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, 2022

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 6, 2022, the registrant had 40,097,076 shares of common stock, $0.0001 par value per share, outstanding.

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 include, among other things:

- our ongoing Phase 1/2 clinical trials of INZ-701 for 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 later stage clinical trials of INZ-701 for patients with ENPP1 and ABCC6 Deficiencies;
- our plans to conduct research and preclinical testing of INZ-701 for additional indications;
- our plans to conduct research and preclinical testing of other product candidates;
- 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 operating expenses and capital expenditure 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;
- the impact of COVID-19 on our business and operations;
- 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;
- 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, 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.

Table of Contents

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)
(Unaudited)

	March 31, 2022	December 31, 2021
Assets		
Current assets:		
Cash and cash equivalents	$ 31,943	$ 23,316
Short-term investments	65,830	88,485
Prepaid expenses and other current assets	2,810	3,541
Total current assets	100,583	115,342
Property and equipment, net	2,234	2,383
Right-of-use assets	1,950	2,053
Restricted cash	354	354
Prepaid expenses, net of current portion	3,810	3,409
Total assets	$ 108,931	$ 123,541
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$ 2,200	$ 2,394
Accrued expenses	9,308	8,508
Operating lease liabilities	752	731
Total current liabilities	12,260	11,633
Operating lease liabilities, net of current portion	2,442	2,640
Total liabilities	14,702	14,273
Commitments and contingencies (Note 7)		
Stockholders' equity:		
Preferred Stock, $0.0001 par value – 5,000,000 shares authorized at March 31, 2022 and December 31, 2021; No shares issued and outstanding at March 31, 2022 or December 31, 2021	—	—
Common Stock, $0.0001 par value – 200,000,000 shares authorized at March 31, 2022 and December 31, 2021; 23,818,411 shares issued and outstanding at March 31, 2022 and 23,668,747 shares issued and outstanding at December 31, 2021	2	2
Additional paid in-capital	258,940	256,948
Accumulated other comprehensive (loss) income	(129)	18
Accumulated deficit	(164,584)	(147,700)
Total stockholders' equity	94,229	109,268
Total liabilities and stockholders' equity	$ 108,931	$ 123,541

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)
(Unaudited)

	Three Months Ended March 31,	
	2022	**2021**
Operating expenses:		
Research and development	$ 11,814	$ 6,603
General and administrative	5,025	4,369
Total operating expenses	16,839	10,972
Loss from operations	(16,839)	(10,972)
Other income (expense):		
Interest income	60	63
Other expenses	(105)	(141)
Other expenses, net	(45)	(78)
Net loss	$ (16,884)	$ (11,050)
Other comprehensive (loss) income:		
Unrealized (losses) gains on available-for-sale securities	(132)	10
Foreign currency translation adjustment	(15)	—
Total other comprehensive (loss) income	(147)	10
Comprehensive loss	$ (17,031)	$ (11,040)
Net loss attributable to common stockholders—basic and diluted	$ (16,884)	$ (11,050)
Net loss per share attributable to common stockholders—basic and diluted	$ (0.71)	$ (0.47)
Weighted-average common shares outstanding—basic and diluted	23,686,351	23,429,507

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 Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount				
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
Balance at December 31, 2020	23,384,969	$ 2	$ 249,175	$ 2	$ (91,076)	$ 158,103
Stock-based compensation	—	—	1,577	—	—	1,577
Exercise of stock options	88,734	—	249	—	—	249
Comprehensive income:						
Unrealized gain on investments	—	—	—	10	—	10
Net loss	—	—	—	—	(11,050)	(11,050)
Balance at March 31, 2021	23,473,703	$ 2	$ 251,001	$ 12	$ (102,126)	$ 148,889

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,	
	2022	**2021**
Operating activities		
Net loss	$ (16,884)	$ (11,050)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	178	158
Stock-based compensation expense	1,752	1,577
Amortization of premiums and discounts on marketable securities	(76)	58
Reduction in the carrying value of right-of-use assets	103	90
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	731	327
Accounts payable	(194)	(1,373)
Accrued expenses	808	(2,272)
Operating lease liabilities	(177)	(131)
Prepaid expenses - noncurrent	(401)	240
Net cash used in operating activities	(14,160)	(12,376)
Investing activities		
Purchases of marketable securities	(30,421)	(38,549)
Maturities of marketable securities	53,000	39,210
Purchases of property and equipment	(17)	(88)
Net cash provided by investing activities	22,562	573
Financing activities		
Proceeds from exercise of stock options	240	249
Net cash provided by financing activities	240	249
Net (decrease) increase in cash, cash equivalents and restricted cash	8,642	(11,554)
Effect of foreign currency exchange rate in cash	(15)	—
Cash, cash equivalents and restricted cash at beginning of period	23,670	28,394
Cash, cash equivalents and restricted cash at end of period	$ 32,297	$ 16,840
Supplemental cash flow information:		
Cash and cash equivalents	$ 31,943	$ 16,486
Restricted cash	354	354
Cash, cash equivalents and restricted cash at end of period	$ 32,297	$ 16,840
Property and equipment unpaid at end of period	$ 12	$ 110
Right-of-use asset at adoption of Topic 842	$ —	$ 2,431
Operating lease liabilities at adoption of Topic 842	$ —	$ 3,997

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

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 of abnormal mineralization impacting the vasculature, soft tissue and skeleton.

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 a critical mineralization pathway and that defects in these genes lead to abnormal mineralization. The Company is initially focused on developing a novel therapy to treat rare genetic diseases of ENPP1 Deficiency and ABCC6 Deficiency.

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 the mineralization pathway caused by ENPP1 and ABCC6 Deficiencies. This pathway is central to the regulation of calcium deposition throughout the body and is further associated with neointimal proliferation, or the overgrowth of smooth muscle cells inside 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 months ended March 31, 2022 are not necessarily indicative of results to be expected for the year ending December 31, 2022, 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, 2021. Any reference in these notes to applicable guidance is meant to refer to authoritative U.S. GAAP as found in the Accounting Standards Codification ("ASC") and Accounting Standards Update ("ASU") of the Financial Accounting Standards Board ("FASB").

Liquidity, Capital Resources, and Going Concern

Since the Company's incorporation in 2017 and through March 31, 2022, 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 $16.9 million in the three months ended March 31, 2022 and $56.6 million in the year ended December 31, 2021 and had an accumulated deficit of $164.6 million as of March 31, 2022. The Company had cash, cash equivalents, and short-term investments of $97.8 million as of March 31, 2022. Subsequent to March 31, 2022, the Company entered into an underwriting agreement (the "Underwriting Agreement") with Jefferies LLC and Cowen and Company, LLC , relating to an underwritten offering 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 estimated offering expenses.

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 and offerings of common stock and pre-funded warrants. 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, 2022, together with the net proceeds from its sale of common stock and pre-funded warrants in April 2022, will be sufficient to fund its operating expenses and capital expenditure requirements for at least twelve months from the date of filing 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 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 consolidated financial statements are described in the Company's audited consolidated financial statements for the year ended December 31, 2021 included in the Company's Annual Report on Form 10-K for the year ended December 31, 2021. There have been no material changes in the Company's significant accounting policies during the three months ended March 31, 2022.

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.

Accrued Research and Development Costs

The Company records accrued liabilities for estimated costs of research and development activities conducted by service providers for sponsored research, preclinical studies, clinical trials, and contract manufacturing activities. The Company records the estimated costs of research and development activities based upon the estimated amount of services provided but not yet invoiced and includes these costs in accrued expenses in the accompanying consolidated balance sheets and within research and development expense in the accompanying consolidated statements of operations and comprehensive loss.

The Company accrues for these costs based on factors such as estimates of the work completed and in accordance with agreements established with service providers. The Company makes significant judgments and estimates in determining the accrued liabilities balance in each reporting period. As actual costs become known, the Company adjusts its accrued liabilities. The Company has not experienced any material differences between accrued costs and actual costs incurred since its inception.

Research and Development Costs

Research and development costs are expensed as incurred. Research and development costs consist of direct and indirect internal 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.

Net Loss Per Share

The Company follows the two-class method when computing net loss allocable to common securities per share as the Company had previously issued shares that meet the definition of participating securities. The two-class method requires a portion of net income to be allocated to the participating securities to determine net income allocable to the common securities. During periods of loss, there is no allocation required under the two-class method since the participating securities do not have a contractual obligation to fund the losses of the Company.

Basic net loss per share attributable to common stockholders is computed by dividing the net loss attributable to common stockholders by the weighted-average number of shares of common stock outstanding during the period, without consideration for potentially dilutive securities. Diluted net loss per share is computed by dividing the net loss attributable to common stockholders by the weighted-average number of shares of common stock and potentially dilutive securities outstanding using the treasury-stock and if-converted methods. The Company has generated a net loss in all 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.

Fair Value Measurements

The Company categorizes its assets and liabilities measured at fair value in accordance with the authoritative accounting guidance that establishes a consistent framework for measuring fair value and expands disclosures for each major asset and liability category measured at fair value on either a recurring or nonrecurring basis. Fair value is defined as the exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. As such, 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).

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 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 Issued and Adopted Accounting Standards

In December 2019, the FASB issued ASU 2019-12, *Income Taxes – Simplifying the Accounting for Income Taxes*. The new guidance simplifies the accounting for income taxes by removing several exceptions in the current standard and adding guidance to reduce complexity in certain areas, such as requiring that an entity reflect the effect of an enacted change in tax laws or rates in the annual effective tax rate computation in the interim period that includes the enactment date. The new standard is effective for fiscal years beginning after December 15, 2021, and interim periods within fiscal years beginning after December 15, 2022 for non-public entities, with early adoption permitted. The Company adopted this standard effective January 1, 2022. There was no material impact to the Company's financial statements upon adoption.

Recently Issued Accounting Standards Not Yet Adopted

In June 2016, the FASB issued 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 new standard and its subsequent related updates are effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years, with early adoption permitted. The Company is currently assessing the impact that adopting this standard will have on its consolidated financial statements but does not expect it to be material.

4. Balance Sheet Details

Short-term investments consisted of the following (dollar amounts in thousands):

		March 31, 2022			
Description	Maturity	Amortized Costs	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Commercial paper	1 year or less	$ 44,213	$ —	$ (87)	$ 44,126
U.S. Treasury securities	1 year or less	21,747	—	(43)	21,704
		$ 65,960	$ —	$ (130)	$ 65,830

		December 31, 2021			
Description	Maturity	Amortized Costs	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Commercial paper	1 year or less	$ 78,456	$ 5	$ (3)	$ 78,458
U.S. Treasury securities	1 year or less	5,025	—	—	5,025
U.S. government agency debt securities	1 year or less	5,002	—	—	5,002
		$ 88,483	$ 5	$ (3)	$ 88,485

The Company concluded that the declines in market value of available-for-sale securities were temporary in nature and did not consider any of the investments to be other-than-temporarily impaired. In accordance with its investment policy, the Company invests in investment grade securities with high credit quality issuers, and generally limits the amount of credit exposure to any one issuer. The Company evaluates securities for other-than-temporary impairment at the end of each reporting period. Impairment is evaluated considering numerous factors, and their relative significance varies depending on the situation. Factors considered include the length of time and extent to which fair value has been less than the cost basis, the financial condition and near-term prospects of the issuer, and the Company's intent and ability to hold the investment to allow for an anticipated recovery in fair value. Furthermore, the aggregate of individual unrealized losses that had been outstanding for 12 months or less was not significant as of March 31, 2022 and December 31, 2021. The Company does not intend to sell these investments and it is not more likely than not that the Company will be required to sell the investments before a recovery of their amortized cost bases, which may be maturity. The Company also believes that it will be able to collect both principal and interest amounts due at maturity.

Prepaid expenses and other current assets consisted of the following (dollar amounts in thousands):

	At March 31, 2022	At December 31, 2021
Interest receivable	$ 48	$ 62
Prepaid insurance	1,029	1,728
Prepaid research studies	1,014	1,190
Prepaid other	719	561
Total	$ 2,810	$ 3,541

Prepaid expenses, net of current portion, consisted of the following (dollar amounts in thousands):

	At March 31, 2022	At December 31, 2021
Prepaid clinical trial and other	$ 3,810	$ 3,409
	$ 3,810	$ 3,409

Property and equipment consisted of the following (dollar amounts in thousands):

	At March 31, 2022	At December 31, 2021
Laboratory equipment and manufacturing equipment	$ 591	$ 591
Furniture and fixtures	258	258
Computer equipment and software	469	440
Leasehold improvements	2,095	2,095
	3,413	3,384
Less accumulated depreciation	(1,179)	(1,001)
Total	$ 2,234	$ 2,383

Depreciation expense for the three months ended March 31, 2022 and 2021 was $178 thousand and $158 thousand, respectively.

Accrued expenses consisted of the following (dollar amounts in thousands):

	At March 31, 2022	At December 31, 2021
Payroll and related liabilities	$ 750	$ 2,379
Professional fees	590	727
Research and development costs	7,144	5,066
Other	824	336
Total	$ 9,308	$ 8,508

5. Fair Value Measurement

The following table represents 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 (in thousands):

		Fair Value Measurements at Reporting Date Using		
Description	March 31, 2022	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Money market funds (included in cash and cash equivalents)	$ 21,877	$ 21,877	$ —	$ —
Commercial paper	44,126	—	44,126	—
U.S. Treasury securities	21,704	21,704	—	—
Total assets	$ 87,707	$ 43,581	$ 44,126	$ —

Description	December 31, 2021	Fair Value Measurements at Reporting Date Using: Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Money market funds (included in cash and cash equivalents)	$ 14,302	$ 14,302	$ —	$ —
Commercial paper	78,457	—	78,457	—
U.S. Treasury securities	5,026	5,026	—	—
U.S. government agency debt securities	5,002	—	5,002	—
Total assets	$ 102,787	$ 19,328	$ 83,459	$ —

There have been no transfers between fair value levels during the three months ended March 31, 2022.

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, 2022, the Company incurred a total of $0.2 million in license maintenance fees to Yale. The Company is required to pay Yale $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 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.

In January 2017, the Company also entered into a corporate sponsored research agreement with Yale (the "Sponsored Research Agreement"), which was amended in February 2019, under which the Company agreed to provide research support funding in the aggregate amount of $2.4 million over the five year period from contract inception through December 2021. The Sponsored Research Agreement was amended in February 2022, under which the contract was extended through June 30, 2022 subject to the terms of the existing agreement. The Company recorded research and development expenses associated with this arrangement of $0.1 million and $0.1 million in the three months ended March 31, 2022 and 2021, respectively.

7. Commitments and Contingencies

Operating Leases

The Company held the following significant operating leases of office and laboratory space as of March 31, 2022:

- 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, 2022, cash paid for amounts included for the measurement of lease liabilities was $0.2 million and the Company recorded operating lease expense of $0.2 million.

Future lease payments under non-cancelable leases as of March 31, 2022 are as follows (dollar amounts in thousands):

Year Ending December 31,		
2022 (remaining 9 months)	$	726
2023		992
2024		1,016
2025		944
Thereafter		—
	$	3,678

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, 2022 or December 31, 2021.

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, 2022 and 2021.

8. Stockholders' Equity

Equity Incentive Plans

In January 2017, the Company's board of directors and stockholders adopted the 2017 Equity Incentive Plan, which was amended and restated in July 2017, (as so amended and restated, the "2017 Plan"), which provided for the grant of incentive stock options, non-statutory stock options, stock appreciation rights, restricted stock awards, restricted stock unit awards and other stock awards. The maximum number of shares of common stock that were authorized for issuance under the 2017 Plan was 2,730,496.

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. The number of shares of the Company's common stock reserved for issuance under the 2020 Plan was 1,588,315 shares, plus the 426,065 shares of common stock remaining available for issuance under the 2017 Plan as of July 23, 2020. The number of shares reserved under the 2020 Plan will be annually increased on each January 1 through January 1, 2030 by the lower of (i) 4% of the number of shares of common stock outstanding on the first day of such fiscal year and (ii) an amount determined by the Company's board of directors.

As of the effective date of the 2020 Plan, no further awards will be made under the 2017 Plan. Any options or awards outstanding under the 2017 Plan are governed by their existing terms. The shares of the Company's common stock subject to outstanding awards under the 2017 Plan that expire, terminate or are otherwise surrendered, cancelled, forfeited or repurchased by the Company at their original issuance price pursuant to a contractual repurchase right will be added back to the shares of common stock available for issuance under the 2020 Plan. No more than 1,588,315 shares of the Company's common stock may be granted subject to incentive stock options under the 2020 Plan. On January 1, 2022, the number of shares of common stock reserved under the 2020 Plan was increased by 946,749 shares. As of March 31, 2022, 721,937 shares of common stock remain available for future issuance under the 2020 Plan.

The following table summarizes stock option activity under the Company's equity incentive plans since December 31, 2021:

	Options Outstanding	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term	Aggregate Intrinsic Value (1)
			(in years)	(in thousands)
Outstanding at December 31, 2021	3,582,613	$ 10.63	8.32	$ 7,428
Granted	1,208,550	5.60		
Exercised	(149,664)	1.61		
Forfeited	(134,641)	10.16		
Outstanding at March 31, 2022	4,506,858	$ 9.60	8.60	$ 2,746
Exercisable at March 31, 2022	1,487,970	$ 8.29	7.53	$ 1,964
Vested and expected to vest at March 31, 2022	4,506,858	$ 9.60	8.60	$ 2,746

(1) The aggregate intrinsic value of stock options is calculated as the difference between the exercise price of the stock options and the fair value of the Company's common stock for those stock options that had exercise prices lower than the fair value of the Company's common stock.

The weighted-average grant date fair value of options granted during the three months ended March 31, 2022 was $4.34 per share. The aggregate intrinsic value of stock options exercised during the three months ended March 31, 2022 was immaterial.

For purposes of calculating stock-based compensation expense, the Company estimates the fair value of stock options using the Black-Scholes option-pricing model. This model incorporates various assumptions, including the expected volatility, expected term, and interest rates. The underlying assumptions used to value stock options granted to participants using the Black-Scholes option-pricing were as follows:

	For the Three Months Ended March 31,	
	2022	2021
Risk-free interest rate range	1.59% to 2.37%	0.48% to 1.05%
Dividend yield	0%	0%
Expected term of options (years)	5.08 to 6.48	6.08 to 6.48
Volatility rate range	85.38% to 86.64%	88.70% to 90.53%

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 (in thousands):

	Three Months Ended March 31,	
	2022	2021
Research and development	$ 896	$ 641
General and administrative	856	936
Total	$ 1,752	$ 1,577

The total unrecognized compensation cost related to outstanding employee awards as of March 31, 2022 was $19.5 million and is expected to be recognized over a weighted-average period of 2.90 years.

Employee Stock Purchase Plan

On July 17, 2020, the Company's stockholders approved the 2020 Employee Stock Purchase Plan (the "ESPP"), which became effective on July 23, 2020. The ESPP initially provides participating employees with the opportunity to purchase up to an aggregate of 198,539 shares of the Company's common stock. The number of shares of common stock reserved for issuance under the ESPP will automatically increase on each January 1 through January 1, 2031, in an amount equal to the lowest of (1) 397,079 shares of the Company's common stock, (2) 1% of the number of shares of the Company's common stock outstanding on the first day of such fiscal year and (3) an amount determined by the Company's board of directors. The number of shares available for grant under this plan increased by 236,687 on January 1, 2022 due to this provision. As of March 31, 2022, no shares have been purchased by employees under the ESPP.

The Company activated its first offering period under the ESPP on April 1, 2022. The offering period ends on September 30, 2022.

9. 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 for the three months ended March 31, 2022 and 2021 (in thousands, except share and per share amounts):

	Three Months Ended March 31,	
	2022	2021
Net loss attributable to common stockholders—basic and diluted	$ (16,884)	$ (11,050)
Net loss per share attributable to common stockholders—basic and diluted	$ (0.71)	$ (0.47)
Weighted-average common shares outstanding—basic and diluted	23,686,351	23,429,507

The Company has generated a net loss in all 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. The Company excluded the following potential common shares, presented based on amounts outstanding at each period end, from the computation of diluted net loss per share attributable to common stockholders for the periods indicated:

	Three Months Ended March 31,	
	2022	2021
Options to purchase common stock	4,506,858	3,523,586
	4,506,858	3,523,586

10. Employee Benefit Plans

The Company established a defined contribution savings plan in 2018 for all eligible U.S. employees under Section 401(k) of the Internal Revenue Code. Employees can designate the investment of their 401(k) accounts into several mutual funds. Effective January 1, 2021, the Company implemented a matching policy under which the Company matches 50% of an employee's contributions to the 401(k) plan, up to a maximum of 6% of the employee's base salary and bonus paid during the year. For the three months ended March 31, 2022, the Company made employer contributions to the 401(k) plan totaling $82 thousand.

11. Related Party Transactions

On May 6, 2021, the Company entered into an amended and restated consulting agreement (the "Consulting Agreement") with Danforth Advisors, LLC ("Danforth"), pursuant to which Danforth, in addition to providing finance, accounting and administrative functions, provided interim chief financial officer services provided to the Company by Stephen J. DiPalma, managing director of Danforth. The Company pays Danforth an agreed upon hourly rate for such services and reimburses Danforth for expenses. The Consulting Agreement may be terminated by the Company or Danforth with cause, upon 30 days prior written notice, and without cause, upon 60 days prior written notice. Mr. DiPalma ceased serving as the Company's interim chief financial officer on March 21,

2022 in connection with the appointment of Sanjay S. Subramanian as the Company's Chief Financial Officer. The Company has incurred $0.4 million of expense for services provided by Danforth in the three months ended March 31, 2022.

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 consolidated financial statements and the related notes appearing elsewhere in the Quarterly Report on Form 10-Q and our Annual Report on Form 10-K for the year ended December 31, 2021 filed with the Securities and Exchange Commission, or SEC, on March 15, 2022. 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, 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 of abnormal mineralization impacting the vasculature, soft tissue and skeleton. Through our in-depth understanding of the biological pathways involved in mineralization, 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 a critical mineralization pathway and that defects in these genes lead to abnormal mineralization. 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, genetically engineered, fusion protein that is designed to correct a defect in the mineralization pathway caused by ENPP1 and ABCC6 Deficiencies. This pathway is central to the regulation of calcium deposition throughout the body and is further associated with neointimal proliferation, or the overgrowth of smooth muscle cells inside blood vessels. We have generated robust preclinical proof of concept data demonstrating that in animal models INZ-701 prevented pathological calcification, led to improvements in overall health and survival and prevented neointimal proliferation. In addition, INZ-701 achieved survival benefit in a mouse model of ENPP1 Deficiency.

We are currently conducting Phase 1/2 clinical trials of INZ-701 for the treatment of ENPP1 Deficiency and ABCC6 Deficiency. These clinical trials are being, and will be, conducted in both North America and in Europe. The U.S. Food and Drug Administration, or FDA, and the European Medicines Agency 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 INZ-701 for the treatment of ENPP1 Deficiency.

In November 2021, we initiated our Phase 1/2 clinical trial of INZ-701 in adult patients with ENPP1 Deficiency. This trial is currently ongoing in North America and the United Kingdom. In the Phase 1 dose-escalation portion of the clinical trial, we are assessing 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 twice weekly, with three patients per dose cohort.

In April 2022, we announced preliminary biomarker, safety and pharmacokinetic, or PK, data from the 0.2 mg/kg cohort of this trial. At the 0.2 mg/kg dose level of INZ-701, all three patients showed rapid, significant, and sustained increases in plasma pyrophosphate, or PPi, levels. Preclinical findings demonstrated PPi as a key predictive biomarker of therapeutic benefit in ENPP1 Deficiency. At the 0.2 mg/kg dose level of INZ-701, the range of peak PPi levels observed during the 32-day dose evaluation period across the three patients was 1082-2416 nM, and was comparable to data from our study of healthy subjects (n=10), which showed PPi levels between 1002 nM and 2169 nM. PPi levels observed after dosing of INZ-701 correlated to systemic exposure and activity of INZ-701. PK analysis showed INZ-701 nearing steady-state by Day 29 with an approximately 4-fold accumulation from Day 1, based on AUC0-72. We believe that the half-life of INZ-701 observed in this trial suggests the potential for once-weekly dosing. INZ-701 was generally well-tolerated, with no serious adverse events reported, and otherwise exhibited a favorable initial safety profile. All three patients from the first cohort enrolled in the open-label Phase 2 48-week extension portion of the trial. At Week 12, low titers of anti-drug antibodies were observed in two out of three patients. The significantly increased PPi levels observed during the 32-day dose evaluation period were sustained in all three patients through Week 12 of the extension portion of the trial. In April 2022, we announced that the 0.6 mg/kg cohort of this trial has been fully enrolled and dosing is underway. We plan to report topline data from this trial in the second half of 2022.

In April 2022, we initiated our Phase 1/2 clinical trial of INZ-701 in adult patients with ABCC6 Deficiency. The trial is currently ongoing in the United States and Europe. We plan to report preliminary safety and biomarker data from this trial in the second quarter of 2022.

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 abnormal mineralization, including those without a clear genetic basis, such as 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, including 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 and offerings of common stock and pre-funded warrants.

Uncertainty remains as to the potential impact of COVID-19 on our future research and development activities and the potential for a material impact on the Company increases the longer the virus impacts certain aspects of economic activity around the world. The full extent to which COVID-19 will directly or indirectly impact our business, results of operations and financial condition, including our ability to fulfill our clinical trial enrollment needs, will depend on future developments that are highly uncertain, including as a result of new information that may emerge concerning COVID-19 and the actions taken to contain it or treat COVID-19, as well as the economic impact on local, regional, national and international markets, the ultimate geographic spread of the disease, the duration of the pandemic, travel restrictions and social distancing in the United States and other countries, business closures or business disruptions, the ultimate impact on financial markets and the global economy, the effectiveness of vaccines and vaccine distribution efforts and the effectiveness of other actions taken in the United States and other countries to contain and treat the disease.

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 $16.9 million for the three months ended March 31, 2022 and $56.6 million for the year ended December 31, 2021. As of March 31, 2022, we had an accumulated deficit of $164.6 million.

Our operating expenses were $16.8 million for the three months ended March 31, 2022 and $56.6 million for the year ended December 31, 2021. We expect to continue to incur significant expenses for the foreseeable future. We expect our expenses to increase substantially in connection with our ongoing and planned activities, particularly as we advance our preclinical activities and clinical trials. 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. 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.

As of March 31, 2022, we had cash, cash equivalents and short-term investments of approximately $97.8 million.

On April 14, 2022, we entered into an underwriting agreement, or Underwriting Agreement, with Jefferies LLC and Cowen and Company, LLC, relating to an underwritten offering of 16,276,987 shares of our common stock or 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 estimated offering expenses.

We believe that our existing cash, cash equivalents and short-term investments as of March 31, 2022, together with the net proceeds from our sale of common stock and pre-funded warrants in April 2022, will enable us to fund our operating expenses and capital expenditure requirements into the fourth quarter of 2023. 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. 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 later stage clinical trials of INZ-701 for patients with ENPP1 and ABCC6 Deficiencies;
- conduct research and preclinical testing of INZ-701 for additional indications;
- conduct research and preclinical testing of other product candidates;
- advance INZ-701 for additional indications or any other product candidate into clinical development;
- seek marketing approval for INZ-701 or any other product candidate if it successfully completes clinical trials;
- scale up our manufacturing processes and capabilities to support clinical trials of INZ-701 or any other product candidates we develop and for commercialization of any product candidate for which we may obtain marketing approval;
- 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; and
- 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.

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 expenses primarily consist of 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 cost of acquiring and manufacturing preclinical trial materials, including manufacturing validation batches;
- employee-related expenses, including salaries, related benefits, travel and stock-based compensation expense for employees engaged in research and development functions;
- the costs of laboratory supplies and acquiring, 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. From inception through March 31, 2022, we have incurred $106.1 million of research and development costs for INZ-701. 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 later stage 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 we develop;
- 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 we develop;

- making arrangements for commercial manufacturing capabilities;
- establishing sales, marketing and distribution capabilities and launching commercial sales of INZ-701 and any other product candidates we develop, if and when approved, whether alone or in collaboration with others;
- acceptance of INZ-701 and any other product candidates we develop, 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 SEC; director and officer insurance costs; and investor and public relations costs. 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

Interest income consists of income from bank deposits and investments.

Other Income (Expense), net

Other income (expense), net primarily consists of foreign exchange gains or losses.

Results of Operations

Comparison of the Three Months Ended March 31, 2022 and 2021

The following table summarizes our results of operations for the three months ended March 31, 2022 and 2021 (in thousands):

	Three Months Ended March 31,		
	2022	2021	Increase (Decrease)
Operating expenses:			
Research and development	$ 11,814	$ 6,603	$ 5,211
General and administrative	5,025	4,369	656
Total operating expenses	16,839	10,972	5,867
Loss from operations	(16,839)	(10,972)	5,867
Other income (expense):			
Interest income	60	63	(3)
Other expenses	(105)	(141)	36
Other expenses, net	(45)	(78)	33
Net loss	$ (16,884)	$ (11,050)	$ 5,834

Research and Development Expense

Research and development expense increased by $5.2 million to $11.8 million for the three months ended March 31, 2022 from $6.6 million for the three months ended March 31, 2021. The increase in research and development expense was primarily attributable to the following:

- an increase of $3.1 million in clinical trial costs due to progression of clinical trials and enrollment of first patients in the Phase 1/2 clinical trial of INZ-701 for ENPP1 Deficiency;
- an increase of $1.0 million related to employee compensation and fees for outsourced services for additional consultants to support the ongoing trials;
- an increase of $0.8 million due to an increase in manufacturing operations based on the timing of production runs; and
- an increase of $0.3 million related to the Yale milestone payment for the dosing of the first patient in the Phase 1/2 clinical trial of INZ-701 for ENPP1 Deficiency.

We expect that our research and development expenses will increase for the foreseeable future as we conduct clinical trials of INZ-701, prepare for, initiate and conduct later stage 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 $0.6 million to $5.0 million for the three months ended March 31, 2022 from $4.4 million for the three months ended March 31, 2021. The increase in general and administrative expense was attributable to an increase in the number of general and administrative employees, consulting expenses, and expenses to support our operations as a public company. We expect that our general and administrative expenses will increase in future periods as we expand our operations and incur additional costs in connection with being a public company.

Interest Income

Interest income for the three months ended March 31, 2022 was approximately $0.1 million which is consistent with interest income for the three months ended March 31, 2021.

Other Expenses

Other expenses, consisting primarily of foreign exchange gains and losses, for the three months ended March 31, 2022 decreased by less than $0.1 million as compared to the three months ended March 31, 2021. This decrease was driven by cash balances we hold which are denominated in Euros and their related appreciation compared to the U.S. Dollar in the three months ended March 31, 2022 compared to the three months ended March 31, 2021.

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 and offerings of common stock and pre-funded warrants. Through March 31, 2022, we had received net cash proceeds of approximately $227.4 million from sales of our convertible preferred stock and common stock, after deducting underwriting discounts and commissions and offering expenses. As of March 31, 2022, we had cash, cash equivalents and short-term investments of approximately $97.8 million.

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. To date, we have 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 estimated offering expenses.

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, 2022 and December 31, 2021 (in thousands):

	March 31, 2022	December 31, 2021
Cash and cash equivalents	$ 31,943	$ 23,316
Short-term investments	65,830	88,485
Total cash, cash equivalents and short-term investments	$ 97,773	$ 111,801

Cash Flows

The following table provides information regarding our cash flows for the three months ended March 31, 2022 and 2021 (in thousands):

	Three Months Ended March 31,	
	2022	2021
Net cash used in operating activities	$ (14,160)	$ (12,376)
Net cash provided by investing activities	22,562	573
Net cash provided by financing activities	240	249
Net increase (decrease) in cash, cash equivalents and restricted cash	$ 8,642	$ (11,554)

Net Cash Used in Operating Activities

The cash used in operating activities resulted primarily from our net losses adjusted for non-cash charges and changes in components of working capital.

Net cash used in operating activities was $14.2 million for the three months ended March 31, 2022 compared to $12.4 million for the three months ended March 31, 2021. The increase in cash used in operating activities of $1.8 million was primarily due to an increase in net loss adjusted for non-cash items of $5.8 million as well as a decrease in the use of cash for accounts payable and a decrease in the use of cash for accrued expenses.

Net Cash Provided by Investing Activities

Net cash provided by investing activities was $22.6 million for the three months ended March 31, 2022 compared to $0.6 million for the three months ended March 31, 2021. Proceeds from the maturity of our investments during the three months ended March 31, 2022 were used to fund our operations and not reinvested as they were during the three months ended March 31, 2021.

Net Cash Provided by Financing Activities

Net cash provided by financing activities of $0.2 million for the three months ended March 31, 2022 reflects the cash proceeds from the exercise of stock options and was consistent with the net cash provided by financing activities for the three months ended March 31, 2021.

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 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, particularly as we advance our preclinical activities and clinical trials. 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 Deficiency and ABCC6 Deficiency 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 to support clinical trials of INZ-701 and any other product candidates we develop;
- 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 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.

As of March 31, 2022, we had cash, cash equivalents and short-term investments of approximately $97.8 million. We believe that our existing cash, cash equivalents and short-term investments as of March 31, 2022, together with the net proceeds from our sale of common stock and pre-funded warrants in April 2022, will enable us to fund our operating expenses and capital expenditure requirements into the fourth quarter of 2023. 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 and 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, and may be impacted by the economic climate and market conditions.

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. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interests of our stockholders will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of our existing common stockholders. Debt financing and preferred 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 debt, 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.

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 consolidated financial statements, which have been prepared in accordance with generally accepted accounting principles in the United States. The preparation of these 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 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, 2022, there were no material changes to our critical accounting estimates from those described in 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, 2021, filed with the SEC on March 15, 2022.

Contractual Obligations, Commitments and Contingencies

During the three months ended March 31, 2022, there were no material changes to our contractual obligations and commitments from those described in "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our Annual Report on Form 10-K for the fiscal year ended December 31, 2021.

Recently Issued Accounting Pronouncements

A description of recently issued accounting pronouncements that may potentially impact our financial position and results of operations is disclosed in Note 3 to our consolidated financial statements appearing elsewhere in this Quarterly Report on Form 10-Q.

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, 2022, our cash equivalents consisted of primarily of short-term money market funds. As of March 31, 2022, 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 primarily 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. An immediate increase (decrease) of 100 basis points would result in an increase (decrease) in interest income of approximately $0.9 million annually.

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 three months ended March 31, 2022 and 2021.

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, 2022. 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, 2022, 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 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, 2021, 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, 2021 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, 2021 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, 2022.

Use of Proceeds from Initial Public Offering

On July 28, 2020, we completed our 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.

The offer and sale of all of the shares of our common stock in our IPO were registered under the Securities Act pursuant to a registration statement on Form S-1 (File No. 333-239648), which was declared effective by the SEC on July 23, 2020. BofA Securities, Inc., Cowen and Company, LLC and Piper Sandler & Co. acted as joint book-running managers for our IPO. Wedbush Securities Inc. acted as lead manager for our IPO. The offering commenced on July 23, 2020 and did not terminate until the sale of all of the shares offered.

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. None of the underwriting discounts and commissions or offering expenses were incurred or paid to directors or officers of ours or their associates or to persons owning 10% or more of our common stock or to any of our affiliates.

We have used approximately $18.7 million of the net proceeds from the IPO as of March 31, 2022 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).
4.1	Form of Pre-Funded Warrant (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K (File No. 001-39397) filed with the Securities and Exchange Commission on April 19, 2022).
10.1*	Employment Agreement, dated March 2, 2022, by and between the Registrant and Sanjay Subramanian.
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 10, 2022

By: /s/ Axel Bolte

Axel Bolte
President and Chief Executive Officer, Director
(Principal Executive Officer)

Date: May 10, 2022

By: /s/ Sanjay Subramanian

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

Exhibit 10.1

March 2, 2022

Sanjay S. Subramanian

Dear Sanjay:

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 Senior Vice President, effective March 21, 2022 ("Effective Date"), and, in addition, as Chief Financial Officer, effective as of the later of (a) the Effective Date and (b) the date immediately following the date of the filing of the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2021. 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 shall have the flexibility to work remotely from your home as your duties permit, but at the request of the Chief Executive Officer and/or as necessitated by business needs, you shall also work out of the Company's office in Boston, Massachusetts (current expectation is up to two weeks per month but may vary in the Company's discretion based on business needs) and travel to other locations; provided, however, that the primary location where you perform work shall become Boston should the Board of Directors (the "Board") so determine at any time: (i) on or after the date that is 24 months following the Effective Date of this Letter Agreement or (ii) that all of the Company's senior executives are to be primarily located in Boston, in each case with 90 days' notice and the Company shall provide you with relocation assistance, the amount and terms and conditions of which shall be determined by the Board in its sole discretion.

2. Base Salary. Your base salary will be at the rate of seventeen thousand nine hundred sixteen dollars and sixty-seven cents ($17,916.67) per regular semi-monthly pay period (annualized rate of four hundred thirty thousand dollars ($430,000), subject to tax and other withholdings as required by law, and will be paid in accordance with the Company's regularly established payroll procedure. 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. For the 2022 calendar year, you will be eligible for 100% of your Discretionary Bonus, subject to the terms and conditions above.

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. Additionally, unless and until the Board determines that your primary work location will become Boston in accordance with Section 1 above, travel expenses for travel between your home and the Company's Boston area headquarters will be reimbursed in accordance with the Company's Travel and Expense Policy.

c. In connection with your commencement of employment with the Company, the Company will advance you a signing bonus of one hundred thousand dollars ($105,000), less applicable taxes and withholdings, which will be payable in two installments: fifty-five thousand dollars ($55,000) in the first payroll after your commencement of employment and fifty thousand dollars ($50,000) in the first payroll following the date that is six months from the date of 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 the approval of the Board of Directors of the Company, the Company will grant to you, effective on your first day of employment, an incentive stock option (the "Option") under the Company's 2020 Stock Incentive Plan (the "Plan") for the purchase of an aggregate of 180,000 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, vesting schedules and other provisions set forth in the Plan and in a separate option agreement.

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.

iii. Provided such termination occurs between January 1 and the date annual bonuses are distributed, the Company will pay you your annual Discretionary Bonus for the prior calendar year in accordance with the terms set forth in Section 3, less all applicable

taxes and withholdings, in a lump sum on the date the first installment of severance pay is paid.

iv. Provided such termination occurs prior to you receiving the second installment of your signing bonus pursuant to Section 4(c), the Company will pay you fifty thousand dollars ($50,000), less all applicable taxes and withholdings, in a lump sum on the date the first installment of severance pay is paid.

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.

v. Provided such termination occurs prior to you receiving the second installment of your signing bonus pursuant to Section 4(c), the Company will pay you fifty thousand dollars ($50,000), less all applicable taxes and withholdings, in a lump sum on the date the first installment of severance pay is paid.

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, other than in connection with a decision by the Board at any time that your primary place of work will become Boston; (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 the Plan 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 15, 2022.

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: 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/ Sanjay Subramanian Date: 3/2/2022
Name: Sanjay Subramanian

APPENDIX A

Payments Subject to Section 409A

1. 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 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, Axel Bolte, 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 10, 2022

By: /s/ Axel Bolte

Axel Bolte
President and 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 10, 2022

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, 2022 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 10, 2022

By: /s/ Axel Bolte

Axel Bolte
President and 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, 2022 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 10, 2022

By: /s/ Sanjay Subramanian
Sanjay Subramanian
Chief Financial Officer
(Principal Financial Officer and Principal Accounting Officer)