for INZ-701 and any other product candidates we develop for which we may receive marketing approval;
- the amount and timing of revenue, if any, received from commercial sales of INZ-701 and any other product candidates we develop for which we receive marketing approval;
- potential changes in pharmaceutical pricing and reimbursement infrastructure;
- the costs and timing of preparing, filing, and prosecuting patent applications, maintaining and enforcing our intellectual property and proprietary rights, and defending any intellectual property-related claims; and
- the extent to which we in-license or acquire additional technologies or product candidates.

We believe that our existing cash, cash equivalents and short-term investments as of March 31, 2023 will enable us to fund our cash flow requirements into the fourth quarter of 2024. However, we have based this estimate on assumptions that may prove to be wrong, and our operating plan may change as a result of many factors currently unknown to us. In addition, changing circumstances could cause us to consume capital significantly faster than we currently anticipate, and we may need to spend more than currently expected because of circumstances beyond our control. As a result, we could deplete our capital resources sooner than we currently expect. In addition, because the successful development of INZ-701 or any other product candidates that we pursue is highly uncertain, at this time we cannot reasonably estimate or know the nature, timing, and costs of the efforts that will be necessary to complete the development of any product candidate.

Identifying potential product candidates and conducting preclinical testing and clinical trials is a time-consuming, expensive, and uncertain process that takes years to complete, and we may never generate the necessary data or results required to obtain marketing approval and achieve product sales. In addition, our product candidates, if approved, may not achieve commercial success. We will not generate commercial revenues unless and until we can achieve sales of products, which we do not anticipate for a number of years, if at all. Accordingly, we will need to obtain substantial additional financing to achieve our business objectives. Adequate additional financing may not be available to us on acceptable terms, or at all. Our ability to raise additional funds may be adversely impacted by general economic conditions, both inside and outside the U.S., including disruptions to, and instability and volatility in, the credit and financial markets in the U.S. and worldwide, heightened inflation, interest rate and currency rate fluctuations, and economic slowdown or recession, as well as concerns related to the COVID-19 pandemic and geopolitical events, including civil or political unrest. In addition, market instability and volatility, high levels of inflation and interest rate fluctuations may increase our cost of financing or restrict our access to potential sources of future liquidity.

Until such time, if ever, as we can generate substantial revenues from product sales, we expect to finance our cash needs through a combination of equity offerings, debt financings, collaborations, strategic alliances, and marketing, distribution or licensing arrangements. We do not have any committed external source of funds, other than under our Loan Agreement. Our ability to borrow under the Loan Agreement is subject to our satisfaction of specified conditions and lender discretion. To the extent that we raise additional capital through the sale of equity or convertible debt securities or the extent the Lenders elect to convert a portion of their outstanding principal into shares of our common stock or elect to purchase up to $5.0 million of shares of our common stock pursuant to the Loan Agreement, the ownership interests of our stockholders will be diluted, and the terms of any new securities may include liquidation or other preferences that adversely affect the rights of our existing common stockholders. Debt financing and equity financing, if available, may involve agreements that include covenants limiting or restricting our operations and ability to take specific actions, such as incurring additional indebtedness, making acquisitions, engaging in acquisition, merger, or collaboration transactions, selling or licensing our assets, making capital expenditures, redeeming our stock, making certain investments, or declaring dividends. The covenants under our Loan Agreement and the pledge of our assets as collateral limit our ability to take specific actions, including obtaining additional financing.

If we raise additional funds through collaborations, strategic alliances, or marketing, distribution or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies, future revenue streams, research programs, or product candidates or grant licenses on terms that may not be favorable to us.

Critical Accounting Estimates

Our management's discussion and analysis of our financial condition and results of operations is based on our condensed consolidated financial statements, which have been prepared in accordance with generally accepted accounting principles in the United States. The preparation of these condensed consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the condensed consolidated financial statements, as well as the reported expenses incurred during the reporting periods. Our estimates are based on our historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. During the three months ended March 31, 2023, there were no material changes to our critical accounting estimates from those described in Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our Annual Report on Form 10-K for the year ended December 31, 2022.

Contractual Obligations, Commitments and Contingencies

Except for the additional borrowing under the Loan Agreement in February 2023 and described in Note 8 to our condensed consolidated financial statements appearing elsewhere in this Quarterly Report on Form 10-Q, during the three months ended March 31, 2023, there were no material changes to our contractual obligations and commitments from those described in Part

II, Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in our Annual Report on Form 10-K for the year ended December 31, 2022.

Emerging Growth Company Status

The Jumpstart Our Business Startups Act of 2012 permits an “emerging growth company” such as us to take advantage of an extended transition period to comply with new or revised accounting standards applicable to public companies until those standards would otherwise apply to private companies. We have elected to use the extended transition period for complying with new or revised accounting standards and will do so until such time that we either (1) irrevocably elect to “opt out” of such extended transition period or (2) no longer qualify as an emerging growth company.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

We are exposed to market risk related to changes in interest rates. As of March 31, 2023, our cash equivalents primarily consisted of short-term money market funds. As of March 31, 2023, our short-term investments consisted of commercial paper and U.S. Treasury securities. Our primary exposure to market risk is interest rate sensitivity, which is affected by changes in the general level of U.S. interest rates. Due to the short-term nature of the investments in our portfolio and the low risk profile of our investments, an immediate change of 100 basis points in interest rates would not have a material effect on the fair market value of our investment portfolio or on our financial position or results of operations.

As of March 31, 2023, the aggregate principal amount outstanding under the Loan Agreement was $25.0 million, which bears interest at a variable rate equal to the greater of (i) 7.85% and (ii) the sum of (A) the prime rate last quoted in The Wall Street Journal (or a comparable replacement rate if The Wall Street Journal ceases to quote such rate) and (B) 3.85%; provided that the interest rate cannot exceed 9.60%. The interest rate as of March 31, 2023 was 9.60%.

We are not currently exposed to significant market risk related to changes in foreign currency exchange rates; however, we have contracted with and may continue to contract with foreign vendors that are located in Europe. Our operations may be subject to fluctuations in foreign currency exchange rates in the future.

Inflation generally affects us by increasing our cost of labor and clinical trial costs. We do not believe that inflation had a material effect on our business, financial condition, or results of operations during the three months ended March 31, 2023 and 2022.

Item 4. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and our Chief Financial Officer (our principal executive officer and principal financial officer, respectively), evaluated the effectiveness of our disclosure controls and procedures as of March 31, 2023. The term “disclosure controls and procedures,” as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, or 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 the company’s management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure. Our management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and our management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of March 31, 2023, our Chief Executive Officer and our Chief Financial Officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15(d)-15(f) under the Exchange Act) that occurred during the period covered by this Quarterly Report on Form 10-Q that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II—OTHER INFORMATION

Item 1A. Risk Factors.

In addition to all of the other information set forth in this Quarterly Report on Form 10-Q, you should carefully consider the factors discussed in Part I, Item 1A, "Risk Factors" in our Annual Report on Form 10–K for the year ended December 31, 2022, which could materially affect our business, financial condition or results of operations. The risk factors disclosure in our Annual Report on Form 10-K for the year ended December 31, 2022 is qualified by the information that is described in this Quarterly Report on Form 10-Q. The risks described in our Annual Report on Form 10–K for the year ended December 31, 2022 are not the only risks facing our Company. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial also may materially adversely affect our business, financial condition or future results.

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

Recent Sales of Unregistered Equity Securities

We did not issue any securities that were not registered under the Securities Act of 1933, as amended, or the Securities Act, during the three months ended March 31, 2023.

Use of Proceeds from Initial Public Offering

On July 28, 2020, we completed our Initial Public Offering ("IPO"), pursuant to which we issued and sold 7,000,000 shares of our common stock at a public offering price of $16.00 per share, and on July 30, 2020, we sold an additional 1,050,000 shares of our common stock at a price of $16.00 per share pursuant to the exercise by the underwriters of their option to purchase additional shares.

We received aggregate gross proceeds from our IPO, inclusive of the exercise by the underwriters of their option to purchase additional shares, of approximately $128.8 million, or aggregate net proceeds of approximately $115.9 million after deducting underwriting discounts and commissions and offering expenses.

We have used approximately $78.9 million of the net proceeds from the IPO as of March 31, 2023 to fund clinical development of INZ-701, to fund our preclinical research and development activities, and for working capital and other general corporate purposes. There has been no material change in our planned use of the net proceeds from our IPO as described in our final prospectus filed pursuant to Rule 424(b)(4) under the Securities Act with the SEC on July 24, 2020.

Item 6. Exhibits.

Exhibit Number	Description
3.1	Restated Certificate of Incorporation of the Registrant (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K (File No. 001-39397) filed with the Securities and Exchange Commission on July 28, 2020).
3.2	Amended and Restated Bylaws of the Registrant (incorporated by reference to Exhibit 3.2 to the Registrant's Current Report on Form 8-K (File No. 001-39397) filed with the Securities and Exchange Commission on July 28, 2020).
10.1*	Employment Agreement, dated March 21, 2023, by and between the Registrant and Douglas Treco.
10.2*	Transition and Separation Letter Agreement, dated March 21, 2023, by and between the Registrant and Axel Bolte.
10.3*	Consulting Agreement, dated April 30, 2023, by and between the Registrant and Axel Bolte.
10.4*	Employment Agreement, dated March 14, 2023, by and between the Registrant and Matthew Winton.
10.5*	Summary of Non-Employee Director Compensation Policy.
10.6	2023 Inducement Stock Incentive Plan (incorporated by reference to Exhibit 99.3 to the Registrant's Registration Statement on Form S-8 (File No. 333-270733) filed with the Securities and Exchange Commission on March 22, 2023).
10.7*	Form of Nonstatutory Stock Option Agreement under 2023 Inducement Stock Incentive Plan.
10.8*	Form of Restricted Stock Unit Agreement under 2023 Inducement Stock Incentive 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, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Certification of Principal Financial Officer 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.
32.1+	Certification of Principal Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2+	Certification of Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	Inline XBRL Instance Document
101.SCH	Inline XBRL Taxonomy Extension Schema Document
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File (formatted as Inline XBRL with applicable taxonomy extension information contained in Exhibits 101).

* Filed herewith.

+ Furnished herewith.

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.

INOZYME PHARMA, INC.

Date: May 9, 2023

By: /s/ Douglas A. Treco

Douglas A. Treco
Chief Executive Officer
(Principal Executive Officer)

Date: May 9, 2023

By: /s/ Sanjay Subramanian

Sanjay Subramanian
Chief Financial Officer
(Principal Financial
Officer and Principal Accounting Officer)

Exhibit 10.1

Inozyme Pharma, Inc.
321 Summer Street
Suite 400
Boston, Massachusetts 02210

March 21, 2023

Doug Treco
[**]

Dear Doug:

On behalf of Inozyme Pharma Inc. (the "Company"), I am pleased to offer you employment with the Company. The purpose of this letter (the "Letter Agreement") is to summarize the terms of your employment with the Company, should you accept our offer:

1. Position and Duties. You will be employed to serve as the Company's Chief Executive Officer, commencing employment effective April 1, 2023. You will be employed on a full time basis, and you will report to the Company's Board of Directors (the "Board") and have such duties and responsibilities as are customary for such position. You agree to devote your best efforts, skill, knowledge, attention and energies to the advancement of the Company's business and interests and to the performance of your duties and responsibilities as an employee of the Company. You agree to abide by the rules, regulations, personnel practices and policies of the Company and any changes therein that may be adopted from time to time by the Company. You will be primarily located in the Company's Boston area offices and may be required to travel as directed by the Company and consistent with the Company's business needs.

2. Base Salary. Your base salary will be at the rate of twenty thousand eight hundred thirty-three dollars and thirty-three cents ($20,833.33) per regular semi-monthly pay period (which if annualized equals five hundred thousand dollars ($500,000)), subject to tax and other withholdings as required by law, and will be paid in accordance with the Company's regularly established payroll procedures. Such base salary may be adjusted from time to time in accordance with normal business practice and in the sole discretion of the Company.

3. Discretionary Bonus. Following the end of each calendar year, and subject to the approval of the Board (or a committee thereof), you will be eligible for a discretionary retention and performance bonus, targeted at fifty-five percent (55%) of your gross base pay actually earned during the applicable calendar year, based on your individual performance and the Company's performance during the applicable calendar year, as determined by the Company in its sole discretion (the "Discretionary Bonus"). You must be an active employee of the Company on the date any bonus is distributed in order to be eligible for and to earn any bonus award, as it also serves as an incentive to remain employed by the Company. Any bonus hereunder will be awarded and paid before March 15th of the calendar year following that to which such bonus relates, and will be subject to tax and other withholdings as required by law.

4. Benefits and Expenses.

a. You may participate in any and all benefit programs that the Company establishes and makes available to its employees from time to time, provided you are eligible under (and subject to all provisions of) the plan documents governing those programs. The benefit programs made available by the Company, and the rules, terms and conditions for participation in such benefit programs, may be changed by the Company at any time without advance notice (other than as required by such programs or under law).

b. All reasonable business expenses that are documented by you and incurred in the ordinary course of business will be reimbursed in accordance with the Company's standard policies and procedures.

c. In connection with your commencement of employment with the Company, the Company will pay you a signing bonus of $7,500, less applicable taxes and withholdings, in the first payroll after your commencement of employment.

5. Vacation. You will be eligible for paid vacation time in accordance with Company policy.

6. Equity. Subject to the approval of the Board and in consideration of and contingent upon you entering into the non-competition provisions of the Restrictive Covenant Agreement (as defined in Section 9 below) and adhering to the non-competition provisions set forth therein, the Company will grant to you, effective on or after your first day of employment, an option (the "Option") under the Company's 2020 Stock Incentive Plan (the "Plan") to purchase an aggregate of 800,000 shares of common stock of the Company, with such Option having an exercise price per share equal to the fair market value of the common stock on the date of grant of the Option, and with such Option being an incentive stock option to the maximum extent permitted by law and under the Plan. The Option shall vest in equal monthly installments with respect to 2.0833% of the shares subject thereto until the fourth anniversary of April 1, 2023, subject to your continued service through each vesting date, and shall otherwise be subject to all terms set forth in the Plan and in a separate option agreement. In addition, subject to the approval of the Board and in further consideration of and contingent upon you entering into the Restrictive Covenant Agreement and adhering to the non-competition provisions set forth therein, the Company will grant to you, effective on or after your first day of employment, a restricted stock unit award (the "RSUs") with respect to 100,000 shares of the common stock of the Company that will vest ratably in annual installments on each of the first four anniversaries of April 1, 2023, subject to your continued service through each vesting date, and shall otherwise be subject to all the terms set forth in the Plan and in a separate restricted stock unit agreement. In the event of a termination pursuant to Section 7(a) below, the Option and the RSUs will become vested with respect to the number of shares subject to such equity awards that would have vested within the one year period following your termination had you remained employed by the Company during such period (the "Acceleration"), with such Acceleration subject to the terms and conditions set forth in Section 7(a).

7. Severance Benefits. You are eligible to receive the following severance benefits in accordance with the terms and conditions set forth below:

a. **Termination by the Company without Cause or by You for Good Reason Not In Connection with a Change In Control.** If your employment is terminated by the Company without Cause or you terminate your employment for Good Reason (each as defined below) and such termination does not take place during the sixty (60) day period prior to a Change in Control (as defined below) or the twelve (12) month period following a Change in Control, and provided you execute and allow to become effective (within 60 days following the termination or such shorter period as may be directed by the Company) a separation and release of claims agreement in a form to be provided by the Company on or about the termination date (which will include, at a minimum, a release of all releasable claims, non-disparagement and cooperation obligations, a reaffirmation of your continuing obligations under any existing restrictive covenant agreements, and an agreement not to compete with the Company for twelve (12) months following your separation from employment) (a "Release Agreement"), the Company will provide you with the following severance benefits (subject to the terms of Appendix A hereto):

i. The Company will pay you as severance pay an amount equivalent to twelve (12) months of your then current base salary, less all applicable taxes and withholdings, which severance pay will be paid in installments in accordance with the Company's regular payroll practices beginning in the Company's first regular payroll cycle after the Release Agreement becomes effective; provided, however, that if the 60th day referenced above occurs in the calendar year following the date of your termination, then the severance payments shall begin no earlier than January 1 of such subsequent calendar year.

ii. Should you timely elect and be eligible to continue receiving group medical coverage pursuant to the "COBRA" law, and so long as the Company can provide such benefit without violating the nondiscrimination requirements of applicable law, the Company will continue to pay the share of the premium for such coverage that is paid by the Company for active and similarly-situated employees who receive the same type of coverage until the earlier of (x) twelve (12) months following your termination date, or (y) the date upon which you commence full-time employment (or employment that provides you with eligibility for healthcare benefits substantially comparable to those provided by the Company) with an entity other than the Company. If applicable, the remaining balance of any premium costs shall timely be paid by you on a monthly basis for as long as, and to the extent that, you remain eligible for COBRA continuation.

iii. The Company will pay you a pro-rated portion of the target Discretionary Bonus, if any, that the Board determines in good faith and in its sole discretion you would have received based on your individual performance and the Company's performance during the applicable calendar year until your date of termination, to be paid, less all applicable taxes and withholdings, in a lump sum on the date the

first installment of severance pay is paid. For the avoidance of doubt, for purposes of calculating the amount due under this Section 7(a)(iii), your target Discretionary Bonus shall be equal to the percent described in Section 3 of your annualized base salary at the time of your termination.

b. **Termination by the Company without Cause or by You for Good Reason In Connection with a Change In Control.** If your employment is terminated by the Company without Cause or you terminate your employment for Good Reason and such termination takes place during the sixty (60) day period prior to a Change in Control (as defined below) or the twelve (12) month period following a Change in Control, and provided you execute and allow to become effective a Release Agreement, the Company will provide you with the following severance benefits (subject to the terms of Appendix A hereto):

i. The Company will pay you as severance pay an amount equivalent to eighteen (18) months of your then current base salary, less all applicable taxes and withholdings, which severance pay will be paid in installments in accordance with the Company's regular payroll practices beginning in the Company's first regular payroll cycle after the Release Agreement becomes effective; provided, however, that if the 60th day referenced above occurs in the calendar year following the date of your termination, then the severance payments shall begin no earlier than January 1 of such subsequent calendar year.

ii. Should you timely elect and be eligible to continue receiving group medical coverage pursuant to the "COBRA" law, and so long as the Company can provide such benefit without violating the nondiscrimination requirements of applicable law, the Company will continue to pay the share of the premium for such coverage that is paid by the Company for active and similarly-situated employees who receive the same type of coverage until the earlier of (x) eighteen (18) months following your termination date, or (y) the date upon which you commence full-time employment (or employment that provides you with eligibility for healthcare benefits substantially comparable to those provided by the Company) with an entity other than the Company. If applicable, the remaining balance of any premium costs shall timely be paid by you on a monthly basis for as long as, and to the extent that, you remain eligible for COBRA continuation.

iii. The Company will pay you 150% of your annual target Discretionary Bonus, less all applicable taxes and withholdings, for the year in which your termination occurs in a lump sum on the date the first installment of severance pay is paid. For the avoidance of doubt, for purposes of calculating the amount due under this Section 7(b)(iii), your target Discretionary Bonus shall be equal to the percent of your annualized base salary at the time of your termination that is set forth in Section 3.

iv. All outstanding and unvested stock options and other equity awards in each case

that vest solely based on continued service that are then held by you shall become fully vested and exercisable and, with respect to any stock options then held by you, those options shall remain exercisable for the period of time set forth in the applicable grant agreement; provided, however, that no such accelerated vesting shall occur unless and until the closing of a Change of Control which closing occurs within 60 days of the date of termination of your employment (the period between the date of termination of your employment and the closing of such a Change of Control, the "Interim Period"). During the Interim Period, any equity awards that were vested as of the date of termination shall continue to be subject to the terms of the respective original award agreements, and any equity awards that were unvested shall remain outstanding but shall not vest or become exercisable unless or until a Change of Control closes on or before the last day of the Interim Period.

c. Definitions. For purposes of this Letter Agreement:

i. "Cause" means any of: (a) your conviction of, or plea of guilty or nolo contendere to, any crime involving dishonesty or moral turpitude or any felony; or (b) a good faith finding by the Company that you have (i) engaged in dishonesty, willful misconduct or gross negligence, (ii) committed an act that materially injures or would reasonably be expected to materially injure the reputation, business or business relationships of the Company, (iii) materially breached the terms of any agreement between you and the Company, including without limitation this Letter Agreement, the Restrictive Covenant Agreement (as defined below) or any other restrictive covenant or confidentiality agreement with the Company; or (iv) failed or refused to comply in any material respect with the Company's material policies or procedures.

ii. "Good Reason" means the occurrence, without your prior written consent, of any of the following events: (a) a material reduction in your authority, duties, or responsibilities; (b) the relocation of the principal place at which you provide services to the Company by at least 50 miles and to a location such that your daily commuting distance is increased; (c) a material reduction of your base salary (except for across the board pay cuts of all management level employees of the Company); or (d) a material breach by the Company of its obligations under this Letter Agreement. No resignation will be treated as a resignation for Good Reason unless (i) you have given written notice to the Company of your intention to terminate your employment for Good Reason, describing the grounds for such action, no later than 90 days after the first occurrence of such circumstances, (ii) you have provided the Company with at least 30 days in which to cure the circumstances, and (iii) if the Company is not successful in curing the circumstances, you end your employment within 30 days following the cure period in (ii).

iii. "Change of Control" means any of the following events provided that such event also constitutes a "change in control event" within the meaning of Treasury

Regulation Section 1.409A-3(i)(5):

(a) the acquisition by an individual, entity or group (within the meaning of Section 13(d)(3) or 14(d)(2) of the Exchange Act) (a "Person") of beneficial ownership of any capital stock of the Company if, after such acquisition, such Person beneficially owns (within the meaning of Rule 13d-3 under the Exchange Act) 50% or more of either (x) the then-outstanding shares of common stock of the Company (the "Outstanding Company Common Stock") or (y) the combined voting power of the then-outstanding securities of the Company entitled to vote generally in the election of directors (the "Outstanding Company Voting Securities"); *provided, however*, that for purposes of this subsection (A), the following acquisitions shall not constitute a Change in Control Event: (1) any acquisition directly from the Company (excluding an acquisition pursuant to the exercise, conversion or exchange of any security exercisable for, convertible into or exchangeable for common stock or voting securities of the Company, unless the Person exercising, converting or exchanging such security acquired such security directly from the Company or an underwriter or agent of the Company), (2) any acquisition by any employee benefit plan (or related trust) sponsored or maintained by the Company or any corporation controlled by the Company, or (3) any acquisition by any corporation pursuant to a Business Combination (as defined below) which complies with clauses (x) and (y) of subsection (C) of this definition; or

(b) a change in the composition of the Board that results in the Continuing Directors (as defined below) no longer constituting a majority of the Board (or, if applicable, the Board of Directors of a successor corporation to the Company), where the term "Continuing Director" means at any date a member of the Board (x) who was a member of the Board on the date of your commencement of employment with the Company or (y) who was nominated or elected subsequent to such date by at least a majority of the directors who were Continuing Directors at the time of such nomination or election or whose election to the Board was recommended or endorsed by at least a majority of the directors who were Continuing Directors at the time of such nomination or election; *provided, however*, that there shall be excluded from this clause (y) any individual whose initial assumption of office occurred as a result of an actual or threatened election contest with respect to the election or removal of directors or other actual or threatened solicitation of proxies or consents, by or on behalf of a person other than the Board; or

(c) the consummation of a merger, consolidation, reorganization, recapitalization or share exchange involving the Company or a sale or other disposition of all or substantially all of the assets of the Company (a "Business Combination"), unless, immediately following such Business Combination, each of the following two conditions is satisfied: (x) all or substantially all of the individuals and entities who were the beneficial owners of the Outstanding Company Common Stock and Outstanding Company Voting Securities immediately prior to such Business Combination beneficially own, directly or indirectly, more than 50% of the then-outstanding shares of common stock and the combined voting power of the

then-outstanding securities entitled to vote generally in the election of directors, respectively, of the resulting or acquiring corporation in such Business Combination (which shall include, without limitation, a corporation which as a result of such transaction owns the Company or substantially all of the Company's assets either directly or through one or more subsidiaries) (such resulting or acquiring corporation is referred to herein as the "Acquiring Corporation") in substantially the same proportions as their ownership of the Outstanding Company Common Stock and Outstanding Company Voting Securities, respectively, immediately prior to such Business Combination and (y) no Person (excluding any employee benefit plan (or related trust) maintained or sponsored by the Company or by the Acquiring Corporation) beneficially owns, directly or indirectly, 50% or more of the then-outstanding shares of common stock of the Acquiring Corporation, or of the combined voting power of the then-outstanding securities of such corporation entitled to vote generally in the election of directors (except to the extent that such ownership existed prior to the Business Combination); or

(d) the liquidation or dissolution of the Company.

For the avoidance of doubt, you will not be eligible for, nor shall you have a right to receive, any payments or benefits from the Company following your termination from employment other than as set forth in this Section 7.

8. Section 280G.

a. Notwithstanding any other provision of this Letter Agreement, except as set forth in Section 8(b), in the event that the Company undergoes a "Change in Ownership or Control" (as defined below), the Company shall not be obligated to provide to you a portion of any "Contingent Compensation Payments" (as defined below) that you would otherwise be entitled to receive to the extent necessary to eliminate any "excess parachute payments" (as defined in Code Section 280G(b)(1)) for you. For purposes of this Section 8, the Contingent Compensation Payments so eliminated shall be referred to as the "Eliminated Payments" and the aggregate amount (determined in accordance with Treasury Regulation Section 1.280G-1, Q/A-30 or any successor provision) of the Contingent Compensation Payments so eliminated shall be referred to as the "Eliminated Amount."

b. Notwithstanding the provisions of 8(a), no such reduction in Contingent Compensation Payments shall be made if the Eliminated Amount (computed without regard to this sentence) exceeds 100% of the aggregate present value (determined in accordance with Treasury Regulation Section 1.280G-1, Q/A-31 and Q/A-32 or any successor provisions) of the amount of any additional taxes that would be incurred by you if the Eliminated Payments (determined without regard to this sentence) were paid to you (including, state and federal income taxes on the Eliminated Payments, the excise tax imposed by Section 4999 of the Code payable with respect to all of the Contingent Compensation Payments in excess of your "base amount" (as defined in Section 280G(b)(3) of the Code), and any withholding taxes). The override of such reduction in Contingent Compensation Payments pursuant to this Section 8(b) shall be referred to as a "Section 8(b) Override." For purposes of this paragraph, if any federal or state income

taxes would be attributable to the receipt of any Eliminated Payment, the amount of such taxes shall be computed by multiplying the amount of the Eliminated Payment by the maximum combined federal and state income tax rate provided by law.

c. For purposes of this Section 8 the following terms shall have the following respective meanings:

(I) "Change in Ownership or Control" shall mean a change in the ownership or effective control of the Company or in the ownership of a substantial portion of the assets of the Company determined in accordance with Section 280G(b)(2) of the Code.

(II) "Contingent Compensation Payment" shall mean any payment (or benefit) in the nature of compensation that is made or made available (under this letter agreement or otherwise) to a "disqualified individual" (as defined in Section 280G(c) of the Code) and that is contingent (within the meaning of Section 280G(b)(2)(A)(i) of the Code) on a Change in Ownership or Control of the Company.

d. Any payments or other benefits otherwise due to you following a Change in Ownership or Control that could reasonably be characterized (as determined by the Company) as Contingent Compensation Payments (the "Potential Payments") shall not be made until the dates provided for in this Section 8(d). Within 30 days after each date on which you first become entitled to receive (whether or not then due) a Contingent Compensation Payment relating to such Change in Ownership or Control, the Company shall determine and notify you (with reasonable detail regarding the basis for its determinations) (i) which Potential Payments constitute Contingent Compensation Payments, (ii) the Eliminated Amount and (iii) whether the Section 8(b) Override is applicable. Within 30 days after delivery of such notice to you, you shall deliver a response to the Company (the "Executive Response") stating either (A) that you agree with the Company's determination pursuant to the preceding sentence, or (B) that you disagree with such determination, in which case you shall set forth (i) which Potential Payments should be characterized as Contingent Compensation Payments, (ii) the Eliminated Amount, and (iii) whether the Section 8(b) Override is applicable. In the event that you fail to deliver an Executive Response on or before the required date, the Company's initial determination shall be final. If and to the extent that any Contingent Compensation Payments are required to be treated as Eliminated Payments pursuant to this Section 8, then the payments shall be reduced or eliminated, as determined by the Company, in the following order: (i) any cash payments, (ii) any taxable benefits, (iii) any nontaxable benefits, and (iv) any vesting of equity awards in each case in reverse order beginning with payments or benefits that are to be paid the farthest in time from the date that triggers the applicability of the excise tax, to the extent necessary to maximize the Eliminated Payments. If you state in the Executive Response that you agree with the Company's determination, the Company shall make the Potential Payments to you within three business days following delivery to the Company of the Executive Response (except for any Potential Payments which are not due to be made until after such date, which Potential Payments shall be made on the date on which they are due). If you state in the Executive Response that you disagree with the Company's determination, then, for a period of 60 days following delivery of the Executive Response, you and the Company shall use good faith efforts to resolve such

dispute. If such dispute is not resolved within such 60-day period, such dispute shall be settled exclusively by arbitration in the Commonwealth of Massachusetts, in accordance with the rules of the American Arbitration Association then in effect. Judgment may be entered on the arbitrator's award in any court having jurisdiction. The Company shall, within three business days following delivery to the Company of the Executive Response, make to you those Potential Payments as to which there is no dispute between the Company and you regarding whether they should be made (except for any such Potential Payments which are not due to be made until after such date, which Potential Payments shall be made on the date on which they are due). The balance of the Potential Payments shall be made within three business days following the resolution of such dispute. Subject to the limitations contained in Sections 8(a) and 8(b) hereof, the amount of any payments to be made to you following the resolution of such dispute shall be increased by the amount of the accrued interest thereon computed at the prime rate announced from time to time by The Wall Street Journal, compounded monthly from the date that such payments originally were due.

e. The provisions of this Section 8 are intended to apply to any and all payments or benefits available to you under this letter agreement or any other agreement or plan of the Company under which you may receive Contingent Compensation Payments.

9. Restrictive Covenants/Absence of Restrictions. In exchange for your employment with the Company pursuant to the terms and conditions herein and, with respect to the non-competition provision, the grant of equity described in Section 6, you hereby agree to execute the enclosed Proprietary Rights, Non-Disclosure, Developments, Non-Competition and Non-Solicitation Agreement (the "Restrictive Covenant Agreement"), a copy of which is attached hereto as Appendix B. By executing this Letter Agreement, you acknowledge that your eligibility for the grant of equity set forth in Section 6 of this Letter Agreement is contingent upon your agreement to the non-competition provisions set forth in the Restrictive Covenant Agreement. You further acknowledge that such consideration was mutually agreed upon by you and the Company and is fair and reasonable in exchange for your compliance with such non-competition obligations and that you were provided at least ten (10) business days to review the Restrictive Covenant Agreement. You represent that you are not bound by any employment contract, restrictive covenant or other restriction preventing (or that purports to prevent) you from entering into employment with or carrying out your responsibilities for the Company, or which is in any way inconsistent with the terms of this Letter Agreement.

10. Employment Eligibility. You agree to provide to the Company, within three (3) days of your date of hire, documentation of your eligibility to work in the United States, as required by the Immigration Reform and Control Act of 1986. You may need a work visa in order to be eligible to work in the United States. If that is the case, your employment with the Company will be conditioned upon your obtaining a work visa in a timely manner as determined by the Company.

11. Background and Reference Checks. The Company's offer of at-will employment is contingent upon your authorization and successful completion of background and reference checks. The Company may obtain background reports both pre-employment and from time to time during your employment with the Company, as necessary.

12. At-Will Employment. This Letter Agreement shall not be construed as an agreement, either express or implied, to employ you for any stated term, and shall in no way alter the Company's policy of employment at will, under which both you and the Company remain free to terminate the employment relationship, with or without cause, at any time, with or without notice. Although your job duties, title, compensation and benefits, as well as the Company's personnel policies and procedures, may change from time to time, the "at-will" nature of your employment may only be changed by a written agreement signed by you and the Board**,** which expressly states the intention to modify the at-will nature of your employment. Similarly, nothing in this Letter Agreement shall be construed as an agreement, either express or implied, to pay you any compensation or grant you any benefit beyond the end of your employment with the Company, except to the extent explicitly set forth in Section 7 hereof.

13. Company Premises and Property. The Company's premises, including all workspaces, furniture, documents, and other tangible materials, and all information technology resources of the Company (including computers, data and other electronic files, and all internet and email) are subject to oversight and inspection by the Company at any time. Company employees should have no expectation of privacy with regard to any Company premises, materials, resources, or information.

14. Entire Agreement/Governing Law. This Letter Agreement is your formal offer of employment and supersedes any and all prior or contemporaneous agreements, discussions and understandings, whether written or oral, relating to the subject matter of this Letter Agreement. This Letter Agreement shall be governed by and construed in accordance with the laws of the Commonwealth of Massachusetts (without reference to the conflict of laws provisions thereof). Any action, suit or other legal proceeding arising under or relating to any provision of this Letter Agreement shall be commenced only in a court of the Commonwealth of Massachusetts (or, if appropriate, a federal court located within the Commonwealth of Massachusetts), and the Company and you each consents to the jurisdiction of such a court.

* * *

If you would like to accept this offer of employment on the terms set forth herein, please sign and return this Letter Agreement.

We look forward to you becoming a part of the Inozyme team and helping to build what we hope will be an exceptional organization.

Very Truly Yours,

By: /s/ Sanjay Subramanian
Name: Sanjay Subramanian
Title: Chief Financial Officer

The foregoing correctly sets forth the terms of my employment by Inozyme Pharma, Inc. I am not relying on any representations other than those set forth above.

/s/ Douglas A. Treco Date: 3/21/2023

Name: Doug Treco

APPENDIX A

Payments Subject to Section 409A

15. Subject to this Appendix A, any severance payments that may be due under the Letter Agreement to which it is attached shall begin only upon the date of your "separation from service" (determined as set forth below) which occurs on or after the termination of your employment. The following rules shall apply with respect to distribution of the severance payments, if any, to be provided to you under the Letter Agreement, as applicable:

(a) It is intended that each installment of the severance payments under the Letter Agreement shall be treated as a separate "payment" for purposes of Section 409A of the Internal Revenue Code and the guidance issued thereunder ("Section 409A"). Neither the Company nor you shall have the right to accelerate or defer the delivery of any such payments except to the extent specifically permitted or required by Section 409A.

(b) If, as of the date of your "separation from service" from the Company, you are not a "specified employee" (within the meaning of Section 409A), then each installment of the severance payments shall be made on the dates and terms set forth in the Letter Agreement.

(c) If, as of the date of your "separation from service" from the Company, you are a "specified employee" (within the meaning of Section 409A), then:

(i) Each installment of the severance payments due under the Letter Agreement that, in accordance with the dates and terms set forth herein, will in all circumstances, regardless of when your separation from service occurs, be paid within the short-term deferral period (as defined under Section 409A) shall be treated as a short-term deferral within the meaning of Treasury Regulation Section 1.409A-1(b)(4) to the maximum extent permissible under Section 409A and shall be paid on the dates and terms set forth in the Letter Agreement; and

(ii) Each installment of the severance payments due under the Letter Agreement that is not described in this Appendix A, Section 1(c)(i) and that would, absent this subsection, be paid within the six-month period following your "separation from service" from the Company shall not be paid until the date that is six months and one day after such separation from service (or, if earlier, your death) (the "New Payment Date"), with any such installments that are required to be delayed being accumulated during the six-month period and paid in a lump sum on the New Payment Date and any subsequent installments, if any, being paid in accordance with the dates and terms set forth herein; provided, however, that the preceding provisions of this sentence shall not apply to any installment of payments if and to the maximum extent that such installment is deemed to be paid under a separation pay plan that does not provide for a deferral of compensation by reason of the application of Treasury Regulation 1.409A-1(b)(9)(iii) (relating to separation pay upon an involuntary separation from service). Any installments that qualify for

the exception under Treasury Regulation Section 1.409A-1(b)(9)(iii) must be paid no later than the last day of your second taxable year following the taxable year in which the separation from service occurs.

16. The determination of whether and when your separation from service from the Company has occurred shall be made in a manner consistent with, and based on the presumptions set forth in, Treasury Regulation Section 1.409A-1(h). Solely for purposes of this Appendix A, Section 2, "Company" shall include all persons with whom the Company would be considered a single employer under Section 414(b) and 414(c) of the Internal Revenue Code.

17. All reimbursements and in-kind benefits provided under the Letter Agreement shall be made or provided in accordance with the requirements of Section 409A to the extent that such reimbursements or in-kind benefits are subject to Section 409A, including, where applicable, the requirements that (i) any reimbursement is for expenses incurred during your lifetime (or during a shorter period of time specified in the Letter Agreement), (ii) the amount of expenses eligible for reimbursement during a calendar year may not affect the expenses eligible for reimbursement in any other calendar year, (iii) the reimbursement of an eligible expense will be made on or before the last day of the calendar year following the year in which the expense is incurred and (iv) the right to reimbursement is not subject to set off or liquidation or exchange for any other benefit.

18. The Company makes no representation or warranty and shall have no liability to you or to any other person if any of the provisions of the Letter Agreement (including this Appendix) are determined to constitute deferred compensation subject to Section 409A but that do not satisfy an exemption from, or the conditions of, that section.

Exhibit 10.2

Inozyme Pharma, Inc.
321 Summer Street
Suite 400
Boston, Massachusetts 02210

March 21, 2023

Axel Bolte
[**]

Dear Axel:

As we have discussed, you are retiring and resigning from employment with Inozyme Pharma Switzerland GmbH (the "Company"), effective April 30, 2023 (the "Separation Date"). By countersigning and returning this letter agreement, you will be entering into a binding agreement with the Company and will be agreeing to the terms and conditions set forth in the numbered paragraphs below, including the release of claims set forth in paragraph 3. The severance benefits described in paragraph 2 below will be subject to you adhering to this letter agreement and returning a signed waiver in the form of Annex 1 on but not earlier than May 31, 2023 and not revoking your agreement to the waiver in Annex 1 (as described below) during the seven (7) day period after you have signed or timely revoking paragraph 4(b) below, in either case by notifying me in writing.

Although your receipt of the severance benefits is expressly conditioned on you entering into this letter agreement and Annex 1 and not revoking Annex 1 or paragraph 4(b), the following will apply regardless of whether or not you do so:

- As of the Separation Date, all usual salary payments from the Company as well as any of its direct and indirect affiliates (i.e. any entity which, directly or indirectly, controls, or is controlled by, or is under common control with such entity) from time to time the "Group", each a "Group Company") will cease and any continuing benefits you were entitled to as of the Separation Date under Company- or Group-provided benefit plans, programs, or practices will terminate, except as required by law or as otherwise set forth herein.

- You will receive on the Separation Date payment for your final wages accrued through the Separation Date (less applicable deductions), if not already paid at the ordinary payroll date.

- Until the Separation Date you have 53.33 accrued or accruing vacation hours. You will endeavor to take any vacation days by the Separation Date. If this is not possible, the remainder will be paid out at a rate of $275.60 gross (less applicable deductions) per hour of vacation time.

- You are obligated to keep confidential and not to use or disclose any and all non-public information concerning the Company and/or the Group that you acquired during the course of your employment with the Company or any other Group Company, including any non-public information concerning the Company's and/or the Group's business

affairs, business prospects, and financial condition, except as otherwise permitted by paragraph 10 below. Further, you remain subject to any and all continuing obligations that you may have pursuant to any previous agreement with the Company and/or any other Group Company, including, as may be applicable and without limitation, the Proprietary Rights, Non-Disclosure, Developments, Non-Competition and Non-Solicitation Agreement dated July 1, 2020 (the "Restrictive Covenants Agreement"); provided, that, the post-employment term of any such covenants shall commence from the Separation Date.

- You must return to the Company no later than the Separation Date all property of the Company and/or any other Group Company (other than your laptop and cell phone previously provided by the Company in accordance with the terms of paragraph 7 below). However, if you enter into the Consulting Agreement described below, you may retain such Company and/or Group Company property as needed to perform the services contemplated by such Consulting Agreement while performing services under the Consulting Agreement, and for so long as you serve on the Inozyme Board (as defined below), you may retain such Company and/or Group Company property as needed to perform services as a member of such board. For the avoidance of doubt, you may retain your contacts, calendar and personal correspondence and all information needed for your personal tax return preparation purposes.

- The Company will notify the pension fund regarding the termination of your employment. Please be aware that the current insurance coverage will end at the latest 31 days (accident insurance) respectively 30 days (pension insurance) after the Separation Date. You are advised to take out your own insurance.

The following numbered paragraphs set forth the terms and conditions that will also apply if you sign this letter agreement.

1. **Resignation from Position(s); Continued Board Service** – You hereby resign as of April 1, 2023 from your position as Chief Executive Officer of the Company, as President and Chief Executive Officer of Inozyme Pharma, Inc. ("Inozyme") and from any and all other positions you hold as an officer of the Company or any Group Company, and you further agree to execute and deliver any documents reasonably necessary to effectuate such resignations, as requested by the Company or any Group Company; provided, however, that if you timely sign and do not revoke Annex 1 and you do not timely revoke paragraph 4(b), you will continue to serve as a member of the Inozyme Board of Directors (the "Inozyme Board") following the Separation Date and further provided that, on the Separation Date, you will enter into the Consulting Agreement attached hereto as Annex 2 to serve as a Senior Advisor to the Company. For the avoidance of doubt, you will remain a Company employee through the Separation Date at the same compensation levels despite such resignations, making yourself available to assist with any transition duties requested by the Company but not providing regular services to the Company, and the Employment Contract between you and the Company dated March 24, 2021 (the "Employment Contract") will remain in effect and will continue to govern your employment through the Separation Date, provided, however, that you agree that you will not be eligible to terminate your employment for Good Reason (as defined in Exhibit A to the Employment Contract) after the date hereof. During this period, you shall be permitted to work remotely and shall not be required to provide services at levels greater than prior to the date hereof. Further, for the avoidance of doubt, it is understood that, while you continue to serve as a member of the Inozyme Board and/or as a consultant to the Company, your existing equity awards that vest solely based on the passage of time shall continue to vest and become free from forfeiture through such period of service on the Inozyme Board and/or as a consultant, and shall remain exercisable, in accordance with the applicable award agreement(s) and equity plan(s). In connection with

your separation from employment, you shall be paid, in accordance with applicable law, the Employment Contract, and the Company's regular payroll practices, all unpaid salary earned through the Separation Date, any amounts for accrued unused paid time off to which you are entitled through such date in accordance with Company policy and applicable law, and reimbursement of any properly incurred unreimbursed business expenses incurred through such date, less applicable deductions (together, the "Accrued Obligations"). As of the Separation Date, all salary payments from the Company will cease and any continuing benefits you were entitled to as of such date under Company-provided benefit plans, programs, or practices will terminate, except as required by applicable law or as otherwise specifically set forth in this letter agreement. Notwithstanding the foregoing, the Company retains the right to immediately terminate your employment prior to April 30, 2023 for Cause (as defined in the Employment Contract and pursuant to the procedures set forth therein) and, in such event, the date of such earlier termination shall become the Separation Date. For the avoidance of doubt, in the event of your valid termination for Cause prior to April 30, 2023, you will receive only the Accrued Obligations, and will not be eligible for or entitled to the severance benefits (as defined below) or any other payments or benefits following such termination.

2. **Severance Benefits** – If you timely sign and return the waiver in Annex 1 and do not revoke your acceptance and you do not timely revoke your acceptance of paragraph 4(b) below, and provided you abide in all material respects by all of the obligations set forth herein (provided, that the Company shall provide you with written notice of any such failure to abide and not less than 30 days to cure, if curable, as determined by the Company in its good faith discretion), the Company will provide you with the severance benefits described in Section a of Exhibit A of the Employment Contract in accordance with the terms set forth in the Employment Contract (with such amounts calculated in accordance with Section a of Exhibit A to the Employment Contract, but with the amount of severance pay to be paid pursuant to Section a(i) reduced by $23,505). For the avoidance of doubt, the severance amount payable in accordance with Section a(i) of Exhibit A to the Employment Contract equals $582,063 gross (subject to applicable deductions), less $23,505, and the amount payable in accordance with Section a(iii) of Exhibit A to the Employment Contract equals $105,250 gross (subject to applicable deductions). The severance benefits described in this paragraph 2 shall be collectively referred to herein as the "severance benefits" and shall be paid as set forth in Section a of Exhibit A to the Employment Contract. For the avoidance of doubt, you will also receive your Discretionary Bonus for the 2022 calendar year in accordance with Section 6 of the Employment Contract if such bonus has not already been paid to you. You will not be eligible to receive any annual equity awards in your capacity as an employee of the Company in 2023; provided, however, that if you remain on the Inozyme Board on the date of the 2023 annual stockholder meeting of Inozyme, you will be eligible to receive an annual equity grant in accordance with the director compensation policy of Inozyme on such date and you will also be eligible to receive any additional compensation provided in accordance with the director compensation policy of Inozyme as in effect from time to time and, further provided that you will be eligible to receive the compensation and option grant described in Section 3(a) of the Consulting Agreement attached as Annex 2 in accordance with the terms and conditions described in this letter agreement and the Consulting Agreement. The Company shall provide you with tax equalization and tax accounting support as under past practice in connection with your tax return preparation for 2022 and 2023. You will not be eligible for, nor shall you have a right to receive, any payments or benefits from the Company or any other Group Company following the Separation Date other than as set forth in this paragraph.

3. **Release** – In consideration of the severance benefits, which you acknowledge you would not otherwise be entitled to receive, you hereby fully, forever, irrevocably and unconditionally release, remise and discharge the Company, its affiliates, subsidiaries, parent companies, predecessors, and successors, and all of their respective past and present officers, directors and partners (each in their individual and corporate capacities) and, in their capacities as such, stockholders, members, managers, employees,

agents, representatives, plan administrators, attorneys, insurers and fiduciaries (collectively, the "Released Parties") from any and all claims, charges, complaints, demands, actions, causes of action, suits, rights, debts, sums of money, costs, accounts, reckonings, covenants, contracts, agreements, promises, doings, omissions, damages, executions, obligations, liabilities, and expenses (including attorneys' fees and costs), of every kind and nature that you ever had or now have through the date hereof against any or all of the Released Parties, whether known or unknown, including, but not limited to, any and all claims arising out of or relating to your employment with and/or separation from the Company and any other Group Company. This release shall not include any claims with respect to (i) accrued employee benefits, (ii) indemnification coverage that you may have now existing pursuant to the Company's articles of incorporation or bylaws or under any applicable indemnification agreements or directors' and officers' liability insurance; provided, however, that nothing herein shall be construed as an acknowledgment or guaranty by the Company that you have any such rights to indemnification, nor does this letter agreement create any additional rights for you to indemnification, (iii) rights as an equity award holder or shareholder of the Company, (iv) the severance benefits, (v) any claims which cannot be released under applicable law and (vi) any claims for breach of this letter agreement. The Company on behalf of itself and its affiliates, subsidiaries, parent companies, predecessors, and successors hereby fully, forever, irrevocably and unconditionally releases, remises and discharges you from any and all claims, charges, complaints, demands, actions, causes of action, suits, rights, debts, sums of money, costs, accounts, reckonings, covenants, contracts, agreements, promises, doings, omissions, damages, executions, obligations, liabilities, and expenses (including attorneys' fees and costs), of every kind and nature that they ever had or now have through the date hereof against you; provided, however, that notwithstanding the foregoing, nothing in this release (i) releases you from your continuing obligations under the terms of this letter agreement or the Restrictive Covenants Agreement, (ii) shall prevent the Company from bringing claims to enforce this letter agreement or the Restrictive Covenants Agreement, or (iii) releases you from any claims arising out of or related to any embezzlement, fraudulent or criminal conduct, willful misconduct or gross negligence by you.

4. **Continuing Obligations** –

a) You acknowledge and reaffirm your confidentiality and non-disclosure obligations discussed on page 1 of this letter agreement, as well as any and all continuing obligations set forth in any previous agreement you may have with the Company or any other Group Company (including, as may be applicable and without limitation, the Restrictive Covenants Agreement), which survive your separation from employment with the Company and any other Group Company.

b) As an express condition of your receipt of the severance benefits, you agree for a period of twelve (12) months following the Separation Date that you will not, without the prior written consent of the Company, in the geographic areas in which you provided services or had a material presence or influence at any time during your last two (2) years of employment (which, because you were a senior leader of the Company, includes anywhere that the Company does business), directly or indirectly, whether as an owner, partner, officer, director, employee, consultant, investor, lender or otherwise, except as the passive holder of not more than 1% of the outstanding stock of a publicly-held company, engage or assist others in engaging in any business or enterprise that is competitive with the Company's business, including but not limited to any business or enterprise that researches, develops, manufactures, markets, licenses, sells or provides any product or service that competes with any product or service researched, developed, manufactured, marketed, licensed, sold or provided, or planned to be researched, developed, manufactured, marketed, licensed, sold or provided by the Company (a "Competitive Company"), if you would be performing job duties or services for the Competitive Company that are of a similar type that you performed for the Company or Inozyme Pharma, Inc. at any time during your last two (2) years of employment. For the avoidance of doubt, because you were a senior leader of the Company, you

acknowledge that taking any leadership role in a Competitive Company would require you to perform job duties or services for the Competitive Company that are of a similar type that you performed for the Company or Inozyme Pharma, Inc. If any restriction set forth in the foregoing sentence is found by any court of competent jurisdiction to be unenforceable because it extends for too long a period of time or over too great a range of activities or in too broad a geographic area, it shall be interpreted to extend only over the maximum period of time, range of activities or geographic area as to which it may be enforceable. If you violate the non-competition provisions set forth in this paragraph, you shall continue to be bound by the restrictions set forth in such paragraph until a period of one year has expired without any violation of such provisions. You understand that you may revoke your agreement to this paragraph 4(b) for a period of seven (7) business days after you sign this letter agreement by notifying me in writing, and this paragraph 4(b) shall not be effective or enforceable until the expiration of this seven (7) business day revocation period.

5. **Non-Disparagement** – You understand and agree that, to the extent permitted by law and except as otherwise permitted by paragraph 10 below, you will not, in public or private, make any false, disparaging, derogatory or defamatory statements, online (including, without limitation, on any social media, networking, or employer review site) or otherwise, to any person or entity, including, but not limited to, any media outlet, industry group, financial institution or current or former employee, board member, consultant, client or customer of the Company or any other Group Company, regarding the Company or any of the other Released Parties, or regarding the Company's or any other Group Company's business affairs, business prospects, or financial condition. The Company and Inozyme will each instruct its officers and all members of its Board of Directors that they shall not, in public or private, make any false, disparaging, negative, critical, adverse, derogatory or defamatory statements, whether orally or in writing (including, without limitation, online on any social media or networking site), to any person or entity concerning you (and the Company and Inozyme shall not make any official statements to such effect); provided, however, that the foregoing shall not be construed as requiring an instruction that any person refrain from making any truthful statement (or from similarly prohibiting the making any truthful official statement) concerning you in connection with any legitimate business need and/or to comply with or satisfy their or the Company's or any Group Company's disclosure, reporting or other obligations under applicable law. This paragraph does not in any way restrict or impede you (or the Company or Inozyme or their officers and directors) from (a) complying with any applicable law or regulation or a valid order of a court of competent jurisdiction or an authorized government agency (b) making truthful statements to rebut any false or misleading statements made about (x) you by the Company or any Group Company or any of their respective officers or members of their respective directors or (y) the Company or any Group Company or any of their respective officers or members of their respective directors by you, (c) making statements in confidence to a professional advisor for the purpose of securing professional advice or (d) making truthful statements in the course of a legal process between you and the Company or any Group Company.

6. **Cooperation** –You agree that, to the extent permitted by law, for 36-months following the Separation Date, you shall cooperate reasonably upon reasonable notice taking into account your business and personal commitments with the Company and any other Group Company in the investigation, defense or prosecution of any claims or actions which already have been brought, are currently pending, or which may be brought in the future against the Company or any other Group Company by a third party or by or on behalf of the Company or any other Group Company against any third party. Your reasonable cooperation in connection with such claims or actions shall include, but not be limited to, being available to meet with the Company's or other Group Company's counsel, at reasonable times designated by the Company or other Group Company, to investigate or prepare the Company's or other Group Company's claims or defenses, to prepare for trial or discovery or an administrative hearing, mediation, arbitration or other proceeding and to act as a witness when requested by the Company or other Group Company. You

shall be permitted to cooperate remotely unless you are required to appear to testify or upon reasonable request by the Company subject to your reasonable approval. You further agree that, to the extent permitted by law, you will notify the Company or other Group Company promptly in the event that you are served with a subpoena (other than a subpoena issued by a government agency), or in the event that you are asked to provide a third party (other than a government agency) with information concerning any actual or potential complaint or claim against the Company or other Group Company. The Company shall reimburse you for all reasonable expenses incurred with respect to such cooperation including travel expenses (at the same class as applicable as of the date hereof).

7. **Return of Company Property** – You confirm that you have returned to the Company (or destroyed if instructed by the Company) all files, records, equipment and any other Company or other Group Company owned property in your possession or control, other than any such property needed to perform the services contemplated by the Consulting Agreement attached as Annex 2, and /or your service as a member of the Inozyme Board, as applicable, which you agree to return immediately if you do not enter into the Consulting Agreement or upon the termination of the Consulting Agreement and/or termination of your service on the Inozyme Board, as applicable; provided, however, that you may retain your laptop and cell phone previously provided by the Company, provided that the laptop and cell phone are wiped clean of any Company confidential information within 10 days of the termination of the Consulting Agreement. You further confirm that you have left intact all, and have otherwise not destroyed, deleted, or made inaccessible to the Company any, electronic Company or other Group Company documents, including, but not limited to, those that you developed or helped to develop during your employment. You further confirm that you have cancelled all accounts for your benefit, if any, in the Company's name, including but not limited to, credit cards, telephone charge cards, cellular phone accounts, and computer accounts, except to the extent necessary to perform the services under the Consulting Agreement attached as Annex 2 and as agreed upon by the Company or your service as a member of the Inozyme Board. You shall be permitted to retain your contacts, calendar and personal correspondence and any information reasonably needed for personal tax return preparation.

8. **Business Expenses and Final Compensation** – You acknowledge that you have been reimbursed by the Company for all business expenses incurred in conjunction with the performance of your employment until the date hereof and that no other reimbursements are owed to you. You further acknowledge that you have received payment in full for all services rendered as of the date hereof in conjunction with your employment by the Company and any other Group Company, including payment for all wages, bonuses, and accrued, unused vacation time, and that no other compensation is owed to you except as provided herein.

9. **Confidentiality** –You understand and agree that, to the extent permitted by law and except as otherwise permitted by paragraph 10 below, the contents of the negotiations and discussions resulting in this letter agreement shall be maintained as confidential by you and your agents and representatives and shall not be disclosed except as otherwise agreed to in writing by the Company. The Company also agrees to maintain as confidential the contents of the negotiations and discussions resulting in this letter agreement, unless otherwise required to be disclosed pursuant to applicable law or regulation or as reasonably necessary to its attorneys and accountants.

10. **Limitation of Disclosure Restrictions** – Nothing in this letter agreement or elsewhere prohibits you from (a) communicating with government agencies about possible violations of federal, state, or local laws or otherwise providing information to government agencies, filing a complaint with government agencies, or participating in government agency investigations or proceedings; or (b) making disclosures or communications to engage in protected, concerted activity or to otherwise exercise rights under Section 7 of the U.S. National Labor Relations Act, and you are not required to notify the Company

of any such communications. Further, nothing in this letter agreement or elsewhere prohibits you from disclosing confidential or proprietary information solely (i) to a court or arbitral body or (ii) to your attorneys, in either case to the extent reasonably necessary to enforce the rights or perform the obligations of, or defend claims against, you under this letter agreement or any agreement entered into in connection with this letter agreement, or (iii) to the minimum extent required by laws, rules, regulations or binding orders of courts or arbitrators (each, a "Legal Requirement"); provided that, in the case of any use or disclosure described in clauses (i), (ii), or (iii), you shall use your reasonable efforts to limit the scope of disclosure, and, in the case of any use or disclosure described in clauses (i) or (iii), you shall (A) seek available confidential treatment available under applicable law prior to such disclosure, (B) to the extent not prohibited by any such Legal Requirement, provide the Company with prior written notice of the proposed disclosure, specifying the precise scope of disclosure and the reason for such disclosure, and (C) to the extent not prohibited by any such Legal Requirement, provide the Company with a reasonable opportunity to contest such disclosure or to seek confidential treatment from the applicable court or arbitral body. Notwithstanding the foregoing in this paragraph, nothing herein authorizes the disclosure of information you obtained through a communication that was subject to the attorney-client privilege. Further, notwithstanding your confidentiality and nondisclosure obligations, you are hereby advised as follows pursuant to the U.S. Defend Trade Secrets Act: "An individual shall not be held criminally or civilly liable under any Federal or State trade secret law for the disclosure of a trade secret that (A) is made (i) in confidence to a Federal, State, or local government official, either directly or indirectly, or to an attorney; and (ii) solely for the purpose of reporting or investigating a suspected violation of law; or (B) is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal. An individual who files a lawsuit for retaliation by an employer for reporting a suspected violation of law may disclose the trade secret to the attorney of the individual and use the trade secret information in the court proceeding, if the individual (A) files any document containing the trade secret under seal; and (B) does not disclose the trade secret, except pursuant to court order."

11. **Amendment and Waiver** – This letter agreement and Annex 1 shall be binding upon the parties and may not be modified in any manner, except by an instrument in writing of concurrent or subsequent date signed by duly authorized representatives of the parties hereto. This letter agreement and Annex 1 are binding upon and shall inure to the benefit of the parties and their respective agents, assigns, heirs, executors, successors and administrators. No delay or omission by the Company in exercising any right under this letter agreement or Annex 1 shall operate as a waiver of that or any other right. A waiver or consent given by the Company on any one occasion shall be effective only in that instance and shall not be construed as a bar to or waiver of any right on any other occasion.

12. **Validity** – Should any provision of this letter agreement or Annex 1 be declared or be determined by any court of competent jurisdiction to be illegal or invalid, the validity of the remaining parts, terms or provisions shall not be affected thereby and said illegal or invalid part, term or provision shall be deemed not to be a part of this letter agreement or Annex 1.

13. **Nature of Agreement** – You understand and agree that this letter agreement, including Annex 1, is a severance agreement and does not constitute an admission of liability or wrongdoing on the part of the Company or any other Group Company or by you.

14. **Voluntary Assent** – You affirm that no other promises or agreements of any kind have been made to or with you by any person or entity whatsoever to cause you to sign this letter agreement and Annex 1, and that you fully understand the meaning and intent of this letter agreement and Annex 1. You further state and represent that you have carefully read this letter agreement and Annex 1, understand the contents therein, freely and voluntarily assent to all of the terms and conditions thereof, and sign your name of your own free act.

15. **Applicable Law; Equitable Remedies** – This letter agreement and Annex 1 shall be interpreted and construed by the substantive laws of Switzerland, without regard to conflict of laws provisions. You hereby irrevocably submit to and acknowledge and recognize the jurisdiction of the courts of Herrliberg, Switzerland, over any suit, action or other proceeding arising out of, under or in connection with this letter agreement and Annex 1 or the subject matter thereof. Further, you acknowledge that the restrictions referenced and contained in paragraphs 4 and 5 of this letter agreement are necessary for the protection of the business and goodwill of the Company and are considered by you to be reasonable for such purpose. You agree that any breach or threatened breach of such provisions is likely to cause the Company and/or the Group substantial and irrevocable damage which is difficult to measure. Therefore, in the event of any such breach or threatened breach, you agree that the Company, in addition to such other remedies which may be available, shall have the right to obtain an injunction from a court restraining such a breach or threatened breach without posting a bond and the right to specific performance of such provisions and you hereby waive the adequacy of a remedy at law as a defense to such relief.

16. **Entire Agreement** – This letter agreement, including Annex 1, contains and constitutes the entire understanding and agreement between the parties hereto with respect to your severance benefits and any payments upon your separation from employment and the settlement of claims against the Company and any other Group Company and cancels all previous oral and written negotiations, agreements, and commitments in connection therewith. Notwithstanding the foregoing, if any of the restrictions contained in paragraph 4(b) above conflict with the restrictions contained in any other restrictive covenant agreement executed by you, such conflict will be resolved in the manner most protective of the Company and the Group. For the avoidance of doubt, any indemnification agreement or policy and directors' and officers' insurance policy between you and the Company or any other Group Company shall continue in full force and effect in accordance with the applicable terms and conditions of such agreement or policy, including any tail period, and is hereby acknowledged and reaffirmed by the Company; provided, however, that nothing herein shall be construed as an acknowledgment or guaranty by the Company that you have any such rights to indemnification, nor does this letter agreement create any additional rights for you to indemnification.

17. **Tax Acknowledgement** – In connection with the severance benefits, you shall be responsible for all applicable taxes with respect to such severance benefits under applicable law. You acknowledge that you are not relying upon the advice or representation of the Company with respect to the tax treatment of the severance benefits.

18. **Legal Fees** – The Company shall reimburse you for reasonable legal fees in connection with the negotiation of this letter agreement and the Consulting Agreement in an amount not to exceed $25,000, less applicable taxes and withholdings.

Very truly yours,

Inozyme Pharma, Inc.

By: /s/ Sanjay Subramanian
Sanjay Subramanian

Chief Financial Officer

Inozyme Pharma Switzerland GmbH

By: /s/ Axel Bolte
Axel Bolte
Chief Executive Officer

I (and the Company and Inozyme) hereby agree to the terms and conditions set forth above. I (and the Company and Inozyme) intend that this letter agreement is a binding agreement between me and the Company and Inozyme. I further understand that the severance benefits described in paragraph 2 above are conditioned upon my timely execution and return and non-revocation of the waiver in Annex 1, as well my non-revocation of paragraph 4(b) above.

/s/ Axel Bolte
Axel Bolte

3/21/2023
Date

Annex 1: Waiver

Whereas I, the undersigned, Axel Bolte, confirm that my employment relationship with Inozyme Pharma Switzerland GmbH came to an end on April 30, 2023.

I note that Inozyme Pharma Switzerland GmbH offered me severance benefits subject to me adhering to the obligations set out in the letter agreement signed on March 21, 2023 and waiving all other claims against Inozyme Pharma Switzerland GmbH and its affiliates, subsidiaries, parent companies, predecessors, and successors, including, but not limited to, Inozyme Pharma, Inc., and all of their respective past and present officers, directors, stockholders, partners, members, managers, employees, agents, representatives, plan administrators, attorneys, insurers and fiduciaries (each in their individual and corporate capacities) (collectively, the "Released Parties").

I herewith confirm the validity of and undertakings in said letter agreement and confirm that I have no other claims of any kind whatsoever against Inozyme Pharma Switzerland GmbH and/or any other of the Released Parties. Alternatively, I herewith waive all claims that I could still have against the above-mentioned entities and individuals. For the avoidance of doubt, this waiver of claims applies to all claims, charges, complaints, demands, actions, causes of action, suits, rights, debts, sums of money, costs, accounts, reckonings, covenants, contracts, agreements, promises, doings, omissions, damages, executions, obligations, liabilities, and expenses (including attorneys' fees and costs), of every kind and nature that I ever had or now have through the date hereof against any or all of the Released Parties, whether known or unknown, including, but not limited to, any and all claims arising out of or relating to my employment with and/or separation from Inozyme Pharma Switzerland GmbH and its affiliates, subsidiaries, parent companies, predecessors, and successors, including, but not limited to, Inozyme Pharma, Inc., including, but not limited to, all claims under Title VII of the Civil Rights Act of 1964, 42 U.S.C. § 2000e et seq., the Americans With Disabilities Act of 1990, 42 U.S.C. § 12101 et seq., the Age Discrimination in Employment Act, 29 U.S.C. § 621 et seq., the Genetic Information Nondiscrimination Act of 2008, 42 U.S.C. § 2000ff et seq., the Family and Medical Leave Act, 29 U.S.C. § 2601 et seq., the Worker Adjustment and Retraining Notification Act ("WARN"), 29 U.S.C. § 2101 et seq., the Rehabilitation Act of 1973, 29 U.S.C. § 701 et seq., Executive Order 11246, Executive Order 11141, the Fair Credit Reporting Act, 15 U.S.C. § 1681 et seq., and the Employee Retirement Income Security Act of 1974 ("ERISA"), 29 U.S.C. § 1001 et seq., all as amended; all claims arising out of the Massachusetts Fair Employment Practices Act, Mass. Gen. Laws ch. 151B, § 1 et seq., the Massachusetts Civil Rights Act, Mass. Gen. Laws ch. 12, §§ 11H and 11I, the Massachusetts Equal Rights Act, Mass. Gen. Laws. ch. 93, § 102, Mass. Gen. Laws ch. 214, § 1C (Massachusetts right to be free from sexual harassment law), the Massachusetts Labor and Industries Act, Mass. Gen. Laws ch. 149, § 1 et seq., Mass. Gen. Laws ch. 214, § 1B (Massachusetts right of privacy law), the Massachusetts Maternity Leave Act, Mass. Gen. Laws ch. 149, § 105D, and the Massachusetts Small Necessities Leave Act, Mass. Gen. Laws ch. 149, § 52D, all as amended; all rights and claims under the Massachusetts Wage Act, Mass. Gen. Laws ch. 149, § 148 et seq., as amended (Massachusetts law regarding payment of wages and overtime), including any rights or claims thereunder to unpaid wages, including overtime, bonuses, commissions, and accrued, unused vacation time; all common law claims including, but not limited to, actions in defamation, intentional infliction of emotional distress, misrepresentation, fraud, wrongful discharge, and breach of contract (including, without limitation, all claims arising out of or relating to the Employment Contract); all claims to any non-vested ownership interest in Inozyme Pharma Switzerland GmbH and its affiliates, subsidiaries, parent companies, predecessors, and successors, including, but not limited to, Inozyme Pharma, Inc., contractual or otherwise; all state and federal whistleblower claims to the maximum extent permitted by law; and any claim or damage arising out of my employment with and/or separation from Inozyme Pharma Switzerland GmbH and its affiliates, subsidiaries, parent companies, predecessors, and

successors, including, but not limited to, Inozyme Pharma, Inc. (including a claim for retaliation) under any common law theory or any Swiss or U.S. federal, state or local statute or ordinance not expressly referenced above; provided, however, that nothing in this waiver (a) prevents me from filing a charge with, cooperating with, or participating in any investigation or proceeding before, the Equal Employment Opportunity Commission or a state fair employment practices agency (except that I acknowledge that I may not recover any monetary benefits in connection with any such claim, charge, investigation, or proceeding, and I further waive any rights or claims to any payment, benefit, attorneys' fees or other remedial relief in connection with any such claim, charge, investigation or proceeding), or (b) releases any claims I may have to (i) the severance benefits described in paragraph 2 of the letter agreement, (ii) accrued employee benefits, (iii) indemnification coverage that I may have now existing pursuant to the Company's articles of incorporation or bylaws or under any applicable indemnification agreement or directors' and officers' liability insurance; provided, however, that nothing herein shall be construed as an acknowledgment or guaranty by the Company that I have any such rights to indemnification, nor does this agreement create any additional rights for me to indemnification, (iv) rights as an equity award holder or shareholder of the Company, and (v) any claims which cannot be released under applicable law.

I also confirm that I have returned any device that was made available to me during my employment and any data related to the business of Inozyme Pharma Switzerland GmbH or any of the Released Parties, without having made any backup or copy, and that I cleaned up my workstation, emptied all my cupboards and all client related information has been correctly and sufficiently archived; provided, however, that I may retain the laptop and cell phone previously provided to me by the Company in accordance with the terms of paragraph 7 of the letter agreement.

I acknowledge that I have been given at least twenty-one (21) days to consider this Annex, and that Inozyme Pharma Switzerland GmbH is hereby advising me to consult with an attorney of my own choosing prior to signing this Annex. I understand that I may revoke my agreement to this Annex for a period of seven (7) days after I sign it by notifying Inozyme Pharma Switzerland GmbH in writing, and the Annex shall not be effective or enforceable until the expiration of this seven (7) day revocation period. I understand and agree that by entering into this Annex, I am waiving any and all rights or claims I might have under the Age Discrimination in Employment Act, as amended by the Older Workers Benefit Protection Act, and that I have received consideration beyond that to which I was previously entitled. I state and represent that I have had an opportunity to fully discuss and review the terms of this Annex with an attorney.

This waiver shall be signed and returned to Inozyme Pharma Switzerland GmbH, c/o Inozyme Pharma, Inc., attn. Chief Financial Officer, on but no earlier than May 31, 2023.

Place and Date: _____

_____
Axel Bolte

Annex 2: Consulting Agreement

Incorporated by reference to Exhibit 10.3 of this Quarterly Report on Form 10-Q filed with the Securities Exchange Commission on May 9, 2023

Exhibit 10.3

Consulting Agreement

This Consulting Agreement (the "**Agreement**"), effective as of the Effective Date (as defined herein), is entered into between Inozyme Pharma, Inc. (the "**Company**") and Axel Bolte (the "**Consultant**").

WHEREAS, the Company desires to retain the services of the Consultant as a Senior Advisor to the Company and the Consultant desires to perform certain services for the Company; and

WHEREAS, the Consultant is in the business of providing such services and has agreed to provide such services pursuant to the terms and conditions set forth in this Agreement.

NOW, THEREFORE in consideration of the mutual covenants and promises contained herein and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged by the parties hereto, the parties agree as follows:

1. Services. The Consultant agrees to perform such consulting and advisory services to and for the Company as may be reasonably requested from time to time by the Company, as specified on Schedule A to this Agreement. For the avoidance of doubt, the Consultant shall be permitted to provide services to other entities as an employee, consultant or board member so long as such services do not otherwise violate any restrictive covenants with the Company or other obligations that the Consultant may have to the Company under applicable law or under corporate governance policies or requirements applicable to the Consultant when serving as a member of the Company's Board of Directors.

2. Term. Provided the Consultant has timely signed and returned to the Company the transition and separation letter agreement to which this Agreement is attached as Annex 2 (the "**Separation Agreement**") and has not timely revoked paragraph 4(b) of the Separation Agreement, the term of this Agreement shall commence on May 1, 2023 (the "**Effective Date**") and shall continue until May 1, 2025 (the "**Expiration Date**"), unless terminated earlier pursuant to the provisions of Section 4 (such period being referred to as the "**Consultation Period**").

3. Consideration and Reimbursement.

a. Consulting Fees. In consideration of the Consultant's performance of the services, the Company will pay to the Consultant fixed consulting fees of twenty-five thousand dollars ($25,000.00) per month for the first three months of the term of the Agreement (the "**Initial Period**"). The Company shall pay the consulting fees monthly in arrears for services rendered the previous month, no later than the seventh (7th) business day of the following month. Following the Initial Period, the Company will pay to the Consultant a consulting fee of $400 per hour and the Consultant shall submit to the Company monthly statements, in a form reasonably satisfactory to the Company, of services performed for the Company in the applicable time period. Within thirty (30) days after receipt of the statement, the Company shall pay to the Consultant consulting fees for all services invoiced in the statement. In addition, effective as of the Effective Date, the Company shall grant to the Consultant a stock option (the "**Option**") under the Company's 2020 Stock Incentive Plan (the "**Plan**") for the purchase of an aggregate of 100,000 shares of common stock of the Company at a price per share equal to the fair market value of the common stock on the date of grant of the Option. The Option shall vest in equal monthly installments during the Consultation Period, subject to the Consultant's continuing service as a consultant or on the Company's Board of Directors on the applicable vesting date, except as otherwise set forth herein, and shall otherwise be subject to all terms and other conditions set forth in the

Plan and in the Company's standard form of non-statutory stock option agreement (but subject to the terms hereof).

b. Expense Reimbursement. The Company shall reimburse the Consultant for all reasonable out-of-pocket expenses incurred by the Consultant in connection with the performance of the services under this Agreement. The Consultant shall submit to the Company itemized monthly statements, in a form reasonably satisfactory to the Company, of such expenses incurred in the previous month. The Company shall pay to the Consultant amounts shown on each such statement within thirty (30) days after receipt thereof. Notwithstanding the foregoing, the Consultant shall not incur total expenses in excess of $1,000 per month without the prior written approval of the Company; provided, however, that this $1,000 monthly cap shall not apply to reimbursement of the Consultant's reasonable travel expenses consistent with the Company's travel reimbursement policies that apply to Company executives.

c. No Employee Benefits. The Consultant's relationship with the Company will be that of an independent contractor, and the Consultant shall not, in connection with this relationship, be entitled to any benefits, coverages or privileges, including, without limitation, health insurance, social security, unemployment, workers compensation, or pension payments, made available to employees of the Company.

4. Termination. This Agreement may be terminated prior to the Expiration Date in the following manner: (a) by the Company at any time immediately upon written notice if the Consultant has materially breached this Agreement, the Separation Agreement, or the Restrictive Covenants Agreement (as defined in the Separation Agreement); provided that the Company shall provide the Consultant with written notice of any such material breach and not less than 30 days to cure, if curable, as determined by the Company in its sole discretion (such termination, a termination for "Cause" under this Agreement); (b) by the Consultant at any time immediately upon written notice if the Company has materially breached this Agreement or the Separation Agreement; provided that the Consultant shall provide the Company with written notice of any such material breach and not less than 30 days to cure, if curable; (c) by the Consultant for any reason at any time upon not less than thirty (30) days' prior written notice; (d) by the Company for any reason upon not less than thirty (30) days' prior written notice, but with such termination date being no earlier than the date following the end of the Initial Period; or (e) at any time upon the mutual written consent of the parties hereto. Notwithstanding the foregoing, and for the avoidance of doubt, the Company may terminate this Agreement effective immediately by giving written notice to the Consultant if the Consultant fails to timely sign or timely revokes Annex 1 to the Separation Agreement as set forth therein (which shall also constitute a termination for "Cause" under this Agreement). In the event of any termination of this Agreement, the Consultant shall be entitled to: (i) payment for services performed prior to the effective date of termination (provided, however, that if termination occurs during the Initial Period, the payment for services performed during the month in which termination occurs shall be prorated proportionally to reflect termination prior to the end of the month), and (ii) reimbursements for expenses incurred in accordance with Section 3 prior to termination. In the event of the termination of this Agreement (W) by the Consultant pursuant to clause (b) of the preceding sentence (X) by the Company without Cause pursuant to clause (d) of the preceding sentence, (Y) on account of the death of the Consultant or (Z) on account of the disability of the Consultant (as defined in Section 22(e)(3) of the Internal Revenue Code), in each case prior to the Expiration Date, and effective as the date of such expiration or termination, (A) the Consultant shall be entitled to (I) the accelerated vesting of any unvested portion of the Option granted by the Company to the Consultant pursuant to Section 3(a) hereof and (II) the accelerated vesting of any other stock options granted by the Company to the Consultant that remain outstanding at the date of such termination but solely with respect to the portion of such stock options that otherwise would have vested between the date of this Agreement and the Expiration Date and (B) any stock options granted by the Company to the Consultant that are

vested and outstanding as of the date of such termination (taking into account clause (A) of this sentence) shall remain exercisable until the earlier of (x) the later of May 1, 2026 or the Consultant ceasing to serve on the Board and (y) the original expiration date of such options, with all such options otherwise remaining subject to the terms and conditions of the applicable award agreement(s) and equity plan(s). No further payments or other consideration of any kind will be due, and such payments and other consideration shall constitute full settlement of any and all claims of the Consultant of every description against the Company.

5. Cooperation. The Consultant shall perform the services hereunder in a professional manner and consistent with customary industry standards. The Company shall provide such access to its information and property as may be reasonably required in order to permit the Consultant to perform the Consultant's obligations hereunder. The Consultant shall cooperate with the Company's personnel, shall not interfere with the conduct of the Company's business, and shall observe all rules, regulations and security requirements of the Company concerning the safety of persons and property.

6. Proprietary Information and Inventions.

a. Proprietary Information.

The Consultant acknowledges that the Consultant's relationship with the Company is one of high trust and confidence and that in the course of the Consultant's service to the Company, Consultant will have access to and contact with Proprietary Information. The Consultant will not disclose any Proprietary Information to any person or entity other than employees of the Company or use the same for any purposes (other than in the performance of the services) without written approval by an officer of the Company, either during or after the Consultation Period, unless and until such Proprietary Information has become public knowledge without fault by the Consultant.

For purposes of this Agreement, Proprietary Information shall mean, by way of illustration and not limitation, all information, whether or not in writing, whether or not patentable and whether or not copyrightable, of a private, secret or confidential nature, owned, possessed or used by the Company, concerning the Company's business, business relationships or financial affairs, including, without limitation, any Invention, formula, vendor information, customer information, apparatus, equipment, trade secret, process, research, report, technical or research data, clinical data, know-how, computer program, software, software documentation, hardware design, technology, product, processes, methods, techniques, formulas, compounds, projects, developments, marketing or business plan, forecast, unpublished financial statement, budget, license, price, cost, customer, supplier or personnel information or employee list that is communicated to, learned of, developed or otherwise acquired by the Consultant in the course of the Consultant's service as a consultant to the Company.

The Consultant agrees that all files, documents, letters, memoranda, reports, records, data sketches, drawings, models, laboratory notebooks, program listings, computer equipment or devices, computer programs or other written, photographic, or other tangible material containing Proprietary Information, whether created by the Consultant or others, which shall come into Consultant's custody or possession, shall be and are the exclusive property of the Company to be used by the Consultant only in the performance of the Consultant's duties for the Company and shall not be copied or removed from the Company premises except in the pursuit of the business of the Company. All such materials or copies thereof and all tangible property of the Company in the custody or possession of the Consultant shall be delivered to the Company, upon the earlier of (i) a request by the Company or (ii) the termination of this Agreement. After such delivery, the Consultant shall not retain any such materials or copies thereof or any such tangible property, except as required by law. The Consultant shall be permitted to retain his contacts,

calendar and personal correspondence and any information reasonably needed for personal tax return preparation.

The Consultant agrees that the Consultant's obligation not to disclose or to use information and materials of the types set forth above, and the Consultant's obligation to return materials and tangible property as set forth above extends to such types of information, materials and tangible property of customers of the Company or suppliers to the Company or other third parties who may have disclosed or entrusted the same to the Company or to the Consultant.

The Consultant acknowledges that the Company from time to time may have agreements with other persons or with the United States Government, or agencies thereof, that impose obligations or restrictions on the Company regarding inventions made during the course of work under such agreements or regarding the confidential nature of such work. The Consultant agrees to be bound by all such obligations and restrictions that are known to the Consultant and to take all action necessary to discharge the obligations of the Company under such agreements.

The Consultant's obligations under this Section 6(a) shall not apply to any information that (i) is or becomes known to the general public under circumstances involving no breach by the Consultant or others known to the Consultant of the terms of this Section 6(a), (ii) is generally disclosed to third parties by the Company without restriction on such third parties, or (iii) is approved for release by written authorization of an officer of the Company. Further, nothing in this Agreement or elsewhere prohibits the Consultant from (a) communicating with government agencies about possible violations of federal, state, or local laws or otherwise providing information to government agencies, filing a complaint with government agencies, or participating in government agency investigations or proceedings or (b) making disclosures or communications to engage in protected, concerted activity or to otherwise exercise rights under Section 7 of the U.S. National Labor Relations Act, and the Consultant is not required to notify the Company of any such communications. Further, nothing in this Agreement or elsewhere prohibits the Consultant from disclosing confidential or proprietary information solely (i) to a court or arbitral body or (ii) to the Consultant's attorneys, in either case to the extent reasonably necessary to enforce the rights or perform the obligations of, or defend claims against, the Consultant under this Agreement, or (iii) to the minimum extent required by laws, rules, regulations or binding orders of courts or arbitrators (each, a "Legal Requirement"); provided that, in the case of any use or disclosure described in clauses (i), (ii), or (iii), the Consultant shall use the Consultant's reasonable efforts to limit the scope of disclosure, and, in the case of any use or disclosure described in clauses (i) or (iii), the Consultant shall (A) seek available confidential treatment available under applicable law prior to such disclosure, (B) to the extent not prohibited by any such Legal Requirement, provide the Company with prior written notice of the proposed disclosure, specifying the precise scope of disclosure and the reason for such disclosure, and (C) to the extent not prohibited by any such Legal Requirement, provide the Company with a reasonable opportunity to contest such disclosure or to seek confidential treatment from the applicable court or arbitral body. Notwithstanding the foregoing in this paragraph, nothing herein authorizes the disclosure of information the Consultant obtained through a communication that was subject to the attorney-client privilege. Further, notwithstanding the Consultant's confidentiality and nondisclosure obligations, the Consultant is hereby advised as follows pursuant to the U.S. Defend Trade Secrets Act: "An individual shall not be held criminally or civilly liable under any Federal or State trade secret law for the disclosure of a trade secret that (A) is made (i) in confidence to a Federal, State, or local government official, either directly or indirectly, or to an attorney; and (ii) solely for the purpose of reporting or investigating a suspected violation of law; or (B) is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal. An individual who files a lawsuit for retaliation by an employer for reporting a suspected violation of law may disclose the trade secret to the attorney of the individual and use the trade secret information in the court proceeding, if the individual (A) files any document containing the trade secret under seal; and (B) does not disclose the trade secret, except pursuant to court order."

b. Inventions.

The Consultant will make full and prompt disclosure to the Company of all inventions, creations, improvements, enhancements, designs, innovations, discoveries, processes, methods, techniques, developments, software, computer programs, and works of authorship, whether or not patentable and whether or not copyrightable, that are created, made, conceived or reduced to practice by the Consultant or under the Consultant's direction or jointly with others during the Consultation Period, whether or not during normal working hours or on the premises of the Company (all of which are collectively referred to in this Agreement as "**Inventions**"). The Consultant agrees to assign and does hereby assign to the Company (or any person or entity designated by the Company) all of the Consultant's right, title and interest in and to all Inventions and all related patents, patent applications, copyrights created in the work(s) of authorship, trademarks, trade names, and other industrial and intellectual property rights and applications therefor in the United States and elsewhere. However, the previous sentence shall not apply to Inventions that do not relate to the present or planned business or research and development of the Company and that are made and conceived by the Consultant, not on the Company's premises and not using the Company's tools, devices, equipment or Proprietary Information. The Consultant understands that, to the extent this Agreement shall be construed in accordance with the laws of any state that precludes a requirement that an individual assign certain classes of inventions, this Section 6(b) shall be interpreted not to apply to any invention that a court rules and/or the Company agrees falls within such classes. The Consultant further acknowledges that each original work of authorship that is made by the Consultant (solely or jointly with others) within the scope of the Agreement and which is protectable by copyright is a "work made for hire," as that term is defined in the United States Copyright Act. The Consultant hereby waives all claims to moral rights in any Inventions.

The Consultant agrees that if, in the course of performing the services, the Consultant incorporates into any Invention developed under this Agreement any preexisting invention, improvement, development, concept, discovery or other proprietary information owned by the Consultant or in which the Consultant has an interest ("**Prior Inventions**"), (i) the Consultant will inform the Company, in writing before incorporating such Prior Inventions into any Invention, and (ii) the Company is hereby granted a nonexclusive, royalty-free, perpetual, irrevocable, transferable worldwide license with the right to grant and authorize sublicenses, to make, have made, modify, use, import, offer for sale, sell, reproduce, distribute, modify, adapt, prepare derivative works of, display, perform, and otherwise exploit such Prior Inventions, without restriction, including, without limitation, as part of or in connection with such Invention, and to practice any method related thereto. The Consultant will not incorporate any invention, improvement, development, concept, discovery or other proprietary information owned by any third party into any Invention without the Company's prior written permission.

The Consultant agrees to cooperate reasonably with the Company, both during and after the Consultation Period, with respect to the procurement, maintenance, and enforcement of copyrights, patents and other intellectual property rights (both in the United States and foreign countries) relating to Inventions. The Consultant shall sign all papers, including, without limitation, copyright applications, patent applications, declarations, oaths, formal assignments, assignments of priority rights, and powers of attorney, which the Company may deem necessary or desirable in order to protect its rights and interests in any Invention. The Consultant further agrees that if the Company is unable, after reasonable effort, to secure the signature of the Consultant on any such papers, any executive officer of the Company shall be entitled to execute any such papers as the agent and the attorney-in-fact of the Consultant, and the Consultant hereby irrevocably designates and appoints each executive officer of the Company as the Consultant's agent and attorney-in-fact to execute any such papers on the Consultant's behalf, and to take any and all actions as the Company may deem necessary or desirable in order to protect its rights and interests in any Invention, under the conditions described in this sentence.

The Consultant shall maintain adequate and current written records (in the form of notes, sketches, drawings and as may be specified by the Company) to document the conception and/or first actual reduction to practice of any Invention related to the present or planned business or research and development of the Company. Such written records shall be available to and remain the sole property of the Company at all times.

7. Non-Exclusivity. The Company retains the right to contract with other companies and/or individuals for consulting services without restriction. Similarly, except as and to the extent set forth in the Separation Agreement and the Restrictive Covenants Agreement (as defined in the Separation Agreement), the Consultant retains the right to contract with other companies or entities for the Consultant's consulting services.

8. Other Agreements; Representation.

The Consultant hereby represents that, except as the Consultant has disclosed in writing to the Company, the Consultant is not bound by the terms of any agreement with any third party to refrain from using or disclosing any trade secret or confidential or proprietary information in the course of Consultant's consultancy with the Company, to refrain from competing, directly or indirectly, with the business of such third party or to refrain from soliciting employees, customers or suppliers of such third party. The Consultant further represents that Consultant's performance of all the terms of this Agreement and the performance of the services as a consultant of the Company do not and will not breach any agreement with any third party to which the Consultant is a party (including, without limitation, any nondisclosure or non-competition agreement), and that the Consultant will not disclose to the Company or induce the Company to use any confidential or proprietary information or material belonging to any current or previous employer or others.

The Consultant hereby represents and confirms that Consultant has the skills and experience necessary to perform the services, that Consultant will perform said services in a professional, competent and timely manner, that Consultant has the power to enter into this Agreement and that Consultant's performance hereunder will not infringe upon or violate the rights of any third party or violate any federal, state or municipal laws.

9. Independent Contractor Status.

The Consultant shall perform all services under this Agreement as an "independent contractor" and not as an employee or agent of the Company. The Consultant is not authorized to assume or create any obligation or responsibility, express or implied, on behalf of, or in the name of, the Company or to bind the Company in any manner. Nothing herein shall create, expressly or by implication, a partnership, joint venture or other association between the parties.

The Consultant shall have the right to control and determine the time, place, methods, manner and means of performing the services. In performing the services, the amount of time devoted by the Consultant on any given day will be entirely within the Consultant's control, and the Company will rely on the Consultant to put in the amount of time necessary to fulfill the requirements of this Agreement. The Consultant will provide all equipment and supplies required to perform the services. The Consultant is not required to attend regular meetings at the Company. However, upon reasonable notice, the Consultant shall meet with representatives of the Company at a location to be designated by the parties to this Agreement.

In the performance of the services, the Consultant has the authority to control and direct the performance of the details of the services, the Company being interested only in the results obtained. However, the services contemplated by the Agreement must meet the Company's reasonable standards and

approval and shall be subject to the Company's general right of inspection and supervision to secure their satisfactory completion.

The Consultant shall not use the Company's trade names, trademarks, service names or service marks without the prior approval of the Company.

The Consultant shall be solely responsible for all income taxes, insurance and social taxes, and any other taxes or fees in connection with this Agreement and for maintaining adequate workers' compensation insurance coverage.

10. Remedies. The Consultant acknowledges that any breach of the provisions of Section 6 of this Agreement may result in serious and irreparable injury to the Company for which the Company could possibly not be adequately compensated by monetary damages alone. The Consultant agrees, therefore, that, in addition to any other remedy the Company may have, the Company shall be entitled to seek to enforce the specific performance of this Agreement by the Consultant and to seek both temporary and permanent injunctive relief (to the extent permitted by law) without the necessity of proving actual damages or posting a bond.

11. Notices. All notices required or permitted under this Agreement shall be in writing and shall be deemed effective upon personal delivery or upon deposit in the United States Post Office, by registered or certified mail, postage prepaid, addressed to the other party at the address shown above, or at such other address or addresses as either party shall designate to the other in accordance with this Section 12.

12. Pronouns. Whenever the context may require, any pronouns used in this Agreement shall include the corresponding masculine, feminine or neuter forms, and the singular forms of nouns and pronouns shall include the plural, and vice versa.

13. Entire Agreement. This Agreement constitutes the entire agreement between the parties and supersedes all prior agreements and understandings, whether written or oral, relating to the subject matter of this Agreement; provided, however, for the avoidance of doubt, that nothing herein supersedes the Separation Agreement or the Restrictive Covenants Agreement (as defined in the Separation Agreement) into which the Consultant entered in connection with his prior employment by the Company, which remain in full force and effect.

14. Amendment. This Agreement may be amended or modified only by a written instrument executed by both the Company and the Consultant.

15. Non-Assignability of Contract. This Agreement is personal to the Consultant and the Consultant shall not have the right to assign any of Consultant's rights or delegate any of Consultant's duties without the express written consent of the Company. Any non-consented-to assignment or delegation, whether express or implied or by operation of law, shall be void and shall constitute a breach and a default by the Consultant. The Company shall not assign this Agreement to any entity other than a direct or indirect wholly owned subsidiary of the Company, unless in connection with a corporate transaction involving the Company.

16. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the Commonwealth of Massachusetts, without giving effect to any choice or conflict of laws provisions or rule that would cause the application of laws of any other jurisdiction. The Consultant hereby irrevocably submits to and acknowledges and recognizes the jurisdiction of the courts of the Commonwealth of Massachusetts (or, if appropriate, a federal court located within the Commonwealth of

Massachusetts), and the Company and the Consultant each consents to the jurisdiction of such a court, over any suit, action or other proceeding arising out of, under or in connection with this Agreement or the subject matter thereof.

17. Successors and Assigns. This Agreement shall be binding upon, and inure to the benefit of, both parties and their respective successors and assigns, including any corporation with which, or into which, the Company may be merged or which may succeed to its assets or business, provided, however, that the obligations of the Consultant are personal and shall not be assigned by Consultant.

18. Interpretation. If any restriction set forth in Section 6 is found by any court of competent jurisdiction to be unenforceable because it extends for too long a period of time or over too great a range of activities or in too broad a geographic area, it shall be interpreted to extend only over the maximum period of time, range of activities or geographic area as to which it may be enforceable.

19. Survival. Sections 4 through 20 shall survive the expiration or termination of this Agreement.

20. Miscellaneous.

No delay or omission by the Company in exercising any right under this Agreement shall operate as a waiver of that or any other right. A waiver or consent given by the Company on any one occasion shall be effective only in that instance and shall not be construed as a bar or waiver of any right on any other occasion.

The captions of the sections of this Agreement are for convenience of reference only and in no way define, limit, or affect the scope or substance of any section of this Agreement.

In the event that any provision of this Agreement shall be invalid, illegal or otherwise unenforceable, the validity, legality and enforceability of the remaining provisions shall in no way be affected or impaired thereby.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the parties hereto have executed this Consulting Agreement as of the date and year first above written.

Inozyme Pharma, Inc.

By: /s/ Sanjay Subramanian
Name: Sanjay Subramanian
Title: Chief Financial Officer

Consultant:

/s/ Axel Bolte
Axel Bolte

Exhibit 10.4

March 14, 2023 (revised)

Matthew Winton, PhD
[**]

Dear Matthew:

On behalf of Inozyme Pharma Inc. (the "Company"), I am pleased to offer you employment with the Company. The purpose of this letter (the "Letter Agreement") is to summarize the terms of your employment with the Company, should you accept our offer:

1. Position and Duties. You will be employed to serve as Chief Operations Officer effective April 3, 2023. You will be employed on a full time basis, and you will report to the Company's Chief Executive Officer and have such duties and responsibilities as are customary for such position. You agree to devote your best efforts, skill, knowledge, attention and energies to the advancement of the Company's business and interests and to the performance of your duties and responsibilities as an employee of the Company. You agree to abide by the rules, regulations, personnel practices and policies of the Company and any changes therein that may be adopted from time to time by the Company. You will be primarily located in the Company's Boston area offices and may be required to travel as directed by the Company and consistent with the Company's business needs.

2. Base Salary. Your base salary will be at the rate of $18,125 per regular semi-monthly pay period (which if annualized equals $435,000 subject to tax and other withholdings as required by law, and will be paid in accordance with the Company's regularly established payroll procedures. Such base salary may be adjusted from time to time in accordance with normal business practice and in the sole discretion of the Company.

3. Discretionary Bonus. Following the end of each calendar year, and subject to the approval of the Company's Board of Directors (the "Board") (or a committee thereof), you will be eligible for a discretionary retention and performance bonus, targeted at forty percent (40%) of your gross base pay actually earned during the applicable calendar year, based on your individual performance and the Company's performance during the applicable calendar year, as determined by the Company in its sole discretion (the "Discretionary Bonus"). You must be an active employee of the Company on the date any bonus is distributed in order to be eligible for and to earn any bonus award, as it also serves as an incentive to remain employed by the Company. Any bonus hereunder will be awarded and paid before March 15th of the calendar year following that to which such bonus relates, and will be subject to tax and other withholdings as required by law.

4. Benefits and Expenses and Signing Bonus.

a. You may participate in any and all benefit programs that the Company establishes and

makes available to its employees from time to time, provided you are eligible under (and subject to all provisions of) the plan documents governing those programs. The benefit programs made available by the Company, and the rules, terms and conditions for participation in such benefit programs, may be changed by the Company at any time without advance notice (other than as required by such programs or under law).

b. All reasonable business expenses that are documented by you and incurred in the ordinary course of business will be reimbursed in accordance with the Company's standard policies and procedures.

c. In connection with your commencement of employment with the Company, the Company will advance you a signing bonus of $50,000 less applicable taxes and withholdings, in the first payroll after your commencement of employment. If you resign your employment with the Company for any reason or the Company terminates your employment for Cause (as defined below), in either case within one year following your commencement of employment, you agree to repay the Company, within 30 days following your separation date, a prorated portion of the signing bonus (based on the number of full months you worked for the Company).

5. Vacation. You will be eligible for paid vacation time in accordance with Company policy.

6. Equity. Subject to approval by the compensation committee of the Board or a majority of the Company's Independent Directors as defined in Nasdaq Listing Rule 5605(a)(2), and as a material inducement to you entering into employment with the Company, the Company will grant to you, effective on or after your first day of employment, a nonstatutory stock option (the "Option") under the Company's 2023 Inducement Stock Incentive Plan (the "Inducement Plan") for the purchase of an aggregate of 250,000 shares of common stock of the Company at a price per share equal to the fair market value of the common stock on the date of grant of the Option. The Option shall be subject to all terms, conditions, vesting schedules and other provisions set forth in the Inducement Plan and in a separate option agreement. The Option shall be awarded outside of the Company's equity incentive plans as an "inducement grant" within the meaning of Nasdaq Listing Rule 5635(c)(4). The Option is subject to adjustment for stock splits, combinations or other recapitalizations. Your rights in, and eligibility for, future equity awards will be determined by the Board or the compensation committee of the Board in its discretion.

7. Severance Benefits. You shall be eligible to receive the following severance benefits in accordance with the terms and conditions set forth below:

a. **Termination by the Company without Cause or by You for Good Reason Not In Connection with a Change In Control.** If your employment is terminated by the Company without Cause or you terminate your employment for Good Reason (each as defined below) and such termination does not take place during the twelve (12) month period following a Change in Control (as defined below), and provided you execute and allow to become effective (within 60 days following the termination or such shorter period as may be directed by the Company) a separation and release of claims agreement in a form to be provided by the Company on or about the termination (which will include, at a minimum, a release of all releasable claims, non-disparagement and cooperation

obligations, a reaffirmation of your continuing obligations under any existing restrictive covenant agreements, and an agreement not to compete with the Company for twelve (12) months following your separation from employment) (a "Release Agreement"), the Company will provide you with the following severance benefits (subject to the terms of Appendix A hereto):

i. The Company will pay you as severance pay an amount equivalent to [nine (9)] months of your then current base salary, less all applicable taxes and withholdings, which severance pay will be paid in installments in accordance with the Company's regular payroll practices beginning in the Company's first regular payroll cycle after the Release Agreement becomes effective; provided, however, that if the 60th day referenced above occurs in the calendar year following the date of your termination, then the severance payments shall begin no earlier than January 1 of such subsequent calendar year.

ii. Should you timely elect and be eligible to continue receiving group medical coverage pursuant to the "COBRA" law, and so long as the Company can provide such benefit without violating the nondiscrimination requirements of applicable law, the Company will continue to pay the share of the premium for such coverage that is paid by the Company for active and similarly-situated employees who receive the same type of coverage until the earlier of (x) [nine (9)] months following your termination date, or (y) the date upon which you commence full-time employment (or employment that provides you with eligibility for healthcare benefits substantially comparable to those provided by the Company) with an entity other than the Company. If applicable, the remaining balance of any premium costs shall timely be paid by you on a monthly basis for as long as, and to the extent that, you remain eligible for COBRA continuation.

b. **Termination by the Company without Cause or by You for Good Reason In Connection with a Change In Control.** If your employment is terminated by the Company without Cause or you terminate your employment for Good Reason and such termination takes place during the twelve (12) month period following a Change in Control (as defined below), and provided you execute and allow to become effective a Release Agreement, the Company will provide you with the following severance benefits (subject to the terms of Appendix A hereto):

i. The Company will pay you as severance pay an amount equivalent to [twelve (12)] months of your then current base salary, less all applicable taxes and withholdings, which severance pay will be paid in installments in accordance with the Company's regular payroll practices beginning in the Company's first regular payroll cycle after the Release Agreement becomes effective; provided, however, that if the 60th day referenced above occurs in the calendar year following the date of your termination, then the severance payments shall begin no earlier than January 1 of such subsequent calendar year.

ii. Should you timely elect and be eligible to continue receiving group medical coverage pursuant to the "COBRA" law, and so long as the Company can provide such benefit

without violating the nondiscrimination requirements of applicable law, the Company will continue to pay the share of the premium for such coverage that is paid by the Company for active and similarly-situated employees who receive the same type of coverage until the earlier of (x) [twelve (12)] months following your termination date, or (y) the date upon which you commence full-time employment (or employment that provides you with eligibility for healthcare benefits substantially comparable to those provided by the Company) with an entity other than the Company. If applicable, the remaining balance of any premium costs shall timely be paid by you on a monthly basis for as long as, and to the extent that, you remain eligible for COBRA continuation.

iii. The Company will pay you 100% of your annual target Discretionary Bonus, less all applicable taxes and withholdings, for the year in which your termination occurs in a lump sum on the date the first installment of severance pay is paid. For the avoidance of doubt, for purposes of calculating the amount due under this Section 7(b)(iii), your target Discretionary Bonus shall be equal to the percent of your annualized base salary at the time of your termination that is set forth in Section 3.

iv. All outstanding and unvested stock options and other equity awards in each case that vest solely based on continued service that are then held by you shall become fully vested and exercisable and, with respect to any stock options then held by you, those options shall remain exercisable for the period of time set forth in the applicable grant agreement.

d. Definitions. For purposes of this Letter Agreement:

i. "Cause" means any of: (a) your conviction of, or plea of guilty or nolo contendere to, any crime involving dishonesty or moral turpitude or any felony; (b) a good faith finding by the Company that you have (i) engaged in dishonesty, willful misconduct or gross negligence, (ii) committed an act that materially injures or would reasonably be expected to materially injure the reputation, business or business relationships of the Company, (iii) materially breached the terms of any agreement between you and the Company, including without limitation this Letter Agreement, the Restrictive Covenant Agreement (as defined below) or any other restrictive covenant or confidentiality agreement with the Company; or (iv) failed or refused to comply in any material respect with the Company's material policies or procedures.

ii. "Good Reason" means the occurrence, without your prior written consent, of any of the following events: (a) a material reduction in your authority, duties, or responsibilities; (b) the relocation of the principal place at which you provide services to the Company by at least 50 miles and to a location such that your daily commuting distance is increased (c) a material reduction of your base salary (except for across the board pay cuts of all management level employees of the Company); or (d) a material breach by the Company of its obligations under this Letter Agreement. No resignation will be treated as a resignation for Good Reason unless (i) you have given written notice to the Company of your intention to terminate your employment for Good Reason, describing the grounds for such action, no later than 90 days after the

first occurrence of such circumstances, (ii) you have provided the Company with at least 30 days in which to cure the circumstances, and (iii) if the Company is not successful in curing the circumstances, you end your employment within 30 days following the cure period in (ii).

iii. "Change of Control" means any of the following events provided that such event also constitutes a "change in control event" within the meaning of Treasury Regulation Section 1.409A-3(i)(5):

(a) the acquisition by an individual, entity or group (within the meaning of Section 13(d)(3) or 14(d)(2) of the Exchange Act) (a "Person") of beneficial ownership of any capital stock of the Company if, after such acquisition, such Person beneficially owns (within the meaning of Rule 13d-3 under the Exchange Act) 50% or more of either (x) the then-outstanding shares of common stock of the Company (the "Outstanding Company Common Stock") or (y) the combined voting power of the then-outstanding securities of the Company entitled to vote generally in the election of directors (the "Outstanding Company Voting Securities"); *provided, however*, that for purposes of this subsection (A), the following acquisitions shall not constitute a Change in Control Event: (1) any acquisition directly from the Company (excluding an acquisition pursuant to the exercise, conversion or exchange of any security exercisable for, convertible into or exchangeable for common stock or voting securities of the Company, unless the Person exercising, converting or exchanging such security acquired such security directly from the Company or an underwriter or agent of the Company), (2) any acquisition by any employee benefit plan (or related trust) sponsored or maintained by the Company or any corporation controlled by the Company, or (3) any acquisition by any corporation pursuant to a Business Combination (as defined below) which complies with clauses (x) and (y) of subsection (C) of this definition; or

(b) a change in the composition of the Board that results in the Continuing Directors (as defined below) no longer constituting a majority of the Board (or, if applicable, the Board of Directors of a successor corporation to the Company), where the term "Continuing Director" means at any date a member of the Board (x) who was a member of the Board on the date of the initial adoption of Company's 2020 Stock Incentive by the Board or (y) who was nominated or elected subsequent to such date by at least a majority of the directors who were Continuing Directors at the time of such nomination or election or whose election to the Board was recommended or endorsed by at least a majority of the directors who were Continuing Directors at the time of such nomination or election; *provided, however*, that there shall be excluded from this clause (y) any individual whose initial assumption of office occurred as a result of an actual or threatened election contest with respect to the election or removal of directors or other actual or threatened solicitation of proxies or consents, by or on behalf of a person other than the Board; or

(c) the consummation of a merger, consolidation, reorganization, recapitalization or share exchange involving the Company or a sale or other disposition of all or substantially all of the assets of the Company (a "Business Combination"), unless, immediately following such Business Combination, each of the following two conditions is satisfied: (x) all or substantially all of the individuals and entities who were the beneficial owners of the

Outstanding Company Common Stock and Outstanding Company Voting Securities immediately prior to such Business Combination beneficially own, directly or indirectly, more than 50% of the then-outstanding shares of common stock and the combined voting power of the then-outstanding securities entitled to vote generally in the election of directors, respectively, of the resulting or acquiring corporation in such Business Combination (which shall include, without limitation, a corporation which as a result of such transaction owns the Company or substantially all of the Company's assets either directly or through one or more subsidiaries) (such resulting or acquiring corporation is referred to herein as the "Acquiring Corporation") in substantially the same proportions as their ownership of the Outstanding Company Common Stock and Outstanding Company Voting Securities, respectively, immediately prior to such Business Combination and (y) no Person (excluding any employee benefit plan (or related trust) maintained or sponsored by the Company or by the Acquiring Corporation) beneficially owns, directly or indirectly, 50% or more of the then-outstanding shares of common stock of the Acquiring Corporation, or of the combined voting power of the then-outstanding securities of such corporation entitled to vote generally in the election of directors (except to the extent that such ownership existed prior to the Business Combination); or

(d) the liquidation or dissolution of the Company.

For the avoidance of doubt, you will not be eligible for, nor shall you have a right to receive, any payments or benefits from the Company following your termination from employment other than as set forth in this Section 7.

8. Section 280G.

a. Notwithstanding any other provision of this Letter Agreement, except as set forth in Section 8(b), in the event that the Company undergoes a "Change in Ownership or Control" (as defined below), the Company shall not be obligated to provide to you a portion of any "Contingent Compensation Payments" (as defined below) that you would otherwise be entitled to receive to the extent necessary to eliminate any "excess parachute payments" (as defined in Code Section 280G(b)(1)) for you. For purposes of this Section 8, the Contingent Compensation Payments so eliminated shall be referred to as the "Eliminated Payments" and the aggregate amount (determined in accordance with Treasury Regulation Section 1.280G-1, Q/A-30 or any successor provision) of the Contingent Compensation Payments so eliminated shall be referred to as the "Eliminated Amount."

b. Notwithstanding the provisions of 8(a), no such reduction in Contingent Compensation Payments shall be made if the Eliminated Amount (computed without regard to this sentence) exceeds 100% of the aggregate present value (determined in accordance with Treasury Regulation Section 1.280G-1, Q/A-31 and Q/A-32 or any successor provisions) of the amount of any additional taxes that would be incurred by you if the Eliminated Payments (determined without regard to this sentence) were paid to you (including, state and federal income taxes on the Eliminated Payments, the excise tax imposed by Section 4999 of the Code payable with respect to all of the Contingent Compensation Payments in excess of your "base amount" (as defined in Section 280G(b)(3) of the Code), and any withholding taxes). The override of such reduction in Contingent Compensation

Payments pursuant to this Section 8(b) shall be referred to as a "Section 8(b) Override." For purposes of this paragraph, if any federal or state income taxes would be attributable to the receipt of any Eliminated Payment, the amount of such taxes shall be computed by multiplying the amount of the Eliminated Payment by the maximum combined federal and state income tax rate provided by law.

c. For purposes of this Section 8 the following terms shall have the following respective meanings:

(I) "Change in Ownership or Control" shall mean a change in the ownership or effective control of the Company or in the ownership of a substantial portion of the assets of the Company determined in accordance with Section 280G(b)(2) of the Code.

(II) "Contingent Compensation Payment" shall mean any payment (or benefit) in the nature of compensation that is made or made available (under this letter agreement or otherwise) to a "disqualified individual" (as defined in Section 280G(c) of the Code) and that is contingent (within the meaning of Section 280G(b)(2)(A)(i) of the Code) on a Change in Ownership or Control of the Company.

d. Any payments or other benefits otherwise due to you following a Change in Ownership or Control that could reasonably be characterized (as determined by the Company) as Contingent Compensation Payments (the "Potential Payments") shall not be made until the dates provided for in this Section 8(d). Within 30 days after each date on which you first become entitled to receive (whether or not then due) a Contingent Compensation Payment relating to such Change in Ownership or Control, the Company shall determine and notify you (with reasonable detail regarding the basis for its determinations) (i) which Potential Payments constitute Contingent Compensation Payments, (ii) the Eliminated Amount and (iii) whether the Section 8(b) Override is applicable. Within 30 days after delivery of such notice to you, you shall deliver a response to the Company (the "Executive Response") stating either (A) that you agree with the Company's determination pursuant to the preceding sentence, or (B) that you disagree with such determination, in which case you shall set forth (i) which Potential Payments should be characterized as Contingent Compensation Payments, (ii) the Eliminated Amount, and (iii) whether the Section 8(b) Override is applicable. In the event that you fail to deliver an Executive Response on or before the required date, the Company's initial determination shall be final. If and to the extent that any Contingent Compensation Payments are required to be treated as Eliminated Payments pursuant to this Section 8, then the payments shall be reduced or eliminated, as determined by the Company, in the following order: (i) any cash payments, (ii) any taxable benefits, (iii) any nontaxable benefits, and (iv) any vesting of equity awards in each case in reverse order beginning with payments or benefits that are to be paid the farthest in time from the date that triggers the applicability of the excise tax, to the extent necessary to maximize the Eliminated Payments. If you state in the Executive Response that you agree with the Company's determination, the Company shall make the Potential Payments to you within three business days following delivery to the Company of the Executive Response (except for any Potential Payments which are not due to be made until after such date, which Potential Payments shall be made on the date on which they are due). If you state in the Executive Response that you disagree with the Company's determination, then, for a period of 60 days following delivery of the Executive Response, you and the Company shall use good faith efforts to resolve such dispute. If such dispute is not resolved within such 60-day period, such dispute shall be

settled exclusively by arbitration in the Commonwealth of Massachusetts, in accordance with the rules of the American Arbitration Association then in effect. Judgment may be entered on the arbitrator's award in any court having jurisdiction. The Company shall, within three business days following delivery to the Company of the Executive Response, make to you those Potential Payments as to which there is no dispute between the Company and you regarding whether they should be made (except for any such Potential Payments which are not due to be made until after such date, which Potential Payments shall be made on the date on which they are due). The balance of the Potential Payments shall be made within three business days following the resolution of such dispute. Subject to the limitations contained in Sections 8(a) and 8(b) hereof, the amount of any payments to be made to you following the resolution of such dispute shall be increased by the amount of the accrued interest thereon computed at the prime rate announced from time to time by The Wall Street Journal, compounded monthly from the date that such payments originally were due.

e. The provisions of this Section 8 are intended to apply to any and all payments or benefits available to you under this letter agreement or any other agreement or plan of the Company under which you may receive Contingent Compensation Payments.

9. Restrictive Covenants/Absence of Restrictions. In exchange for your employment with the Company pursuant to the terms and conditions herein and, with respect to the non-competition provision, the grant of equity described in Section 6, you hereby agree to execute the enclosed Inventions, Non-Disclosure, Non-Competition and Non-Solicitation Agreement (the "Restrictive Covenant Agreement"). By executing this Letter Agreement, you acknowledge that your eligibility for the grant of equity set forth in Section 6 of this Letter Agreement is contingent upon your agreement to the non-competition provisions set forth in the Restrictive Covenant Agreement. You further acknowledge that such consideration was mutually agreed upon by you and the Company and is fair and reasonable in exchange for your compliance with such non-competition obligations and that you were provided at least ten (10) business days to review the Restrictive Covenant Agreement. You represent that you are not bound by any employment contract, restrictive covenant or other restriction preventing (or that purports to prevent) you from entering into employment with or carrying out your responsibilities for the Company, or which is in any way inconsistent with the terms of this Letter Agreement.

10. Employment Eligibility. You agree to provide to the Company, within three days of your hire date, documentation of your eligibility to work in the United States, as required by the Immigration Reform and Control Act of 1986. You may need to obtain a work visa in order to be eligible to work in the United States. If that is the case, your employment with the Company will be conditioned upon your obtaining a work visa in a timely manner as determined by the Company.

11. Background and Reference Checks. The Company's offer of at-will employment is contingent upon your authorization and successful completion of background and reference checks. The Company may obtain background reports both pre-employment and from time to time during your employment with the Company, as necessary.

12. At-Will Employment. This Letter Agreement shall not be construed as an agreement, either express or implied, to employ you for any stated term, and shall in no way alter the Company's policy of employment at will, under which both you and the Company remain free to

terminate the employment relationship, with or without cause, at any time, with or without notice. Although your job duties, title, compensation and benefits, as well as the Company's personnel policies and procedures, may change from time to time, the "at-will" nature of your employment may only be changed by a written agreement signed by you and the Chief Executive Officer**,** which expressly states the intention to modify the at-will nature of your employment. Similarly, nothing in this Letter Agreement shall be construed as an agreement, either express or implied, to pay you any compensation or grant you any benefit beyond the end of your employment with the Company, except to the extent explicitly set forth in Section 7 hereof.

13.Company Premises and Property. The Company's premises, including all workspaces, furniture, documents, and other tangible materials, and all information technology resources of the Company (including computers, data and other electronic files, and all internet and email) are subject to oversight and inspection by the Company at any time. Company employees should have no expectation of privacy with regard to any Company premises, materials, resources, or information.

14.Entire Agreement/Governing Law. This Letter Agreement is your formal offer of employment and supersedes any and all prior or contemporaneous agreements, discussions and understandings, whether written or oral, relating to the subject matter of this Letter Agreement. This Letter Agreement shall be governed by and construed in accordance with the laws of the Commonwealth of Massachusetts (without reference to the conflict of laws provisions thereof). Any action, suit or other legal proceeding arising under or relating to any provision of this Letter Agreement shall be commenced only in a court of the Commonwealth of Massachusetts (or, if appropriate, a federal court located within the Commonwealth of Massachusetts), and the Company and you each consents to the jurisdiction of such a court.

* * *

If you would like to accept this offer of employment on the terms set forth herein, please sign and return this Letter Agreement on or before March 20, 2023. If you do not accept this offer by March 20, 2023, this offer will be deemed revoked.

We look forward to you becoming a part of the Inozyme team and helping to build what we hope will be an exceptional organization.

Very Truly Yours,

By: /s/ Axel Bolte
Name: Axel Bolte
Title: President & Chief Executive Officer

The foregoing correctly sets forth the terms of my employment by Inozyme Pharma, Inc. I am not relying on any representations other than those set forth above.

_/s/ Matthew Winton Date: 3/20/2023
Name: Matthew Winton

APPENDIX A

Payments Subject to Section 409A

15.Subject to this Appendix A, any severance payments that may be due under the Letter Agreement to which it is attached shall begin only upon the date of your "separation from service" (determined as set forth below) which occurs on or after the termination of your employment. The following rules shall apply with respect to distribution of the severance payments, if any, to be provided to you under the Letter Agreement, as applicable:

(a) It is intended that each installment of the severance payments under the Letter Agreement shall be treated as a separate "payment" for purposes of Section 409A of the Internal Revenue Code and the guidance issued thereunder ("Section 409A"). Neither the Company nor you shall have the right to accelerate or defer the delivery of any such payments except to the extent specifically permitted or required by Section 409A.

(b) If, as of the date of your "separation from service" from the Company, you are not a "specified employee" (within the meaning of Section 409A), then each installment of the severance payments shall be made on the dates and terms set forth in the Letter Agreement.

(c) If, as of the date of your "separation from service" from the Company, you are a "specified employee" (within the meaning of Section 409A), then:

(i) Each installment of the severance payments due under the Letter Agreement that, in accordance with the dates and terms set forth herein, will in all circumstances, regardless of when your separation from service occurs, be paid within the short-term deferral period (as defined under Section 409A) shall be treated as a short-term deferral within the meaning of Treasury Regulation Section 1.409A-1(b)(4) to the maximum extent permissible under Section 409A and shall be paid on the dates and terms set forth in the Letter Agreement; and

(ii) Each installment of the severance payments due under the Letter Agreement that is not described in this Appendix A, Section 1(c)(i) and that would, absent this subsection, be paid within the six-month period following your "separation from service" from the Company shall not be paid until the date that is six months and one day after such separation from service (or, if earlier, your death) (the "New Payment Date"), with any such installments that are required to be delayed being accumulated during the six-month period and paid in a lump sum on the New Payment Date and any subsequent installments, if any, being paid in accordance with the dates and terms set forth herein; provided, however, that the preceding provisions of this sentence shall not apply to any installment of payments if and to the maximum extent that such installment is deemed to be paid under a separation

pay plan that does not provide for a deferral of compensation by reason of the application of Treasury Regulation 1.409A-1(b)(9)(iii) (relating to separation pay upon an involuntary separation from service). Any installments that qualify for the exception under Treasury Regulation Section 1.409A-1(b)(9)(iii) must be paid no later than the last day of your second taxable year following the taxable year in which the separation from service occurs.

16. The determination of whether and when your separation from service from the Company has occurred shall be made in a manner consistent with, and based on the presumptions set forth in, Treasury Regulation Section 1.409A-1(h). Solely for purposes of this Appendix A, Section 2, "Company" shall include all persons with whom the Company would be considered a single employer under Section 414(b) and 414(c) of the Internal Revenue Code.

17. All reimbursements and in-kind benefits provided under the Letter Agreement shall be made or provided in accordance with the requirements of Section 409A to the extent that such reimbursements or in-kind benefits are subject to Section 409A, including, where applicable, the requirements that (i) any reimbursement is for expenses incurred during your lifetime (or during a shorter period of time specified in the Letter Agreement), (ii) the amount of expenses eligible for reimbursement during a calendar year may not affect the expenses eligible for reimbursement in any other calendar year, (iii) the reimbursement of an eligible expense will be made on or before the last day of the calendar year following the year in which the expense is incurred and (iv) the right to reimbursement is not subject to set off or liquidation or exchange for any other benefit.

18. The Company makes no representation or warranty and shall have no liability to you or to any other person if any of the provisions of the Letter Agreement (including this Appendix) are determined to constitute deferred compensation subject to Section 409A but that do not satisfy an exemption from, or the conditions of, that section.

Exhibit 10.5

INOZYME PHARMA, INC.

NON-EMPLOYEE DIRECTOR COMPENSATION POLICY

The Company's non-employee directors shall receive the following compensation for their service as members of the Board of Directors (the "Board") of Inozyme Pharma, Inc. (the "Company").

Director Compensation

Our goal is to provide compensation for our non-employee directors in a manner that enables us to attract and retain outstanding director candidates and reflects the substantial time commitment necessary to oversee the Company's affairs. We also seek to align the interests of our directors and our stockholders and we have chosen to do so by compensating our non-employee directors with a mix of cash and equity-based compensation.

Cash Compensation

The fees that will be paid to our non-employee directors for service on the Board, and for service on each committee of the Board on which the director is then a member, and the fees that will be paid to the chairman of the Board, if one is then appointed, and the chairman of each committee of the Board will be as follows:

	Member Annual Fee	Chairman Incremental Annual Fee
Board of Directors	$ 35,000	$ 30,000
Audit Committee	$ 7,500	$ 7,500
Compensation Committee	$ 5,000	$ 5,000
Nominating and Corporate Governance Committee	$ 4,000	$ 4,000
Research & Development Committee	$ 4,000	$ 4,000

The foregoing fees will be payable in arrears in four equal quarterly installments on the last day of each quarter, provided that the amount of such payment will be prorated for any portion of such quarter that the director is not serving on the Board, on such committee or in such position.

Equity Compensation

Initial Grants. Upon initial election to the Board, each non-employee director will be granted, automatically and without the need for any further action by the Board, an initial equity award of an option to purchase 32,000 shares of our common stock. The initial award shall have a term of ten years from the grant date of the award, and shall vest and become exercisable as to 2.7778% of the shares underlying such award at the end of each successive one-month period following the grant date until the third anniversary of the grant date, subject to the director's continued service to the Company as a director through each applicable vesting date. The vesting shall accelerate as to 100% of the shares upon a change in control of the Company. The exercise price shall be the closing price of our common stock on the date of grant.

Annual Grants. Each non-employee director who has served as a member of the Board for at least six months prior to the date of our annual meeting of stockholders for a particular year will be granted, automatically and without the need for any further action by the Board, an equity award on the date of the first Board meeting held after our annual meeting of stockholders for such year of an option to purchase 16,000 shares of our common stock. The annual award shall have a term of ten years from the grant date of the award, and shall vest and become exercisable in full on the one-year anniversary of the grant date (or, if earlier, immediately prior to the first annual meeting of stockholders occurring after the grant date), subject to the director's continued service to the Company as a director through each applicable vesting date. The vesting shall accelerate as to 100% of the shares upon a change in control of the Company. The exercise price shall be the closing price of our common stock on the date of grant.

The foregoing share amounts shall be automatically adjusted in the event of any stock split, reverse stock split, stock dividend, recapitalization, combination of shares, reclassification of shares, spin-off or other similar change in capitalization or event effecting our common stock, or any distribution to holders of our common stock other than an ordinary cash dividend.

The initial awards and the annual awards shall be subject to the terms and conditions of our 2020 Stock Incentive Plan, or any successor plan, and the terms of the option agreements entered into with each director in connection with such awards.

Expenses

Upon presentation of documentation of such expenses reasonably satisfactory to the Company, each non-employee director shall be reimbursed for his or her reasonable out-of-pocket business expenses incurred in connection with attending meetings of the Board and committees thereof or in connection with other business related to the Board, and each non-employee director shall also be reimbursed for his or her reasonable out-of-pocket business expenses authorized by the Board or a committee of the Board that are incurred in connection with attendance at various conferences or meetings with management of the Company, in accordance with the Company's travel policy, as it may be in effect from time to time.

***

Last Amended: March 15, 2023

Exhibit 10.7

Inozyme Pharma, Inc.
NONSTATUTORY STOCK OPTION AGREEMENT

Granted under 2023 Inducement Stock Incentive Plan

Inozyme Pharma, Inc. (the "Company") hereby grants the following stock option to the recipient named below pursuant to its 2023 Inducement Stock Incentive Plan (as amended through the date hereof, the "Plan"). The terms and conditions attached hereto are also a part hereof and incorporated herein by reference.

Notice of Grant

Name of optionee (the "Participant"):
Grant Date:
Number of shares of the Company's Common Stock subject to this option ("Shares"):
Option exercise price per Share:
Number, if any, of Shares that vest immediately on the grant date:
Shares that are subject to vesting schedule:
Vesting Start Date:
Final Exercise Date:

Vesting Schedule:

Vesting Date:	Number of Options that Vest:

All vesting is dependent on the Participant remaining an Eligible Participant, as provided herein.

This option satisfies in full all commitments that the Company has to the Participant with respect to the issuance of stock, stock options or other equity securities.

_____
Signature of Participant

_____
Street Address

_____
City/State/Zip Code

Inozyme Pharma, Inc.

By: _____
Name of Officer:
Title:

Inozyme Pharma, Inc.
Nonstatutory Stock Option Agreement
Granted under 2023 Inducement Stock Incentive Plan
Incorporated Terms and Conditions

1. Grant of Option.

This agreement evidences the grant by the Company, on the grant date (the "Grant Date") set forth in the Notice of Grant that forms part of this agreement (the "Notice of Grant"), to the Participant of an option to purchase, in whole or in part, on the terms provided herein and in the Plan, the number of Shares set forth in the Notice of Grant of common stock, $0.0001 par value per share, of the Company ("Common Stock"), at the exercise price per Share set forth in the Notice of Grant. Unless earlier terminated, this option shall expire at 5:00 p.m., Eastern time, on the Final Exercise Date set forth in the Notice of Grant (the "Final Exercise Date").

The option evidenced by this agreement was granted to the Participant pursuant to the inducement grant exception under Nasdaq Stock Market Rule 5635(c)(4) as an inducement that is material to the Participant's employment with the Company.

It is intended that the option evidenced by this agreement shall not be an incentive stock option as defined in Section 422 of the Internal Revenue Code of 1986, as amended, and any regulations promulgated thereunder (the "Code"). Except as otherwise indicated by the context, the term "Participant", as used in this option, shall be deemed to include any person who acquires the right to exercise this option validly under its terms.

2. Vesting Schedule.

This option will become exercisable ("vest") in accordance with the vesting schedule set forth in the Notice of Grant.

The right of exercise shall be cumulative so that to the extent the option is not exercised in any period to the maximum extent permissible it shall continue to be exercisable, in whole or in part, with respect to all Shares for which it is vested until the earlier of the Final Exercise Date or the termination of this option under Section 3 hereof or the Plan.

3. Exercise of Option.

(a) Form of Exercise. Each election to exercise this option shall be in writing, in the form of the Stock Option Exercise Notice attached as Annex A, signed by the Participant, and received by the Company at its principal office, accompanied by this agreement, or in such other form (which may be electronic) as is approved by the Company, together with payment in full in the manner provided in the Plan. The Participant may purchase less than the number of shares covered hereby, provided that no partial exercise of this option may be for any fractional share.

(b) Continuous Relationship with the Company Required. Except as otherwise provided in this Section 3, this option may not be exercised unless the Participant, at the time he or she exercises this option, is, and has been at all times since the Grant Date, an employee, director or officer of, or consultant or advisor to, the Company or any other entity the employees, officers, directors, consultants, or advisors of which are eligible to receive option grants under the Plan (an "Eligible Participant").

(c) Termination of Relationship with the Company. If the Participant ceases to be an Eligible Participant for any reason, then, except as provided in paragraphs (d) and (e) below, the right to exercise this option shall terminate three months after such cessation (but in no event after the Final Exercise Date), provided that this option shall be exercisable only to the extent that the Participant was entitled to exercise this option on the date of such cessation. Notwithstanding the foregoing, if the Participant, prior to the Final Exercise Date, violates the restrictive covenants (including, without limitation, the non-competition, non-solicitation, or confidentiality provisions) of any employment contract, any non-competition, non-solicitation, confidentiality or assignment agreement to which the Participant is a party, or any other agreement between the Participant and the Company, the right to exercise this option shall terminate immediately upon such violation.

(d) Exercise Period Upon Death or Disability. If the Participant dies or becomes disabled (within the meaning of Section 22(e)(3) of the Code) prior to the Final Exercise Date while he or she is an Eligible Participant and the Company has not terminated such relationship for "cause" as specified in paragraph (e) below, this option shall be exercisable, within the period of one year following the date of death or disability of the Participant, by the Participant (or in the case of death by an authorized transferee), provided that this option shall be exercisable only to the extent that this option was exercisable by the Participant on the date of his or her death or disability, and further provided that this option shall not be exercisable after the Final Exercise Date.

(e) Termination for Cause. If, prior to the Final Exercise Date, the Participant's employment or other service is terminated by the Company for Cause (as defined in below), the right to exercise this option shall terminate immediately upon the effective date of such termination of service. If, prior to the Final Exercise Date, the Participant is given notice by the Company of the termination of his or her employment or other service by the Company for Cause, and the effective date of such termination is subsequent to the date of delivery of such notice, the right to exercise this option shall be suspended from the time of the delivery of such notice until the earlier of (i) such time as it is determined or otherwise agreed that the Participant's service shall not be terminated for Cause as provided in such notice or (ii) the effective date of such termination of service (in which case the right to exercise this option shall, pursuant to the preceding sentence, terminate upon the effective date of such termination of employment). If the Participant is subject to an individual employment, consulting or other service agreement with the Company or eligible to participate in a Company severance plan or arrangement, in any case which agreement, plan or arrangement contains a definition of "cause" for termination of service, "Cause" shall have the meaning ascribed to such term in such agreement, plan or arrangement. Otherwise, "Cause" shall mean willful misconduct by the Participant or willful failure by the Participant to perform his or her responsibilities to the Company (including, without limitation, breach by the Participant of any provision of any employment, consulting, advisory, nondisclosure, non-competition or other similar agreement between the Participant and the Company), as determined by the Company, which determination shall be conclusive. The Participant's employment or other service shall be considered to have been terminated for Cause if the Company determines, within 30 days after the Participant's resignation, that termination for Cause was warranted.

4. Withholding.

No Shares will be issued pursuant to the exercise of this option unless and until the Participant pays to the Company, or makes provision satisfactory to the Company for payment of, any federal, state or local withholding taxes required by law to be withheld in respect of this option.

5. Transfer Restrictions; Clawback.

(a) This option may not be sold, assigned, transferred, pledged, encumbered or otherwise disposed of by the Participant, either voluntarily or by operation of law, except by will or the laws of descent and distribution, and, during the lifetime of the Participant, this option shall be exercisable only by the Participant.

(b) In accepting this option, the Participant agrees to be bound by any clawback policy that the Company has in place or may adopt in the future.

6. Provisions of the Plan.

This option is subject to the provisions of the Plan (including the provisions relating to amendments to the Plan), a copy of which is furnished to the Participant with this option.

ANNEX A

Inozyme Pharma, Inc.

Stock Option Exercise Notice

Inozyme Pharma, Inc.
321 Summer Street
Suite 400
Boston, MA 02210

Dear Sir or Madam:

I, (the "Participant"), hereby irrevocably exercise the right to purchase shares of the Common Stock, $0.0001 par value per share (the "Shares"), of Inozyme Pharma, Inc. (the "Company") at $ per share pursuant to the Company's 2023 Inducement Stock Incentive Plan and a stock option agreement with the Company dated (the "Option Agreement"). Enclosed herewith is a payment of $, the aggregate purchase price for the Shares. The certificate for the Shares should be registered in my name as it appears below or, if so indicated below, jointly in my name and the name of the person designated below, with right of survivorship.

Dated: _____

_____

Signature
Print Name:

Address:

_____

_____

Name and address of persons in whose name the Shares are to be jointly registered (if applicable):

_____

Exhibit 10.8

Inozyme Pharma, Inc.
RESTRICTED STOCK UNIT AGREEMENT

Granted under 2023 Inducement Stock Incentive Plan

Inozyme Pharma, Inc. (the "Company") hereby grants the following restricted stock units to the recipient named below pursuant to its 2023 Inducement Stock Incentive Plan (as amended through the date hereof, the "Plan"). The terms and conditions attached hereto are also a part hereof and incorporated herein by reference.

Notice of Grant

Name of recipient (the "Participant"):
Grant Date:
Number of restricted stock units ("RSUs") granted:
Vesting Start Date:

Vesting Schedule:

Vesting Date:	Number of RSUs that Vest:

All vesting is dependent on the Participant remaining an Eligible Participant, as provided herein.

This grant of RSUs satisfies in full all commitments that the Company has to the Participant with respect to the issuance of stock, stock options or other equity securities.

Inozyme Pharma, Inc.

Signature of Participant

By: _____

Street Address

Name of Officer
Title:

City/State/Zip Code

Inozyme Pharma, Inc.
Restricted Stock Unit Agreement
Granted under 2023 Inducement Stock Incentive Plan
Incorporated Terms and Conditions

For valuable consideration, receipt of which is acknowledged, the parties hereto agree as follows:

1. Award of Restricted Stock Units.

The Company has granted to the Participant, subject to the terms and conditions set forth in this Restricted Stock Unit Agreement (this "Agreement") and in the Plan, an award with respect to the number of RSUs set forth in the Notice of Grant that forms part of this Agreement (the "Notice of Grant"). Each RSU represents the right to receive one share of common stock, $0.0001 par value per share, of the Company (the "Common Stock") upon vesting of the RSU, subject to the terms and conditions set forth herein.

The RSUs evidenced by this Agreement were granted to the Participant pursuant to the inducement grant exception under Nasdaq Stock Market Rule 5635(c)(4), as an inducement that is material to the Participant's employment with the Company.

2. Vesting.

The RSUs shall vest in accordance with the Vesting Schedule set forth in the Notice of Grant (the "Vesting Schedule"). Any fractional shares resulting from the application of any percentages used in the Vesting Schedule shall be rounded down to the nearest whole number of RSUs. Upon the vesting of the RSU, the Company will deliver to the Participant, for each RSU that becomes vested, one share of Common Stock, subject to the payment of any taxes pursuant to Section 7. The Common Stock will be delivered to the Participant as soon as practicable following each vesting date, but in any event within 30 days of such date.

3. Forfeiture of Unvested RSUs Upon Cessation of Service.

In the event that the Participant ceases to be an employee, director or officer of, or consultant or advisor to, the Company or any other entity the employees, officers, directors, consultants, or advisors of which are eligible to receive awards under the Plan (an "Eligible Participant") for any reason or no reason, with or without cause, all of the RSUs that are unvested as of the time of such cessation shall be forfeited immediately and automatically to the Company, without the payment of any consideration to the Participant, effective as of such cessation. The Participant shall have no further rights with respect to the unvested RSUs or any Common Stock that may have been issuable with respect thereto. If the Participant provides services to a subsidiary of the Company, any references in this Agreement to provision of services to the Company shall instead be deemed to refer to service with such subsidiary.

4. Restrictions on Transfer.

The Participant shall not sell, assign, transfer, pledge, hypothecate, encumber or otherwise dispose of, by operation of law or otherwise (collectively "transfer") any RSUs, or any interest therein. The Company shall not be required to treat as the owner of any RSUs or issue any Common Stock to any transferee to whom such RSUs have been transferred in violation of any of the provisions of this Agreement.

5. Rights as a Stockholder.

The Participant shall have no rights as a stockholder of the Company with respect to any shares of Common Stock that may be issuable with respect to the RSUs until the issuance of the shares of Common Stock to the Participant following the vesting of the RSUs.

6. Provisions of the Plan.

This Agreement is subject to the provisions of the Plan, a copy of which is furnished to the Participant with this Agreement.

7. Tax Matters.

(a) Acknowledgments; No Section 83(b) Election. The Participant acknowledges that he or she is responsible for obtaining the advice of the Participant's own tax advisors with respect to the award of RSUs and the Participant is relying solely on such advisors and not on any statements or representations of the Company or any of its agents with respect to the tax consequences relating to the RSUs. The Participant understands that the Participant (and not the Company) shall be responsible for the Participant's tax liability that may arise in connection with the acquisition, vesting and/or disposition of the RSUs. The Participant acknowledges that no election under Section 83(b) of the Internal Revenue Code of 1986, as amended (the "Code"), is available with respect to RSUs.

(b) Withholding. The Participant acknowledges and agrees that the Company has the right to deduct from payments of any kind otherwise due to the Participant any federal, state, local or other taxes of any kind required by law to be withheld with respect to the vesting of the RSUs. At such time as the Participant is not aware of any material nonpublic information about the Company or the Common Stock and is not prohibited from doing so by the Company's insider trading policy or otherwise, the Participant shall execute the instructions set forth in Schedule A attached hereto (the "Durable Automatic Sell-to-Cover Instruction") as the means of satisfying such tax obligation. If the Participant is required to but does not execute the Durable Automatic Sell-to-Cover Instruction prior to an applicable vesting date, then the Participant agrees that if under applicable law the Participant will owe taxes at such vesting date on the portion of the award then vested the Company shall be entitled to immediate payment from the Participant of the amount of any tax required to be withheld by the Company. The Company shall not deliver any shares of Common Stock to the Participant until it is satisfied that all required withholdings have been made.

8. Miscellaneous.

(a) No Right to Continued Service. The Participant acknowledges and agrees that, notwithstanding the fact that the vesting of the RSUs is contingent upon his or her continued service to the Company, this Agreement does not constitute an express or implied promise of continued service relationship with the Participant or confer upon the Participant any rights with respect to a continued service relationship with the Company or any affiliate of the Company.

(b) Section 409A. The RSUs awarded pursuant to this Agreement are intended to be exempt from or comply with the requirements of Section 409A of the Code and the Treasury Regulations issued thereunder ("Section 409A"). The delivery of shares of Common Stock on the vesting of the RSUs may not be accelerated or deferred unless permitted or required by Section 409A.

(c) Participant's Acknowledgments. The Participant acknowledges that he or she: (i) has read this Agreement; (ii) has been represented in the preparation, negotiation and execution of this Agreement by legal counsel of the Participant's own choice or has voluntarily declined to seek such counsel; (iii) understands the terms and consequences of this Agreement; (iv) is agreeing, in accepting this award, to be bound by any clawback policy that the Company has in place or may adopt in the future; and (iv) is fully aware of the legal and binding effect of this Agreement.

(d) Governing Law. This Agreement shall be construed, interpreted and enforced in accordance with the internal laws of the State of Delaware without regard to any applicable conflicts of laws provisions.

Schedule A

Durable Automatic Sell-to-Cover Instruction

This Durable Automatic Sell-to-Cover Instruction (this "Instruction"), which is being delivered to Inozyme Pharma, Inc. (the "Company") by the undersigned on the date set forth below (the "Adoption Date"), relates to any restricted stock units that may be granted to me from time to time by the Company under the Company's equity compensation programs, other than any restricted stock units which by the terms of the applicable award agreement require the Company to withhold shares for tax withholding obligations in connection with the vesting and settlement of such restricted stock units and therefore do not permit sell-to-cover transactions (the restricted stock units subject to this Instruction are referred to as "Covered RSUs"). This Instruction provides for "eligible sell-to-cover transactions" (as described in Rule 10b5-1(c)(1)(ii)(D)(3) under the Securities Exchange Act of 1934 (the "Exchange Act")) with respect to Covered RSUs and is intended to satisfy the affirmative defense conditions of Rule 10b5-1(c)(1) under the Exchange Act.

I acknowledge that upon vesting and settlement of any Covered RSUs in accordance with the applicable RSU's terms, whether vesting is based on the passage of time or the achievement of performance goals, I will have compensation income equal to the fair market value of the shares of the Company's common stock subject to the RSUs that are settled on such settlement date and that the Company is required to withhold income and employment taxes in respect of that compensation income.

I desire to establish a plan and process to satisfy such withholding obligation in respect of all Covered RSUs through an automatic sale of the number of the shares of the Company's common stock that would otherwise be issuable to me on each applicable settlement date in an amount sufficient to satisfy the applicable withholding obligation, with the proceeds of the sale delivered to the Company in satisfaction of the applicable withholding obligation.

I understand that the Company has arranged for the administration and execution of its equity incentive programs and the sale of securities by participants thereunder pursuant to a platform administered by a third party (the "Administrator") and the Administrator's designated brokerage partner.

Upon the settlement of any of my Covered RSUs after the 30th day following the Adoption Date (or if I am an officer of the Company on the Adoption Date, after the [120th day following the Adoption Date]) (the "Cooling-Off Period"), I hereby appoint the Administrator (or any successor administrator) to automatically sell such number of shares of the Company's common stock issuable with respect to such RSUs that vested and settled as is sufficient to generate net proceeds sufficient to satisfy the Company's minimum statutory withholding obligations with respect to the income recognized by me in connection with the vesting and settlement of such RSUs (based on minimum statutory withholding rates for all tax purposes, including payroll and social security taxes, that are applicable to such income), and the Company shall receive such net proceeds in satisfaction of such tax withholding obligation.

I hereby appoint the Chief Executive Officer, the Chief Financial Officer and the Chief Operations Officer, and any of them acting alone and with full power of substitution, to serve as my attorneys-in-fact to arrange for the sale of shares of the Company's common stock in accordance with this Instruction. I agree to execute and deliver such documents, instruments and certificates as may reasonably be required in connection with the sale of the shares of common stock pursuant to this Instruction.

I hereby certify that, as of the Adoption Date:

(i) I am not prohibited from entering into this Instruction by the Company's insider trading policy or otherwise;

(ii) I am not aware of any material nonpublic information about the Company or its common stock; and

(iii) I am adopting this Instruction in good faith and not as part of a plan or scheme to evade the prohibitions of Rule 10b-5 under the Exchange Act.

_____

Print Name: _____

Date: _____

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, Douglas A. Treco, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Inozyme Pharma, 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(s) 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(s) 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: May 9, 2023

By: /s/ Douglas A. Treco
Douglas A. Treco
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, Sanjay Subramanian, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Inozyme Pharma, 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(s) 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(s) 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: May 9, 2023

By: /s/ Sanjay Subramanian
Sanjay Subramanian
Chief Financial Officer

(Principal Financial Officer and Principal Accounting Officer)

Exhibit 32.1

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 of Inozyme Pharma, Inc. (the "Company") on Form 10-Q for the period ended March 31, 2023 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that, to my 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: May 9, 2023

By: /s/ Douglas A. Treco

Douglas A. Treco
Chief Executive Officer
(Principal Executive Officer)

Exhibit 32.2

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 of Inozyme Pharma, Inc. (the "Company") on Form 10-Q for the period ended March 31, 2023 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that, to my 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: May 9, 2023

By: /s/ Sanjay Subramanian

Sanjay Subramanian
Chief Financial Officer
(Principal Financial Officer and Principal Accounting Officer)