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

FORM 10-K/A
(Amendment No. 1)

(Mark One)

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

For the fiscal year ended December 31, 2021

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 No. 000-30319

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

Delaware	**94-3265960**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
1350 Old Bayshore Highway, Suite 400 Burlingame, CA	**94010**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: **(650) 238-9600**

Title of Each Class	**Trading Symbol(s)**	**Name of Each Exchange On Which Registered**
Common Stock $0.01 Par Value	INVA	The Nasdaq Stock Market LLC

SECURITIES REGISTERED PURSUANT TO SECTION 12(g) OF THE ACT: **NONE**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☐

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 registrant is a large accelerated filer, an accelerated filer or a non-accelerated filer. See definition of "accelerated filer and large accelerated filer" in Rule 12b-2 of the Exchange Act (Check One):

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 has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

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

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant based upon the closing price of the registrant's Common Stock on The Nasdaq Global Select Market on June 30, 2021 was $840,846,560. This calculation does not reflect a determination that persons are affiliates for any other purpose.

On February 14, 2022, there were 69,565,501 shares of the registrant's Common Stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Specified portions of the registrant's definitive Proxy Statement to be issued in conjunction with the registrant's 2022 Annual Meeting of Stockholders, which is expected to be filed not later than 120 days after the registrant's fiscal year ended December 31, 2021, are incorporated by reference into Part III of this Annual Report. Except as expressly incorporated by reference, the registrant's Proxy Statement shall not be deemed to be a part of this Annual Report on Form 10-K/A.

EXPLANATORY NOTE

This Amendment No. 1 on Form 10-K/A (the "Amendment") amends the Annual Report on Form 10-K of Innoviva, Inc. (the "Company") for the year ended December 31, 2021, originally filed on February 28, 2022 (the "Original Filing") solely for the purpose of attaching the Audited Consolidated Financial Statements of Armata Pharmaceuticals, Inc. for the year ended December 31, 2021 and the Consent of Ernst & Young LLP Independent Registered Public Accounting Firm of Armata Pharmaceuticals, Inc. as Exhibit 99.1 and Exhibit 23.2, respectively. These exhibits were not available at the time of our Original Filing.

In accordance with applicable Securities and Exchange Commission ("SEC") rules and as required by Rule 12b-15 under the Securities Exchange Act of 1934, as amended, this Amendment includes new certifications from the Company's Principal Executive Officer and Principal Financial Officer dated as of the date of filing of this Amendment.

This Amendment consists solely of the preceding cover page, this explanatory note, Part II., Item 8., "Financial Statements and Supplementary Data", in its entirety, Part IV., Item 15., "Exhibits and Financial Statement Schedules," in its entirety, the Exhibits, the signature page, and the new certifications from the Company's Principal Executive Officer and Principal Financial Officer.

This Amendment does not reflect events occurring after the date of the Original Filing and does not amend or update in any way the disclosures made in the Original Filing, except as described above. In particular, the information included in this Amendment under Part II, Item 8 is identical in all respects to the information included under such caption in the Original Filing. This Amendment should be read in conjunction with the Original Filing and with the Company's subsequent filings with the SEC.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

INNOVIVA, INC.

CONSOLIDATED BALANCE SHEETS

(In thousands, except per share data)

	December 31, 2021	December 31, 2020
Assets		
Current assets:		
Cash and cash equivalents	$ 201,525	$ 246,487
Related party receivables from collaborative arrangements	110,711	93,931
Prepaid expenses and other current assets	1,437	1,640
Total current assets	313,673	342,058
Property and equipment, net	12	28
Equity and long-term investments	483,845	438,258
Capitalized fees paid to a related party, net	111,430	125,253
Deferred tax assets, net	17,327	93,759
Other assets	108	214
Total assets	$ 926,395	$ 999,570
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 27	$ 66
Accrued personnel-related expenses	619	490
Accrued interest payable	4,152	4,152
Other accrued liabilities	1,009	1,402
Total current liabilities	5,807	6,110
Long-term debt, net of discount and issuance costs	394,653	385,517
Other long-term liabilities	—	106
Commitments and contingencies (Note 9)		
Stockholders' equity:		
Preferred stock: $0.01 par value, 230 shares authorized, no shares issued and outstanding	—	—
Common stock: $0.01 par value, 200,000 shares authorized, 69,566 and 101,392 issued and outstanding as of December 31, 2021 and December 31, 2020 respectively	696	1,014
Treasury stock: at cost, 32,005 and no shares at December 31, 2021 and December 31, 2020, respectively	(393,829)	—
Additional paid-in capital	1,264,024	1,260,900
Accumulated deficit	(456,148)	(722,002)
Total Innoviva stockholders' equity	414,743	539,912
Noncontrolling interest	111,192	67,925
Total stockholders' equity	525,935	607,837
Total liabilities and stockholders' equity	$ 926,395	$ 999,570

See accompanying notes to consolidated financial statements.

INNOVIVA, INC.

CONSOLIDATED STATEMENTS OF INCOME

(In thousands, except per share data)

	Year Ended December 31,		
	2021	2020	2019
Royalty revenue from a related party, net of amortization of capitalized fees paid to a related party of $13,823 in the years ended December 31, 2021, 2020, 2019 respectively	$ 391,866	$ 326,794	$ 261,016
Revenue from collaborative arrangement with a related party	—	10,000	—
Total net revenue	391,866	336,794	261,016
Operating expenses:			
Research and development	576	1,788	—
General and administrative	16,187	13,883	14,656
Total operating expenses	16,763	15,671	14,656
Income from operations	375,103	321,123	246,360
Interest and dividend income	1,839	1,524	5,540
Other expense, net	(3,626)	(348)	(345)
Interest expense	(19,070)	(18,331)	(18,660)
Changes in fair values of equity and long-term investments, net	91,030	50,277	—
Income before income taxes	445,276	354,245	232,895
Income tax expense, net	76,439	60,431	41,902
Net income	368,837	293,814	190,993
Net income attributable to noncontrolling interest	102,983	69,412	33,705
Net income attributable to Innoviva stockholders	$ 265,854	$ 224,402	$ 157,288
Basic net income per share attributable to Innoviva stockholders	$ 3.24	$ 2.21	$ 1.55
Diluted net income per share attributable to Innoviva stockholders	$ 2.87	$ 2.02	$ 1.43
Shares used to compute Innoviva basic and diluted net income per share:			
Shares used to compute basic net income per share	82,062	101,320	101,150
Shares used to compute diluted net income per share	94,310	113,554	113,409

See accompanying notes to consolidated financial statements.

INNOVIVA, INC.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(In thousands)

	Year Ended December 31,		
	2021	2020	2019
Net income	$ 368,837	$ 293,814	$ 190,993
Unrealized gain on marketable securities, net	—	—	30
Reclassifications to net income	—	(27)	—
Comprehensive income	368,837	293,787	191,023
Comprehensive income attributable to noncontrolling interest	102,983	69,412	33,705
Comprehensive income attributable to Innoviva stockholders	$ 265,854	$ 224,375	$ 157,318

See accompanying notes to consolidated financial statements.

INNOVIVA, INC.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

(In thousands)

	Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Treasury Stock		Noncontrolling Interest	Total Stockholders' Equity
	Shares	Amount				Shares	Amount		
Balance as of December 31, 2018	101,098	$ 1,01	$ 1,256,267	$ (3)	$ (1,103,692)	—	$ —	$ 5,469	$ 159,052
Distributions to noncontrolling interest	—	—	—	—	—	—	—	(10,553)	(10,553)
Exercise of stock options, and issuance of common stock units and stock awards, net of repurchase of shares to satisfy tax withholding	190	2	536	—	—	—	—	—	538
Stock-based compensation	—	—	2,056	—	—	—	—	—	2,056
Net income	—	—	—	—	157,288	—	—	33,705	190,993
Other comprehensive income	—	—	—	30	—	—	—	—	30
Balance as of December 31, 2019	101,288	$ 1,01 3	$ 1,258,859	$ 27	$ (946,404)	—	$ —	$ 28,621	$ 342,116
Distributions to noncontrolling interest	—	—	—	—	—	—	—	(30,474)	(30,474)
Equity activity of noncontrolling interest from a consolidated variable interest entity	—	—	—	—	—	—	—	366	366
Exercise of stock options, and issuance of common stock units and stock awards, net of repurchase of shares to satisfy tax withholding	104	1	343	—	—	—	—	—	344
Stock-based compensation	—	—	1,698	—	—	—	—	—	1,698
Net income	—	—	—	—	224,402	—	—	69,412	293,814
Other comprehensive income	—	—	—	(27)	—	—	—	—	(27)
Balance as of December 31, 2020	101,392	$ 1,01 4	$ 1,260,900	$ —	$ (722,002)	—	$ —	$ 67,925	$ 607,837
Distributions to noncontrolling interest	—	—	—	—	—	—	—	(59,457)	(59,457)
Equity activity of noncontrolling interest from a consolidated variable interest entity	—	—	—	—	—	—	—	(259)	(259)
Exercise of stock options, and issuance of common stock units and stock awards, net of repurchase of shares to satisfy tax withholding	179	2	1,107	—	—	—	—	—	1,109
Repurchase of common stock	(32,005)	(320)	—	—	—	32,005	(393,829)	—	(394,149)
Stock-based compensation	—	—	2,017	—	—	—	—	—	2,017
Net income	—	—	—	—	265,854	—	—	102,983	368,837
Balance as of December 31, 2021	69,566	$ 696	$ 1,264,024	$ —	$ (456,148)	32,005	$ (393,829)	$ 111,192	$ 525,935

See accompanying notes to consolidated financial statements.

INNOVIVA, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS

(In thousands)

	Year Ended December 31,		
	2021	**2020**	**2019**
Cash flows from operating activities			
Net income	$ 368,837	$ 293,814	$ 190,993
Adjustments to reconcile net income to net cash provided by operating activities:			
Deferred income taxes	76,432	60,420	41,875
Depreciation and amortization	13,832	13,840	13,874
Stock-based compensation	2,017	1,698	2,056
Amortization of debt discount and issuance costs	9,136	8,397	7,799
Loss on write-off of property and equipment	—	—	104
Loss on extinguishment of debt	—	—	216
Amortization of discount on short-term investments	—	(343)	(2,229)
Amortization of lease guarantee	—	(135)	(325)
Changes in fair values of equity and long-term investments, net	(89,309)	(50,277)	—
Other non-cash items	(259)	21	—
Changes in operating assets and liabilities:			
Receivables from collaborative arrangements	(16,780)	(14,504)	3,859
Prepaid expenses and other current assets	203	(678)	(113)
Other assets	—	—	27
Accounts payable	(39)	56	(1)
Accrued personnel-related expenses and other accrued liabilities	(257)	804	(439)
Accrued interest payable	—	—	(112)
Other long-term liabilities	—	—	(126)
Net cash provided by operating activities	363,813	313,113	257,458
Cash flows from investing activities			
Maturities of marketable securities	—	86,000	213,924
Purchases of marketable securities	—	(12,943)	(231,915)
Purchases of equity and long-term investments	(66,278)	(87,981)	—
Purchases of equity investments managed by ISP Fund LP	(190,970)	(14,877)	—
Sales of equity investments managed by ISP Fund LP	21,440	—	—
Purchase and sales of other investments managed by ISP Fund LP, net	279,530	(285,123)	—
Purchases of property and equipment	—	(13)	(12)
Net cash provided by (used in) investing activities	43,722	(314,937)	(18,003)
Cash flows from financing activities			
Repurchase of common stock	(394,149)	—	—
Distributions to noncontrolling interest	(59,457)	(30,474)	(10,553)
Repurchase of shares to satisfy tax withholding	(60)	(92)	(89)
Payments of principal on senior secured term loans	—	—	(13,750)
Payments of cash dividends to stockholders	—	—	(11)
Proceeds from issuances of common stock, net	1,169	436	627
Net proceeds from the issuance of variable interest entity's equity	—	345	—
Net cash used in financing activities	(452,497)	(29,785)	(23,776)
Net increase (decrease) in cash and cash equivalents	(44,962)	(31,609)	215,679
Cash and cash equivalents at beginning of period	246,487	278,096	62,417
Cash and cash equivalents at end of period	$ 201,525	$ 246,487	$ 278,096
Supplemental disclosure of cash flow information			
Cash paid for interest	$ 9,933	$ 9,933	$ 10,974

See accompanying notes to consolidated financial statements.

INNOVIVA, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. DESCRIPTION OF OPERATIONS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Description of Operations

Innoviva Inc. (referred to as "Innoviva", the "Company", or "we" and other similar pronouns) is a company with a portfolio of royalties and other healthcare assets. Our royalty portfolio contains respiratory assets partnered with Glaxo Group Limited ("GSK"), including RELVAR®/BREO® ELLIPTA® (fluticasone furoate/ vilanterol, "FF/VI"), ANORO® ELLIPTA® (umeclidinium bromide/ vilanterol, "UMEC/VI") and TRELEGY® ELLIPTA® (the combination FF/UMEC/VI). Under the Long-Acting Beta2 Agonist ("LABA") Collaboration Agreement, Innoviva is entitled to receive royalties from GSK on sales of RELVAR®/BREO® ELLIPTA® as follows: 15% on the first $3.0 billion of annual global net sales and 5% for all annual global net sales above $3.0 billion; and royalties from the sales of ANORO® ELLIPTA® which tier upward at a range from 6.5% to 10%. Innoviva is also entitled to 15% of royalty payments made by GSK under its agreements originally entered into with us, and since assigned to Theravance Respiratory Company, LLC ("TRC"), including TRELEGY® ELLIPTA® and any other product or combination of products that may be discovered or developed in the future under the LABA Collaboration Agreement and the Strategic Alliance Agreement with GSK (referred to herein as the "GSK Agreements"), which have been assigned to TRC other than RELVAR®/BREO® ELLIPTA® and ANORO® ELLIPTA®.

Principles of Consolidation

The accompanying consolidated financial statements include the accounts of Innoviva, our wholly owned subsidiaries and certain variable interest entities for which we are the primary beneficiary. All intercompany balances and transactions have been eliminated in consolidation. For consolidated entities where we own or are exposed to less than 100% of the economics, we record net income (loss) attributable to noncontrolling interest in our consolidated statements of income equal to the percentage of the economic or ownership interest retained in such entity by the respective noncontrolling party.

Prior Period Reclassifications

The Company reclassified certain prior period amounts related to the investments managed by ISP Fund LP to conform with the current year presentation. These reclassifications were from purchases of equity and long-term investments of $388.0 million to: (i) purchases of equity investments managed by ISP Fund LP of $14.9 million, (ii) purchase and sales of other investments managed by ISP Fund LP, net of $285.1 million. These changes were not deemed material and did not impact total cash flows from investing activities, and any other consolidated financial statements.

Use of Management's Estimates

The preparation of consolidated financial statements in conformity with U.S. Generally Accepted Accounting Principles ("GAAP") requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. Actual results could differ materially from those estimates. Management evaluates its significant accounting policies and estimates on an ongoing basis. We base our estimates on historical experience and other relevant assumptions that we believe to be reasonable under the circumstances. These estimates also form the basis for making judgments about the carrying values of assets and liabilities when these values are not readily apparent from other sources.

Certain Risks and Concentrations

Our financial instruments that are exposed to concentrations of credit risk consist primarily of cash and cash equivalents, marketable securities, equity and long-term investments. Although we deposit our cash with multiple financial institutions, our deposits, at times, may exceed federally insured limits. Refer to "Segment Reporting" below for concentrations with respect to revenues and geographic locations.

Segment Reporting

We operate in a single segment, which is to provide capital return to stockholders by maximizing the potential value of our respiratory assets partnered with GSK. Revenues are generated from our collaborative arrangements and royalty payments from GSK, located in Great Britain. Our facilities are located within the United States.

Variable Interest Entities

We evaluate our ownership, contractual and other interest in entities to determine if they are variable interest entities ("VIE"). We evaluate whether we have a variable interest in those entities and the nature and extent of those interests. Based on our evaluation, if we determine we are the primary beneficiary of a VIE, we consolidate the entity in our financial statements.

Cash and Cash Equivalents

We consider all highly liquid investments purchased with a maturity of three months or less on the date of purchase to be cash equivalents. Cash equivalents are carried at cost, which approximates fair value.

Investments in Marketable Securities

We invest in short-term investments and marketable securities, primarily corporate notes, government securities, government agencies, and government commercial papers. We limit the amount of credit exposure with any one issuer, industry or geographic area for investments other than instruments backed by the U.S. federal government. We classify our marketable securities as available-for-sale securities and report them at fair value in cash equivalents or short-term marketable securities on the consolidated balance sheets with related unrealized gains and losses included as a component of stockholders' equity. The amortized cost of debt securities is adjusted for amortization of premiums and accretion of discounts to maturity, which is included in interest income on the consolidated statements of operations. Realized gains and losses, if any, on available-for-sale securities are included in interest income. The cost of securities sold is based on the specific identification method. Interest and dividends on securities classified as available-for-sale are included in interest income.

We regularly review all of our investments for other-than-temporary declines in estimated fair value. Our review includes the consideration of the cause of the impairment, including the creditworthiness of the security issuers, the number of securities in an unrealized loss position, the severity and duration of the unrealized losses, whether we have the intent to sell the securities and whether it is more likely than not that we will be required to sell the securities before the recovery of their amortized cost basis. When we determine that the decline in estimated fair value of an investment is below the amortized cost basis and the decline is other-than-temporary, we reduce the carrying value of the security and record a loss for the amount of such decline to other income (expense), net.

Equity and Long-Term Investments

We invest from time to time in equity and debt securities of private or public companies. If we determine that we have control over these companies under either voting or VIE models, we include them in our consolidated financial statements. If we determine that we do not have control over these companies under either voting or VIE models, we then determine if we have an ability to exercise significant influence via voting interests, board representation or other business relationships.

We may account for the investments where we exercise significant influence using either an equity method of accounting or at fair value by electing the fair value option under Accounting Standards Codification ("ASC") Topic 825, *Financial Instruments*. If the fair value option is applied to an investment that would otherwise be accounted for under the equity method, we apply it to all our financial interests in the same entity (equity and debt, including guarantees) that are eligible items. All gains and losses from fair value changes, unrealized and realized, are presented as changes in fair values of equity and long-term investments, net on the consolidated statements of income.

If we conclude that we do not have an ability to exercise significant influence over an investee, we may elect to account for the security without a readily determinable fair value using the measurement alternative under ASC Topic 312, *Investments - Equity Securities*. This measurement alternative allows us to measure the equity investment at its cost minus impairment, if any, plus or minus changes resulting from observable price changes in orderly transactions for the identical or a similar investment of the same issuer.

We also invest in ISP Fund LP, which investments consist of money market funds and equity securities in the healthcare, pharmaceutical and biotechnology industries. Pursuant to the Partnership Agreement entered in December 2020, we became a limited partner of this partnership, and our contributions are subject to a 36-month lock-up period which restriction prevents us to have control and access to the contributions and related investments. These investments are classified as long-term investments on the consolidated balance sheets.

Fair Value of Financial Instruments

We define fair value as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date.

Our valuation techniques are based on observable and unobservable inputs. Observable inputs reflect readily obtainable data from independent sources, while unobservable inputs reflect our market assumptions. We classify these inputs into the following hierarchy:

Level 1—Quoted prices for identical instruments in active markets.

Level 2—Quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations whose inputs are observable or whose significant value drivers are observable.

Level 3—Unobservable inputs and little, if any, market activity for the assets.

Financial instruments include cash equivalents, marketable securities, receivables from collaborative arrangements, accounts payable, and accrued liabilities. Cash equivalents and marketable securities are carried at estimated fair value. The carrying values of receivables from collaborative arrangements, accounts payable, and accrued liabilities approximate their estimated fair values due to the relatively short-term nature of these instruments.

Property and Equipment

Property and equipment, which consisted of equipment, computer equipment, software, office furniture and fixtures, was immaterial as of December 31, 2021 and 2020, respectively.

Property, equipment and leasehold improvements are stated at cost less accumulated depreciation. Property, equipment and leasehold improvements are depreciated using the straight-line method as follows:

Leasehold improvements	Shorter of remaining lease terms or useful life
Equipment, furniture and fixtures	5 - 7 years
Software and computer equipment	3 years

Capitalized Fees Paid to a Related Party

We capitalize fees paid to licensors related to agreements for approved products or commercialized products. We capitalize these fees as capitalized fees paid to a related party (“Capitalized Fees”) and amortize them on a straight-line basis over their estimated useful lives upon the commercial launch of the product, shortly after its regulatory approval. The estimated useful lives of these Capitalized Fees are determined on a country-by-country and product-by-product basis, as the later of the expiration or termination of the last patent right covering the compound in such product in such country and 15 years from first commercial sale of such product in such country, unless the Collaboration Agreement is terminated earlier. Consistent with our policy for classification of costs under the research and development collaborative arrangements, the amortization of these Capitalized Fees is recognized as a reduction of royalty revenue. We review our Capitalized Fees for impairment on a product-by-product basis for each major geographic area when events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable. The recoverability of Capitalized Fees is measured by comparing the asset’s carrying amount to the expected undiscounted future cash flows that the asset is expected to generate. The determination of recoverability typically requires various estimates and assumptions, including estimating the useful life over which cash flows will occur, their amount, and the asset’s residual value, if any. We derive the required cash flow estimates from near-term forecasted product sales and long-term projected sales in the corresponding market.

Revenue Recognition

Revenue is recognized when our customer obtains control of promised goods or services, in an amount that reflects the consideration which we expect to receive in exchange for those goods or services. Revenue is recognized through a five-step process: (i) identify the contract with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price for the contract; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue as a performance obligation is satisfied.

We recognize the royalty revenue on net sales of products with respect to which we have contractual royalty rights in the period in which the royalties are earned. The net sales reports provided by our partner are based on its methodology and assumptions to estimate rebates and returns, which it monitors and adjusts regularly in light of contractual and legal obligations, historical trends, past experience and projected market conditions. Our partner may make significant adjustments to its sales based on actual results recorded, which could cause our royalty revenue to fluctuate. We have the ability to conduct periodic royalty audits to evaluate the information provided by our partner. Royalties are recognized net of amortization of capitalized fees associated with any approval and launch milestone payments made to our partner.

Fair Value of Stock-Based Compensation Awards

We use the Black-Scholes-Merton option pricing model to estimate the fair value of options granted under our equity incentive plans and rights to acquire stock granted under our employee stock purchase plan ("ESPP"). The Black-Scholes-Merton option valuation model requires the use of assumptions, including the expected term of the award and the expected stock price volatility. We use the "simplified" method as described in Staff Accounting Bulletin No. 107, "*Share-Based Payment*," for the expected option term. We use our historical volatility to estimate expected stock price volatility.

Restricted stock units ("RSUs") and restricted stock awards ("RSAs") are measured based on the fair market values of the underlying stock on the dates of grant.

Stock-based compensation expense is calculated based on awards ultimately expected to vest and is reduced for estimated forfeitures at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differed from those estimates. Our estimated annual forfeiture rates for stock options, RSUs and RSAs are based on our historical forfeiture experience.

The estimated fair value of stock options, RSUs and RSAs is expensed on a ratable or straight-line basis over the expected term of the grant or expected term of the vesting. Compensation expense is recorded over the requisite service period based on management's best estimate as to whether it is probable that the shares awarded are expected to vest.

Compensation expense for purchases under the ESPP is recognized based on the fair value of the common stock on the date of offering, less the purchase discount percentage provided for in the plan.

Income Taxes

We utilize the asset and liability method of accounting for income taxes. Under this method, deferred tax assets and liabilities are determined based on differences between financial reporting and the tax basis of assets and liabilities and are measured using enacted tax rates and laws that will be in effect when the differences are expected to reverse. A valuation allowance is provided when it is more likely than not that some portion or all of a deferred tax asset will not be realized.

The recognition and measurement of tax benefits requires significant judgment. Our judgment might change as new information becomes available. We continue to evaluate our deferred tax assets each reporting period to determine whether adjustments to our valuation allowance are required and deferred tax assets will be realized based on the consideration of all available positive and negative evidence, including the differences between our anticipated and actual future operating results, using a "more likely than not" standard.

We assess all material positions taken in any income tax return, including all significant uncertain positions, in all tax years that are still subject to assessment or challenge by relevant taxing authorities. Assessing an uncertain tax position begins with the initial determination of the position's sustainability and is measured at the largest amount of benefit that is greater than 50% likely to be realized upon ultimate settlement. As of each balance sheet date, unresolved uncertain tax positions must be reassessed, and we determine whether the factors underlying the sustainability assertion have changed and whether the amount of the recognized tax benefit is still appropriate.

Comprehensive Income

Comprehensive income is comprised of net income and other comprehensive income (loss). Other comprehensive income (loss) consists of changes in unrealized and realized gains and losses on our marketable securities and the related tax impact of these changes.

Related Parties

While GSK no longer had an ownership stake in our outstanding common stock as of December 31, 2021, GSK was considered a related party during the year ended December 31, 2021 due to our collaborative arrangement with them. Transactions with GSK are described in Note 3, "Revenue Recognition and Collaborative Arrangements."

Sarissa Capital owned 9.5% of our outstanding common stock as of December 31, 2021. Transactions with Sarissa Capital are described in Note 4, "Consolidated Entities". Sarissa Capital is considered to be a related party because two of its principals are members of our Board of Directors.

Recently Adopted Accounting Standards Updates

In December 2019, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes*, which is intended to simplify various aspects related to accounting for income taxes by removing certain exceptions to the general principles in Topic 740. The pronouncement is effective for fiscal years, and for interim periods within those fiscal years, beginning after December 15, 2020, with early adoption permitted. We adopted ASU 2019-12 effective January 1, 2021. The adoption did not have a material impact on our consolidated financial statements.

In October 2020, the FASB issued ASU 2020-10, *Codification Improvements*. This ASU improves the codification by ensuring that all guidance that requires or provides an option for an entity to provide information in the notes to financial statements is codified in the disclosure section of the codification. The ASU also improves various topics in the codification so that entities can apply guidance more consistently. The ASU is effective for fiscal years beginning after December 15, 2020. We adopted ASU 2020-10 effective January 1, 2021. The adoption did not have a material impact on our consolidated financial statements.

Recently Issued Accounting Standards or Updates Not Yet Adopted

In August 2020, the FASB issued ASU 2020-06, *Debt—Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging-Contracts in Entity's Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity's Own Equity*, which is intended to simplify the accounting for convertible instruments by removing certain separation models in Subtopic 470-20 for convertible instruments. As a result, a convertible debt instrument will be accounted for as a single liability measured at its amortized cost as long as no other features require bifurcation and recognition as derivatives. The elimination of the separation models will reduce reported interest expense and increase reported net income for entities that have issued a convertible instrument within the scope of ASU 2020-06. The ASU is effective for fiscal years beginning after December 15, 2021, and for interim periods within those fiscal years with early adoption permitted. The Company is evaluating the effect of adopting ASU 2020-06 for both of our convertible notes due in 2023 and 2025 and is currently finalizing its analysis of the financial impact of the adoption. Upon adoption, we may apply the modified retrospective method through a cumulative effect adjustment, if any, to the accumulated deficit, compute the dilutive EPS of our notes due in 2025 under the if-converted method going forward, and update our long-term debt balance on the consolidated balance sheets accordingly.

2. NET INCOME PER SHARE

Basic net income per share attributable to Innoviva stockholders is computed by dividing net income attributable to Innoviva stockholders by the weighted-average number of shares of common stock outstanding. Diluted net income per share attributable to Innoviva stockholders is computed by dividing net income attributable to Innoviva stockholders by the weighted-average number of shares of common stock and dilutive potential common stock equivalents then outstanding. Dilutive potential common stock equivalents include the assumed exercise, vesting and issuance of employee stock awards using the treasury stock method, as well as common stock issuable upon assumed conversion of our convertible subordinated notes due 2023 (the "2023 Notes") using the if-converted method.

Our convertible senior notes due 2025 (the "2025 Notes") are convertible, based on the applicable conversion rate, into cash, shares of our common stock or a combination thereof, at our election. Our current intent is to settle the principal amount of the 2025 Notes in cash upon conversion. The impact of the assumed conversion premium to diluted net income per share is computed using the treasury stock method. As the average market price per share of our common stock as reported on The Nasdaq Global Select Market was lower than the initial conversion price of $17.26 per share, there was no dilutive effect of the assumed conversion premium for the years ended December 31, 2021, 2020, and 2019 respectively.

INNOVIVA, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The following table shows the computation of basic and diluted net income per share for the years ended December 31, 2021, 2020 and 2019:

(In thousands except per share data)	Year Ended December 31, 2021	2020	2019
Numerator:			
Net income attributable to Innoviva stockholders, basic	$ 265,854	$ 224,402	$ 157,288
Add: interest expense on 2023 Notes	4,736	4,717	4,648
Net income attributable to Innoviva stockholders, diluted	$ 270,590	$ 229,119	$ 161,936
Denominator:			
Weighted-average shares used to compute basic net income per share attributable to Innoviva stockholders	82,062	101,320	101,150
Dilutive effect of 2023 Notes	12,189	12,189	12,189
Dilutive effect of options and awards granted under equity incentive plan and employee stock purchase plan	59	45	70
Weighted-average shares used to compute diluted net income per share attributable to Innoviva stockholders	94,310	113,554	113,409
Net income per share attributable to Innoviva stockholders			
Basic	$ 3.24	$ 2.21	$ 1.55
Diluted	$ 2.87	$ 2.02	$ 1.43

Anti-dilutive Securities

The following common stock equivalents were not included in the computation of diluted net income per share because their effect was anti-dilutive:

(In thousands)	Year Ended December 31, 2021	2020	2019
Outstanding options and awards granted under equity incentive plan and employee stock purchase plan	979	1,193	1,130

3. REVENUE RECOGNITION AND COLLABORATIVE ARRANGEMENTS

Revenue from Collaborative Arrangements

We recognize royalty revenue on net sales of products with respect to which we have contractual royalty rights in the period in which the royalties are earned. Royalties, which may include adjustments of estimates of net sales in prior periods, are recognized net of amortization of capitalized fees associate with any approval and launch milestone payments made to GSK.

Net revenue recognized under our GSK Agreements was as follows:

(In thousands)	Year Ended December 31, 2021	2020	2019
Royalties from a related party - RELVAR/BREO	$ 234,066	$ 221,536	$ 189,424
Royalties from a related party - ANORO	44,935	45,992	42,625
Royalties from a related party - TRELEGY	126,688	73,089	42,790
Total royalties from a related party	405,689	340,617	274,839
Less: amortization of capitalized fees paid to a related party	(13,823)	(13,823)	(13,823)
Royalty revenue	391,866	326,794	261,016
Strategic alliance - MABA program	—	10,000	—
Total net revenue from GSK	$ 391,866	$ 336,794	$ 261,016

LABA Collaboration

As a result of the launch and approval of RELVAR®/BREO® ELLIPTA® and ANORO® ELLIPTA® in the U.S., Japan and Europe, we paid milestone fees to GSK totaling $220.0 million during the year ended December 31, 2014. The milestone fees paid to GSK were recognized as capitalized fees paid to a related party, which are being amortized over their estimated useful lives commencing upon the commercial launch of the product. The amortization expense is recorded as a reduction to the royalties from GSK.

We are entitled to receive annual royalties from GSK on sales of RELVAR®/BREO® ELLIPTA® as follows: 15% on the first $3.0 billion of annual global net sales and 5% for all annual global net sales above $3.0 billion. Sales of single-agent LABA medicines and combination medicines would be combined for the purposes of this royalty calculation. For other products combined with a LABA from the LABA Collaboration, such as ANORO® ELLIPTA®, royalties are upward tiering and range from 6.5% to 10%.

We are also entitled to 15% of royalty payments made by GSK under its agreements originally entered into with us, and since assigned to TRC in connection with the Spin-Off, including TRELEGY® ELLIPTA®, which royalties are upward tiering and range from 6.5% to 10%.

2004 Strategic Alliance

During the year ended December 31, 2020, we recognized $10.0 million in revenue from a termination fee paid in connection with the termination of the Bifunctional Muscarinic Antagonist-Beta2 Agonist (“MABA”) program under the Strategic Alliance Agreement with GSK.

4. CONSOLIDATED ENTITIES

We consolidate the financial results of TRC and Pulmoquine Therapeutics, Inc. (“Pulmoquine”), which we have determined to be VIEs. As we have the power to direct the economically significant activities of these entities and the obligation to absorb losses of, or the right to receive benefits from them, we are the primary beneficiary of the entities. We also consolidate the financial results of ISP Fund LP (the “Partnership”), which is our partnership with Sarissa Capital, as we have determined that the Partnership is a VIE and we are its primary beneficiary.

Theravance Respiratory Company, LLC

The primary source of revenue for TRC is the royalties generated from the net sales of TRELEGY® ELLIPTA® by GSK. As of December 31, 2021, TRC held equity and long-term investments in InCarda Therapeutics, Inc. (“InCarda”), ImaginAb, Inc. ("ImaginAb") and Gate Neurosciences, Inc. ("Gate"). Refer to Note 5, “Financial Instruments and Fair Value Measurements,” for more information.

The summarized financial information for TRC is presented as follows:

Balance sheets

(In thousands)	December 31, 2021	December 31, 2020
Assets		
Cash and cash equivalents	$ 50,713	$ 38,081
Receivables from collaborative arrangements	42,492	24,946
Prepaid expenses and other current assets	71	—
Equity and long-term investments	37,695	16,959
Total assets	$ 130,971	$ 79,986
Liabilities and LLC Members’ Equity		
Current liabilities	$ 252	$ 508
LLC members’ equity	130,719	79,478
Total liabilities and LLC members’ equity	$ 130,971	$ 79,986

Income statements

(In thousands)	Year Ended December 31, 2021	2020	2019
Royalty revenue from a related party	$ 126,688	$ 73,089	$ 42,790
Revenue from collaborative arrangements	—	10,000	—
Total net revenue	126,688	83,089	42,790
Operating expenses	3,956	2,612	3,380
Income from operations	122,732	80,477	39,410
Other income, net	—	38	243
Changes in fair values of equity and long-term investments	(1,541)	1,147	—
Net income	$ 121,191	$ 81,662	$ 39,653

Pulmoquine Therapeutics, Inc.

In April 2020, we purchased 5,808,550 shares of Series A preferred stock of Pulmoquine for $5.0 million in cash. These shares represented a majority voting interest in Pulmoquine. Pulmoquine was a biotechnology company focused on the research and development of an aerosolized formulation of hydroxychloroquine to treat respiratory infections. In August 2021, the directors and stockholders of Pulmoquine voted to cease and terminate all operations and activities of Pulmoquine as soon as practicable. We received a total net distribution of $2.4 million in cash as a result of the dissolution, which was finalized at the end of 2021.

As of December 31, 2021 and 2020, total assets attributable to Pulmoquine were nil and $3.5 million. Pulmoquine did not generate revenue. The total operating expenses for the years ended December 31, 2021 and 2020 were $0.7 million and $2.0 million, respectively.

The net loss for the years ended December 31, 2021 and 2020 were $0.5 million and $2.2 million, respectively.

ISP Fund LP

In December 2020, Innoviva Strategic Partners LLC, our wholly owned subsidiary (“Strategic Partners”), contributed $300.0 million to ISP Fund LP (the "Partnership") for investing in “long” positions in the healthcare, pharmaceutical and biotechnology sectors and became a limited partner. The general partner of the Partnership ("General Partner") is an affiliate of Sarissa Capital.

The Partnership Agreement provides for Sarissa Capital to receive management fees from the Partnership, payable quarterly in advance, measured based on the Net Asset Value of Strategic Partners' capital account in the Partnership. In addition, General Partner is entitled to an annual performance fee based on the Net Profits of the Partnership during the annual measurement period. For the year ended December 31, 2021 and 2020, we paid management and annual performance incentive fees totaling $3.1 million and $0.2 million, respectively.

The Partnership Agreement includes a lock-up period of thirty-six months after which Strategic Partners is entitled to make withdrawals from the Partnership as of such lock-up expiration date and each anniversary thereafter, subject to certain limitations.

In May 2021, Strategic Partners received a distribution of $110.0 million from the Partnership to provide funding to Innoviva for a strategic repurchase of the Company's shares held by GSK. The distribution is a component of "Purchases and sales of other investments held by ISP Fund, net" on the consolidated statements of cash flows. Pursuant to the letter agreement entered into between Strategic Partners, the Partnership, and Sarissa Capital Fund GP LP on May 20, 2021, Strategic Partners agreed to make additional capital contributions to the Partnership in an aggregate amount equal to the amount of the May 2021 distribution prior to March 31, 2022. The capital contributions will then be subject to a 36-month lock up period from the contribution date. Refer to Note 10, "Shareholders' Equity," for more information on the GSK share repurchase.

As of December 31, 2021, we continued to hold 100% of the economic interest of Partnership. As of December 31, 2021 and 2020, total assets of the Partnership were $195.8 million and $299.3 million, respectively, which were mainly attributable to equity and long-term investments. During the year ended December 31, 2021, the Partnership incurred $3.6 million in net investment-related expense, generated $1.8 million interest and dividend income, and recorded net $10.5 million realized gains and net $2.4 million unrealized loss as changes in fair values of equity and long-term investments on the consolidated statements of income. During the year ended December 31, 2020, the Partnership incurred $0.4 million in net investment-related expense and recorded an unrealized loss of $0.4 million as changes in fair values of equity and long-term investments on the consolidated statements of income.

5. FINANCIAL INSTRUMENTS AND FAIR VALUE MEASUREMENTS

Equity Investment in Armata

During the first quarter of 2020, Innoviva acquired 8,710,800 shares of common stock as well as warrants to purchase 8,710,800 additional shares of common stock of Armata Pharmaceuticals, Inc. (“Armata”) for approximately $25.0 million in cash. Armata is a clinical stage biotechnology company focused on precisely targeted bacteriophage therapeutics for antibiotic-resistant infections.

On January 26, 2021, Innoviva Strategic Opportunities LLC (“ISO”), our wholly owned subsidiary, entered into a securities purchase agreement with Armata to acquire 6,153,847 shares of Armata common stock and warrants to purchase 6,153,847 additional shares of Armata common stock for approximately $20.0 million. The investment was closed in two tranches on January 26, 2021 and March 17, 2021. The additional investment increased Innoviva and ISO’s combined ownership to 59.6% as of March 31, 2021. Armata also entered into a voting agreement with the Company and ISO, pursuant to which the Company and ISO agreed not to vote or take any action by written consent with respect to any common shares held by the Company and ISO that represent, in the aggregate, more than 49.5% of the total number of voting shares of Armata’s common stock for voting on the matters related to election or removal of Armata’s board members. The voting agreement will expire the earlier of the second anniversary of the agreement effective date and approval by the FDA of any of Armata's product candidates for marketing and commercial distribution.

On October 28, 2021, ISO purchased an additional 1,212,122 shares of Armata common stock for approximately $4.0 million. The investments support Armata’s ongoing advancement of its bacteriophage development programs. As of December 31, 2021, three of the eight members of Armata’s board of directors are also members of the board of directors of Innoviva. As of December 31, 2021 and 2020, we owned approximately 59.3% and 46.6%, respectively, of Armata’s common stock.

The investments in Armata provide Innoviva and ISO the ability to have significant influence, but not control over Armata’s operations. Armata's business and affairs are managed under the direction of its board of directors, which Innoviva and ISO do not control. Based on our evaluation, we determined that Armata is a VIE, but Innoviva and ISO are not the primary beneficiary of the VIE. We continue to elect the fair value option to account for both Armata’s common stock and warrants. The fair value of Armata’s common stock is measured based on its closing market price. The warrants purchased in 2020 and 2021 have an exercise price of $2.87 and $3.25 per share, respectively. All warrants are exercisable immediately within five years from the issuance date of the warrants and include a cashless exercise option. We use the Black-Scholes-Merton pricing model to estimate the fair value of these warrants with the following input assumptions: Armata’s closing market price on the valuation date, the risk-free interest rate computed based on the U.S. Treasury yield, the remaining contractual term as the expected term, and the expected stock price volatility calculated based on the historical volatility of the common stock of Armata and its peer companies.

As of December 31, 2021, the fair values of our holdings of Armata common stock and warrants were estimated at $88.1 million and $58.6 million, respectively. As of December 31, 2020, the fair values of our holdings of Armata common stock and warrants were estimated at $26.0 million and $18.0 million, respectively. The total fair value of both financial instruments in the amount of $146.7 million and $44.0 million was recorded as equity and long-term investments on the consolidated balance sheets as of December 31, 2021 and 2020, respectively. We recorded $78.7 million and $19.0 million unrealized gains as changes in fair values of equity and long-term investments, net on the consolidated statements of income for the years ended December 31, 2021 and 2020, respectively.

Equity Investment in Entasis

During the second quarter of 2020, we purchased 14,000,000 shares of common stock as well as warrants to purchase 14,000,000 additional shares of common stock of Entasis Therapeutics, Inc. (“Entasis”) for approximately $35.0 million in cash. Entasis is a clinical-stage biotechnology company focused on the discovery and development of novel antibacterial products.

During the third quarter of 2020, we purchased 4,672,897 shares of Entasis common stock as well as warrants to purchase 4,672,897 additional shares of its common stock for approximately $12.5 million in cash. Innoviva has a right to designate two members to Entasis' board. As of December 31, 2021, no Innoviva designees are serving on Entasis' six-member board.

On May 3, 2021, ISO entered into a securities purchase agreement with Entasis to acquire 10,000,000 shares of Entasis common stock and warrants to purchase 10,000,000 additional shares of Entasis common stock for approximately $20.0 million. The investment was closed in two tranches on May 3, 2021 and June 11, 2021. This investment supports the continued development of Entasis' novel pipeline of pathogen-targeted antibacterial product candidates. As of December 31, 2021 and 2020, we owned approximately 59.9% and 51.0%, respectively, of Entasis’s common stock.

The investments in Entasis provide Innoviva the ability to have significant influence, but not control over Entasis’s operations. Entasis's business and affairs are managed under the direction of its board of directors, which Innoviva and ISO do not control. Based on our evaluation, we determined that Entasis is a VIE, but Innoviva is not the primary beneficiary of the VIE. We elected the fair value option to account for both Entasis’s common stock and warrants at fair value. The fair value of Entasis’s common stock is measured based on its closing market price at each balance sheet date. The warrants have an exercise price of $2.50 per share and $2.675 per share for those warrants acquired in the second and third quarter of 2020, respectively. The warrants acquired in the second quarter of 2021 have an exercise price of $2.00 per share. All of the warrants are exercisable immediately within five years from the issuance date of the warrants and include a cashless exercise option. We use the Black-Scholes-Merton pricing model to estimate the fair value of these warrants with the following input assumptions: Entasis’s closing market price on the valuation date, the risk-free interest rate computed based on the U.S. Treasury yield, the remaining contractual term as the expected term, and the expected stock price volatility calculated based on the historical volatility of the common stock of Entasis and its peer companies.

As of December 31, 2021, the fair values of our holdings of Entasis common stock and warrants were estimated at $62.8 million and $40.9 million, respectively. As of December 31, 2020, the fair values of our holdings of Entasis common stock and warrants were estimated at $46.1 million and $31.9 million, respectively. The total fair value of both financial instruments in the amount of $103.7 million and $78.0 million was recorded as equity and long-term investments on the consolidated balance sheets as of December 31, 2021 and 2020, respectively. We recorded $5.7 million and $30.5 million unrealized gains as changes in fair values of equity and long-term investments, net on the consolidated statements of income for the years ended December 31, 2021 and 2020, respectively.

Equity Investment in InCarda

During the third quarter of 2020, TRC purchased 20,469,432 shares of Series C preferred stock and warrants to purchase 5,117,358 additional shares of Series C preferred stock of InCarda Therapeutics, Inc. (“InCarda”) for $15.8 million, which includes $0.8 million of transaction costs. InCarda is a privately held biopharmaceutical company focused on developing inhaled therapies for cardiovascular diseases. The investment is intended to fund the ongoing clinical development of InRhythm™ (flecainide for inhalation), the company’s lead program, for the treatment of a recent-onset episode of paroxysmal atrial fibrillation. TRC has the right to designate one member to InCarda’s board. As of December 31, 2021, one of InCarda's eight board members is designated by TRC. As of December 31, 2021 and 2020, TRC held 13.0% and 13.4% of InCarda equity ownership.

The investment in InCarda does not provide TRC the ability to control or have significant influence over InCarda's operations. Based on our evaluation, we determined that InCarda is a VIE, but TRC is not the primary beneficiary of the VIE. We have accounted for the investment in Series C preferred shares in InCarda using the measurement alternative because the securities are not publicly traded and do not have a readily determinable fair value. Under the measurement alternative, the equity investment is initially recorded at its allocated cost, but the carrying value may be adjusted through earnings upon an impairment or when there is an observable price change involving the same or a similar investment with the same issuer. As of December 31, 2021 and 2020, we recorded $15.8 million for our investment in InCarda's series C preferred stock as equity and long-term investments on the consolidated balance sheets. There was no impairment or other change to the value of the InCarda's Series C preferred stock as of December 31, 2021 and 2020, respectively.

The warrants are recorded at fair value and subject to remeasurement at each balance sheet date. The warrants are exercisable immediately with an exercise price of $0.7328 per share. In September 2021, TRC and InCarda entered into an amendment to extend the expiration date of the warrants from October 6, 2021 to March 31, 2022. We use the Black-Scholes-Merton pricing model to estimate the fair value of the warrants with the following input assumptions: the exercise price of the warrants, the risk-free interest rate computed based on the U.S. Treasury yield, the remaining contractual term as the expected term, and the expected stock price volatility calculated based on the historical volatility of the common stock of its public peer companies.

As of December 31, 2021 and 2020, the fair value of InCarda’s warrants was estimated at $0.4 million and $1.1 million, respectively, and recorded as equity and long-term investments on the consolidated balance sheets. We recorded $0.7 million unrealized loss and $1.1 million unrealized gains as changes in fair values of equity and long-term investments, net on the consolidated statements of income for the years ended December 31, 2021 and 2020, respectively.

Equity Investment in ImaginAb

On March 18, 2021, TRC entered into a securities purchase agreement with ImaginAb, Inc. ("ImaginAb") to purchase 4,051,724 shares of ImaginAb Series C preferred stock for $4.7 million. On the same day, TRC also entered into a securities purchase agreement with one of ImaginAb's common stockholders to purchase 4,097,157 shares of ImaginAb common stock for $1.3 million. ImaginAb is a privately held biotechnology company focused on clinically managing cancer and autoimmune diseases via molecular imaging. $0.4 million was incurred for investment due diligence costs and execution and recorded as part of the equity and long-term investment on the consolidated balance sheet. As of December 31, 2021, one of ImaginAb's five board members is designated by TRC, and TRC held 14.5% of ImaginAb's equity.

The investment in ImaginAb does not provide TRC the ability to control or have significant influence over ImaginAb's operations. Based on our evaluation, we determined that ImaginAb is a VIE, but TRC is not the primary beneficiary of the VIE. Because ImaginAb's equity securities are not publicly traded and do not have a readily determinable fair value, we have accounted for our investment in ImaginAb's Series C preferred stock and common stock using the measurement alternative. Under the measurement alternative, the equity investment is initially recorded as its allocated cost, but the carrying value may be adjusted through earnings upon an impairment or when there is an observable price change involving the same or a similar investment with the same issuer. As of December 31, 2021, $6.4 million was recorded as equity and long-term investments on the consolidated balance sheets and there was no change to the fair value of our investment.

Convertible Promissory Note in Gate Neurosciences

On November 24, 2021, TRC entered into a Convertible Promissory Note Purchase Agreement with Gate Neurosciences, Inc. ("Gate") to acquire a convertible promissory note (the "Convertible Note") with a principal amount of $15.0 million. Gate is a privately held biopharmaceutical company focused on developing the next generation of targeted nervous system therapies, leveraging precision medicine approaches to develop breakthrough drugs for psychiatric and neurologic diseases. The investment is intended to fund its ongoing development and research. The Convertible Note bears an annual interest rate of 8% and will convert into common stock shares upon a qualified event or into shares of shadow preferred stock ("Shadow Preferred") upon a qualified financing. A qualifying event can be a qualified initial price offering, a qualified merger, or a merger with a special-purpose acquisition company ("SPAC").

The number of common stock shares to be issued in a qualified event shall be equal to the amount due on the conversion date divided by the lesser of a capped conversion price (the "Capped Conversion Price") and the qualified event price (the "Qualified Event Price"). The Capped Conversion Price is calculated as $50.0 million divided by the number of common stock outstanding at such time on a fully diluted basis. The Qualified Event Price is the price per share determined by the qualified event. A qualified financing is a sale or series of sales of preferred stock where (i) at least 50 percent of counterparties are not existing shareholders, (ii) net proceeds to Gate are at least $35.0 million, and (iii) the stated or implied equity valuation of Gate is at least $80.0 million. Shadow Preferred means preferred stock having identical rights, preferences and restrictions as the preferred stock that would be issued in a qualified financing.

INNOVIVA, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The investment in Gate does not provide TRC the ability to control or have significant influence over Gate's operations. Based on our evaluation, we determined that Gate is a VIE, but TRC is not the primary beneficiary of the VIE. We have accounted for the convertible debt investment as a trading security, measured at fair value using a Monte Carlo simulation model with the probability of certain qualified events. TRC has the right to designate one board member to Gate's board. As of December 31, 2021, TRC has not designated a board member to Gate's board, which currently consists of two directors. As of December 31, 2021, $15.9 million, which includes $0.9 million of transaction costs, was recorded as equity and long-term investments on the consolidated balance sheets. We recorded $0.8 million unrealized loss as changes in fair values of equity and long-term investments, net on the consolidated statements of income for the years ended December 31, 2021.

Summarized Financial Data

As of December 31, 2021, the total changes in fair values of our equity investments in Armata and Entasis exceeded 10% of our income before income taxes. Rule 4-08(g) of Regulation S-X, according to the SEC guidance, requires summarized financial information of these entities in an annual report if either the investment, asset or income test as set in the rule exceeds the 10% level individually or in aggregate. The summarized financial information, including the portion we do not own in these entities, is presented for Armata and Entasis, respectively, on a one quarter lag regardless of the date of our investments as follows:

Armata Pharmaceuticals, Inc.

Balance Sheet Information

(In thousands)	September 30, 2021	September 30, 2020
Current assets	$ 14,178	$ 17,024
Noncurrent assets	$ 28,493	$ 28,651
Current liabilities	$ 5,254	$ 7,070
Noncurrent liabilities	$ 13,662	$ 13,986

Income Statement Information

(In thousands)	For the twelve months ended September 30, 2021	For the nine months ended September 30, 2020
Revenue	$ 3,989	$ 319
Loss from operations	$ (24,227)	$ (15,134)
Net loss	$ (23,732)	$ (15,557)

Entasis Therapeutics Holdings, Inc.

Balance Sheet Information

(In thousands)	September 30, 2021	September 30, 2020
Current assets	$ 49,746	$ 68,398
Noncurrent assets	$ 1,020	$ 1,564
Current liabilities	$ 9,348	$ 6,862
Noncurrent liabilities	$ 183	$ 864

Income Statement Information

(In thousands)	For the twelve months ended September 30, 2021	For the six months ended September 30, 2020
Loss from operations	$ (52,323)	$ (26,080)
Net loss	$ (125,413)	$ (24,529)

Available-for-Sale Securities

The estimated fair value of available-for-sale securities is based on quoted market prices for these or similar investments that were based on prices obtained from a commercial pricing service. Available-for-sale securities are summarized below:

	December 31, 2021			
(In thousands)	**Amortized Cost**	**Gross Unrealized Gains**	**Gross Unrealized Losses**	**Estimated Fair Value**
Money market funds[(1)]	$ 145,132	$ —	$ —	$ 145,132
Total	$ 145,132	$ —	$ —	$ 145,132

(1) Money market funds are included in cash and cash equivalents on the consolidated balance sheets.

	December 31, 2020			
(In thousands)	**Amortized Cost**	**Gross Unrealized Gains**	**Gross Unrealized Losses**	**Estimated Fair Value**
Money market funds [(1)]	$ 204,808	$ —	$ —	$ 204,808
Total	$ 204,808	$ —	$ —	$ 204,808

(1) Money market funds are included in cash and cash equivalents on the consolidated balance sheets.

As of December 31, 2021, all investments were money market funds, and there was no credit loss.

INNOVIVA, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Fair Value Measurements

Our available-for-sale securities, equity and long-term investments are measured at fair value on a recurring basis and our debt is carried at amortized cost basis. The estimated fair values were as follows:

	Estimated Fair Value Measurements as of December 31, 2021 Using:			
Types of Instruments (In thousands)	Quoted Price in Active Markets for Identical Assets Level 1	Significant Other Observable Inputs Level 2	Significant Unobservable Inputs Level 3	Total
Assets				
Money market funds	$ 145,132	$ —	$ —	$ 145,132
Investments held by ISP Fund LP [1]	193,677	—	2,068	195,745
Equity investment - Armata Common Stock	88,101	—	—	88,101
Equity investment - Armata Warrants	—	58,595	—	58,595
Equity investment - Entasis Common Stock	62,794	—	—	62,794
Equity investment - Entasis Warrants	—	40,914	—	40,914
Equity investment - InCarda Warrants	—	—	411	411
Convertible debt investment - Gate Note	—	—	15,100	15,100
Total assets measured at estimated fair value	$ 489,704	$ 99,509	$ 17,579	$ 606,792
Debt				
2023 Notes	$ —	$ 261,769	$ —	$ 261,769
2025 Notes	—	234,498	—	234,498
Total fair value of debt	$ —	$ 496,267	$ —	$ 496,267

[1] The investments held by ISP Fund LP, consisted of $192.2 million equity investments and $3.5 million money market funds, are subject to a 36-month lock-up period from our initial contribution date, December 11, 2020.

	Estimated Fair Value Measurements as of December 31, 2020 Using:			
Types of Instruments (In thousands)	Quoted Price in Active Markets for Identical Assets Level 1	Significant Other Observable Inputs Level 2	Significant Unobservable Inputs Level 3	Total
Assets				
Money market funds	$ 204,808	$ —	$ —	$ 204,808
Investments held by ISP Fund LP [1]	299,288	—	—	299,288
Equity investment - Armata Common Stock	25,958	—	—	25,958
Equity investment - Armata Warrants	—	18,049	—	18,049
Equity investment - Entasis Common Stock	46,122	—	—	46,122
Equity investment - Entasis Warrants	—	31,882	—	31,882
Equity investment - InCarda Warrants	—	—	1,147	1,147
Total assets measured at estimated fair value	$ 576,176	$ 49,931	$ 1,147	$ 627,254
Debt				
2023 Notes	$ —	$ 239,779	$ —	$ 239,779
2025 Notes	—	206,135	—	206,135
Total fair value of debt	$ —	$ 445,914	$ —	$ 445,914

[1] The investments held by ISP Fund LP, consisted of $14.5 million equity investments and $284.8 million money market funds, are subject to a 36-month lock-up period from our initial contribution date, December 11, 2020.

The fair values of our equity investments in Armata's and Entasis's common stock and public traded investments held by ISP Fund LP are based on the quoted prices in active markets and are classified as Level 1 financial instruments. The fair values of the warrants of Armata and Entasis classified within Level 2 are based upon observable inputs that may include benchmark yields, reported trades, broker/dealer quotes, issuer spreads, two-sided markets, benchmark securities, bids, offers and reference data including market research publications.

InCarda's warrants, Gate's convertible note, and private placement positions held by ISP Fund LP are classified as Level 3 financial instruments as these securities are not publicly traded and the assumptions used in the valuation model for valuing these securities are based on significant unobservable and observable inputs including those of publicly traded peer companies.

The fair values of our 2023 Notes and our 2025 Notes are based on recent trading prices of the respective instruments.

6. CAPITALIZED FEES PAID TO A RELATED PARTY

Capitalized fees paid to a related party, which consist of registrational and launch-related milestone fees paid to GSK, were as follows:

		December 31,	
(In thousands)	Amortization period	2021	2020
United States	2013-2030	$ 120,000	$ 120,000
Europe	2013-2029	60,000	60,000
Japan	2013-2019	40,000	40,000
Gross carrying value		220,000	220,000
Accumulated amortization		(108,570)	(94,747)
Net carrying value		$ 111,430	$ 125,253

These milestone fees are amortized over their estimated useful lives commencing upon the commercial launch of the product in their respective regions with the amortization expense recorded as a reduction in revenue from collaborative arrangements. As of December 31, 2021, the weighted average remaining amortization period was 8.1 years.

Additional information regarding these milestone fees is included in Note 3, "Revenue Recognition and Collaborative Arrangements." Amortization expense for each of the years ended December 31, 2021, 2020 and 2019 was $13.8 million. The remaining estimated amortization expense is $13.8 million for each of the years from 2022 to 2026 and $42.3 million thereafter.

7. STOCK-BASED COMPENSATION

Equity Incentive Plans

In May 2012, we adopted the 2012 Equity Incentive Plan (the "2012 Plan"). The 2012 Plan provides for the grant of incentive stock options, nonstatutory stock options, RSAs, RSUs and Stock Appreciation Rights to employees, non-employee directors and consultants. As of December 31, 2021, total shares remaining available for issuance under the 2012 Plan were 4,978,521.

Employee Stock Purchase Plan

Under the 2004 Employee Stock Purchase Plan (the "ESPP"), our employees may purchase common stock through payroll deductions at a price equal to 85% of the lower of the fair market value of the stock at the beginning of the offering period or at the end of each applicable purchase period. The ESPP provides for consecutive and overlapping offering periods of 24 months in duration, with each offering period composed of four consecutive six-month purchase periods. The purchase periods end on either May 15 or November 15. ESPP contributions are limited to a maximum of 15% of an employee's eligible compensation. The maximum number of shares that an employee may purchase in any purchase period is 2,500. An employee may not purchase shares with a value greater than $25,000 in any calendar year.

As of December 31, 2021, total shares remaining available for issuance under the ESPP were 171,827.

INNOVIVA, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Director Compensation Program

Our non-employee directors receive compensation for services provided as a director. Each member of our Board of Directors who is not an employee receives both cash and equity compensation for services as a director, member of a committee of the Board of Directors, lead independent director and chairman, as applicable.

Each of our independent directors receives periodic automatic grants of equity awards under a program implemented under the 2012 Plan. These grants are non-discretionary. Only our independent directors or affiliates of such directors are eligible to receive automatic grants under the 2012 Plan. Under the program, each individual who first became a non-employee director will, on the date such individual joins the Board of Directors, automatically be granted a one-time grant of RSUs covering a number of shares of our common stock calculated as $125,000 ($250,000 prior to the October 2017 Amendments) divided by our common stock closing share price on the date of grant as reported on The Nasdaq Global Select Market, rounded down to the nearest whole share (the "Initial RSUs"), plus a one-time grant of RSUs covering a number of shares of our common stock calculated as $225,000 ($250,000 prior to the October 2017 Amendments) divided by our common stock closing share price on the date of grant as reported on The Nasdaq Global Select Market, which would be pro-rated for the number of whole months remaining until the anniversary of the prior year's stockholders' meeting, rounded down to the nearest whole share (the "Pro Rata RSUs"). The Initial RSUs vest in two equal annual installments, while Pro Rata RSUs vest in a single installment at the sooner of the next annual stockholder meeting or the one-year grant anniversary, in each case subject to the non-employee director's continuous service through the applicable vesting date.

Annually, upon his or her re-election to the Board of Directors at the Annual Meeting of Stockholders, each non-employee director is automatically granted an RSU covering a number of shares of our common stock calculated as $225,000 ($250,000 prior to the October 2017 Amendments) divided by our common stock closing share price on the date of grant as reported on The Nasdaq Global Select Market, rounded down to the nearest whole share. These RSUs will vest at the sooner of the next annual stockholder meeting or the one-year anniversary of grant, subject to the non-employee director's continuous service through the applicable vesting date. Following the amendment to our non-employee director compensation program, both the annual RSUs and Initial RSUs described above remained unchanged with the exception that the number of shares of our common stock subject to each award has been reduced.

These RSUs will vest in full upon the director's death, the occurrence of a change in control or, with respect to awards made after the October 2017 Amendments, the director's disability before the director's service terminates. Director RSUs carry dividend equivalent rights to be credited with an amount equal to all cash dividends paid on the underlying shares of common stock while unvested. Dividend equivalents are subject to the same terms and conditions, including vesting, as the RSUs to which they attach and are paid in cash upon vesting.

Stock-Based Compensation Expense

Stock-based compensation expense is included in the consolidated statements of income as follows:

	Year Ended December 31,		
(In thousands)	**2021**	**2020**	**2019**
General and administrative	$ 2,017	$ 1,698	$ 2,056

Stock-based compensation expense included in the consolidated statements of income by award type is as follows:

	Year Ended December 31,		
(In thousands)	**2021**	**2020**	**2019**
Stock options	$ 490	$ 242	$ —
RSUs	1,280	1,149	1,431
RSAs	200	273	615
ESPP	47	34	10
Total stock-based compensation expense	$ 2,017	$ 1,698	$ 2,056

INNOVIVA, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

As of December 31, 2021, the unrecognized stock-based compensation cost and the estimated weighted-average amortization period were as follows:

(In thousands)	Unrecognized Compensation Cost	Weighted-Average Amortization Period (Years)
Stock options	$ 1,507	2.8
RSUs	574	0.5
RSAs	327	2.6
Total unrecognized compensation expense	$ 2,408	

Compensation Awards

The following table summarizes equity award activity under the 2012 Plan and prior plans and related information:

(In thousands, except per share data)	Number of outstanding options	Weighted-Average Exercise Price of Outstanding Options	Number of outstanding RSUs	Weighted-Average Fair Value per Share at Grant	Number of outstanding RSAs	Weighted-Average Fair Value per Share at Grant
Balance as of December 31, 2020	1,155	$ 22.28	85	$ 13.30	30	$ 14.61
Granted	116	13.28	117	12.81	19	12.44
Exercised	(73)	14.69	—	—	—	—
Released RSUs/RSAs	—	—	(86)	13.28	(14)	14.57
Forfeited	(432)	23.81	—	—	(6)	13.80
Balance as of December 31, 2021	766	20.79	116	12.82	29	13.35

As of December 31, 2021, the aggregate intrinsic value of the options outstanding and options exercisable was $1.3 million and $0.3 million, respectively. All outstanding options were exercisable. The weighted average remaining contractual term was 4.43 years.

The total intrinsic value of the options exercised was $0.2 million, $0.1 million and $0.2 million for the years ended December 31, 2021, 2020, and 2019, respectively. The total estimated fair value of options vested was $0.6 million for the year ended December 31, 2021. The total estimated fair value of options vested was not material for the year ended December 31, 2020 and 2019, respectively.

The total estimated fair value of RSUs vested was $1.1 million, $1.3 million, and $1.4 million in the years ended December 31, 2021, 2020, and 2019, respectively.

The total estimated fair value of RSAs vested was $0.2 million, $0.6 million, and $0.9 million in the years ended December 31, 2021, 2020, and 2019, respectively.

Valuation Assumptions

The weighted-average assumptions used in calculating the estimated value of our stock options on the date of grant as follows:

	Year Ended December 31,	
	2021	2020
Risk-free interest rate	1.1%	0.4%
Expected term (in years)	6.11	6.11
Volatility	44.9%	46.9%
Dividend yield	0.0%	0.0%
Weighted-average estimated fair value of stock options granted	$ 5.84	$ 6.28

There were no grants of stock options during the year ended December 31, 2019.

8. DEBT

Our debt consists of:

(In thousands)	December 31, 2021	December 31, 2020
2023 Notes	$ 240,984	$ 240,984
2025 Notes	192,500	192,500
Total debt	433,484	433,484
Unamortized debt discount and issuance costs	(38,831)	(47,967)
Net long-term debt	$ 394,653	$ 385,517

Convertible Senior Notes Due 2025

On August 7, 2017, we completed a private placement of $192.5 million aggregate principal amount of our 2025 Notes. The proceeds include the 2025 Notes sold pursuant to the $17.5 million over-allotment option granted by us to the initial purchasers, which option was exercised in full. The 2025 Notes were sold in a private placement to qualified institutional buyers pursuant to Rule 144A under the Securities Act. The 2025 Notes are senior unsecured obligations and bear interest at a rate of 2.5% per year, payable semi-annually in arrears on February 15 and August 15 of each year, beginning on February 15, 2018.

The 2025 Notes are convertible, based on the applicable conversion rate, into cash, shares of our common stock or a combination thereof, at our election. The initial conversion rate for the 2025 Notes is 57.9240 shares of our common stock per $1,000 principal amount of the 2025 Notes (which is equivalent to an initial conversion price of approximately $17.26 per share), representing a 30.0% conversion premium over the last reported sale price of the Company's common stock on August 1, 2017, which was $13.28 per share. The conversion rate is subject to customary anti-dilution adjustments in certain circumstances. The 2025 Notes will mature on August 15, 2025, unless repurchased or converted in accordance with their terms prior to such date. Prior to February 15, 2025, the 2025 Notes will be convertible at the option of the holders only upon the occurrence of specified events and during certain periods. From, and including, February 15, 2025, until the close of business on the second scheduled trading day immediately preceding the maturity date, the 2025 Notes will be convertible at any time.

In accordance with accounting guidance for debt with conversion and other options, we separately account for the liability and equity components of the 2025 Notes by allocating the proceeds between the liability component and the embedded conversion option ("equity component") due to our ability to settle the conversion obligation of the 2025 Notes in cash, common stock or a combination of cash and common stock, at our option. The carrying amount of the liability component was calculated by measuring the fair value of a similar liability that does not have an associated convertible feature using the income approach. The allocation was performed in a manner that reflected our non-convertible debt borrowing rate for similar debt. The equity component of the 2025 Notes of $67.3 million was recognized as a debt discount and represents the difference between the proceeds from the issuance of the 2025 Notes and the fair value of the liability of the 2025 Notes on the date of issuance. The excess of the principal amount of the liability component over its carrying amount ("debt discount") is amortized to interest expense using the effective interest method over the term of the 2025 Notes. The equity component is not remeasured as long as it continues to meet the conditions for equity classification.

Our outstanding 2025 Notes balances consisted of the following:

(In thousands)	December 31, 2021	December 31, 2020
Liability component		
Principal	$ 192,500	$ 192,500
Debt discount and issuance costs, net	(38,211)	(46,766)
Net carrying amount	$ 154,289	$ 145,734
Equity component, net	$ 65,361	$ 65,361

INNOVIVA, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The following table sets forth total interest expense recognized related to the 2025 Notes for the years ended December 31, 2021, 2020 and 2019:

	Year Ended December 31,		
(In thousands)	**2021**	**2020**	**2019**
Contractual interest expense	$ 4,813	$ 4,813	$ 4,813
Amortization of debt issuance costs	657	601	551
Amortization of debt discount	7,898	7,230	6,618
Total interest and amortization expense	$ 13,368	$ 12,644	$ 11,982

Convertible Subordinated Notes Due 2023

In January 2013, we completed an underwritten public offering of $287.5 million aggregate principal amount of unsecured convertible subordinated notes, which will mature on January 15, 2023. The financing raised proceeds, net of issuance costs, of approximately $281.2 million, less $36.8 million to purchase two privately negotiated capped call option transactions in connection with the issuance of the notes. The 2023 Notes bear interest at the rate of 2.125% per year that is payable semi-annually in arrears in cash on January 15 and July 15 of each year, beginning on July 15, 2013.

The 2023 Notes were convertible, at the option of the holder, into shares of our common stock at an initial conversion rate of 35.9903 shares per $1,000 principal amount of the 2023 Notes, subject to adjustment in certain circumstances, which represents an initial conversion price of approximately $27.79 per share.

In connection with the offering of the 2023 Notes, we entered into two privately negotiated capped call option transactions with a single counterparty. The capped call option transaction is an integrated instrument consisting of a call option on our common stock purchased by us with a strike price equal to the initial conversion price of $27.79 per share for the underlying number of shares and a cap price of $38.00 per share, both of which are subject to adjustments consistent with the 2023 Notes. The cap component is economically equivalent to a call option sold by us for the underlying number of shares with an initial strike price of $38.00 per share. As an integrated instrument, the settlement of the capped call coincides with the due date of the convertible debt. Upon settlement, we would receive from our hedge counterparty a number of shares of our common shares that would range from zero, if the stock price was below $27.79 per share, to a maximum of 2,779,659 shares, if the stock price is above $38.00 per share. However, if the market price of our common stock, as measured under the terms of the capped call transactions, exceeds $38.00 per share, there is no incremental anti-dilutive benefit from the capped call.

As a result of the partial conversion by certain holders of the 2023 Notes in July 2014, and dividends declared and paid in 2014 and 2015, the conversion rate with respect to our 2023 Notes was adjusted in total to 50.5818 shares of our common stock per $1,000 principal amount of the 2023 Notes, which represents a conversion price of approximately $19.77 per share. As a result of the conversion rate adjustments, the capped call strike price and cap price were also adjusted to $19.77 and $27.04, respectively.

For the year ending December 31, 2016, we retired a portion of our 2023 Notes with a face value of $14.1 million and carrying value of $13.9 million by way of purchase in the open market.

Debt Maturities

The aggregate scheduled maturities of our long-term debt as of December 31, 2021 are as follows:

(In thousands)	
Years ending December 31:	
2022	$ —
2023	240,984
2024	—
2025	192,500
Total	$ 433,484

9. COMMITMENTS AND CONTINGENCIES

Operating Lease

In 2014, our facility leases in South San Francisco, California were assigned to Theravance Biopharma, Inc. However, if Theravance Biopharma, Inc. were to default on its lease obligations, we had in substance guaranteed the lease payments for these facilities. This lease concluded in May 2020, and we have no further obligations for the lease.

In 2019, we entered into an operating lease in Burlingame, California for approximately 2,111 rentable square feet. The new lease commenced in November 2019 with a term of thirty-six calendar months.

Minimum lease payments on our corporate headquarters as of December 31, 2021 are as follows:

(In thousands)	
Years ending December 31:	
2022	$ 109
Thereafter	—
Total	$ 109

Indemnifications and Other Contingencies

We indemnify our officers and directors for certain events or occurrences, subject to certain limits. We believe the fair value of these indemnification agreements is minimal. We may be subject to contingencies that may arise from matters such as product liability claims, legal proceedings, shareholder suits and tax matters. We have not recognized any liabilities relating to these matters as of December 31, 2021.

10. SHAREHOLDERS' EQUITY

On May 20, 2021, the Company entered into a share repurchase agreement with GSK to buy back 32,005,260 shares of its common stock at $12.25 per share from GSK, representing all of the shares of common stock or other capital interests of Innoviva owned by GSK or its affiliates. The total consideration, including related transaction fees, was $394.1 million. The share repurchase was completed on May 25, 2021. These shares are recorded as treasury stock on the consolidated balance sheets.

11. INCOME TAXES

Income tax expense consists of the following:

	Year Ended December 31,		
(In thousands)	2021	2020	2019
Current			
State	$ 7	$ 11	$ 26
Deferred			
Federal	70,893	60,408	41,567
State	5,539	12	309
	76,432	60,420	41,876
Total income tax expense, net	$ 76,439	$ 60,431	$ 41,902

INNOVIVA, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The impacts of the differences between the expected U.S. federal statutory income tax to our income tax expense are as follows:

	Year Ended December 31,		
(In thousands)	**2021**	**2020**	**2019**
Expected tax at federal statutory rate	$ 93,507	$ 74,392	$ 48,908
State income tax, net of federal benefit	848	(26)	325
Federal and state research credits	1,260	—	—
Noncontrolling interest	(21,626)	(14,577)	(7,078)
Other	1,129	839	326
Change in valuation allowance	1,321	(197)	(579)
Income tax expense (benefit), net	$ 76,439	$ 60,431	$ 41,902

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of our deferred tax assets and deferred tax liabilities are as follows:

	As of December 31,	
(In thousands)	**2021**	**2020**
Deferred tax assets		
Net operating loss carryforwards	$ 64,813	$ 121,839
Research and development tax credit carryforwards	53,467	55,211
Other	743	1,100
Total deferred tax assets before valuation allowance	119,023	178,150
Valuation allowance	(64,744)	(63,423)
Total deferred tax assets	54,279	114,727
Deferred tax liabilities		
Debt issuance discount and other	(9,158)	(10,596)
Unrealized gain on investment, net	(27,794)	(10,372)
Net deferred tax assets	$ 17,327	$ 93,759

We record deferred tax assets if the realization of such assets is more likely than not to occur. Significant management judgment is required in determining whether a valuation allowance against the deferred tax assets is required. We have considered all available evidence, both positive and negative, such as our historical operating results and predictability of future taxable income, in making such determination. We are also required to exercise significant management's judgment in forecasting future taxable income. Specifically, we evaluate the following criteria when considering a valuation allowance:

- the history of tax net operating losses in recent years;
- predictability of operating results;
- profitability for a sustained period of time; and
- level of profitability on a quarterly basis.

As of December 31, 2021, we recognized $76.4 million income tax expense and reduced the deferred tax assets by the same amount mainly based on the taxable income generated during the year.

As of December 31, 2021, we had federal net operating loss carryforwards of approximately $92.9 million, which expire from 2033 through 2035. We also had federal research and development tax credit carryforwards of approximately $42.1 million, which will expire beginning 2022. We also had state net operating loss carryforwards of approximately $648.6 million expiring in the beginning of 2029 and state research tax credits of approximately $31.6 million, which do not expire.

Utilization of net operating loss and tax credit carryforwards may be subject to a substantial annual limitation due to ownership change limitations provided by the Internal Revenue Code and similar state provisions. Annual limitations may result in expiration of net operating loss and tax credit carryforwards before some or all of such amounts have been utilized.

We conducted an Internal Revenue Code of 1986, as amended, Section 382 ("Section 382") analysis through October 31, 2021 to determine whether an ownership change had occurred since inception. The Section 382 study concluded that it is more likely than not that the Company did not experience an ownership change during the testing period. However, notwithstanding the applicable annual limitations, no portion of the net operating loss or credit carryforwards is expected to expire before becoming available to reduce federal and state income tax liabilities as a result of those identified ownership changes. If we undergo another ownership change, the utilization of the pre-ownership change net operating loss carryforwards or pre-ownership change tax attributes, such as research tax credits, to offset the post-ownership change income may be subject to an annual limitation, pursuant to Sections 382 and 383 of the Internal Revenue Code of 1986, as amended. Similar rules may apply under state tax laws.

Our policy is to recognize interest and/or penalties related to income tax matters in income tax expense. As of December 31, 2021 and 2020, we had no accrued interest or penalties.

Uncertain Tax Positions

A reconciliation of the beginning and ending balances of the total amounts of unrecognized tax benefits are as follows:

(In thousands)		
Unrecognized tax benefits as of December 31, 2018	$	15,413
Gross decrease in tax portions for 2019		(71)
Unrecognized tax benefits as of December 31, 2019		15,342
Net decrease in tax portions for 2020		(157)
Unrecognized tax benefits as of December 31, 2020		15,185
Net decrease in tax portions for 2021		(313)
Unrecognized tax benefits as of December 31, 2021	$	14,872

Our total unrecognized tax benefits as of December 31, 2021 were $14.9 million. Total unrecognized tax benefits that, if recognized, would affect our effective tax rate, were $8.4 million as of December 31, 2021.

We are subject to taxation in the U.S. and various state jurisdictions. The tax years 2004 through 2013, 2015 and forward remain open to examination by the federal and most state tax authorities due to net operating loss and overall credit carryforward positions.

12. SUBSEQUENT EVENTS

On February 9, 2022, ISO entered into a securities purchase agreement with Armata to acquire 9,000,000 shares of Armata common stock and warrants to purchase 4,500,000 additional shares of common stock with an exercise price of $5.00 per share for $45.0 million. The investment is set to close in two tranches. The first tranche consisting of approximately 3.6 million shares of common stock and warrants to purchase approximately 1.8 million shares of common stock for an aggregate purchase price of approximately $18.1 million was consummated simultaneously with the execution of the agreement. The second tranche consisting of approximately 5.4 million shares of common stock and warrants to purchase approximately 2.7 million shares of common stock for an aggregate purchase price of $26.9 million will be consummated upon satisfaction of certain closing conditions, which is expected to occur in the first quarter of 2022. Upon closing of the second tranche, we expect to own approximately 70% of Armata's outstanding stock. The investment is intended to aid Armata in advancing its clinical pipeline and strengthening its bacteriophage platform.

On February 9, 2022, Armata also entered a second amended and restated voting agreement with the Company and ISO, pursuant to which the Company and ISO agreed not to vote or take any action by written consent with respect to any common shares held by the Company and ISO that represent, in the aggregate, more than 49.5% of the total number of voting shares of Armata's common stock for voting on the matters related to election or removal of Armata's board. The Company and ISO also agreed not to amend Armata's bylaws to reduce its maximum number of directors or set the number of directors who may serve on Armata's board. The voting agreement will expire the earlier of the second anniversary of the agreement effective date and approval by the FDA of any of Armata's product candidates for marketing and commercial distribution.

INNOVIVA, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

On February 17, 2022, ISO entered into a securities purchase agreement with Entasis to purchase a convertible promissory note for a total purchase price of $15.0 million. The note bears an annual interest rate of 0.59% and will mature and become payable on August 18, 2022 unless it is converted at the conversion price of $1.48 before the maturity date. This financing is expected to support Entasis' product development and operations into August 2022. With this financing, we have become the primary beneficiary of Entasis and expect to consolidate its financial position and results of operations effective on the date of the transaction. Entasis was valued at $85.3 million based on its close trading price on February 17, 2022.

On February 18, 2022, TRC entered into an investment and shareholders agreement with Nanolive SA ("Nanolive") to purchase 18,750,000 shares of Series C preferred stock for $9.8 million (equivalent to 9.0 million CHF). Nanolive SA is a Swiss privately held life sciences company focused on developing breakthrough imaging solutions that accelerate research in growth industries such as drug discovery and cell therapy. TRC owns 16.1% of Nanolive's equity and has a right to designate one board member to Nanolive's board.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and Board of Directors of Innoviva, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Innoviva, Inc. (a Delaware corporation) and subsidiaries (the "Company") as of December 31, 2021 and 2020, the related consolidated statements of income, comprehensive income, changes in stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2021, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and 2020, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2021, in conformity with accounting principles generally accepted in the United States of America.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the Company's internal control over financial reporting as of December 31, 2021, based on criteria established in the 2013 *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"), and our report dated February 28, 2022 expressed an unqualified opinion.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Consolidation of Investees

As described further in Notes 4 and 5 to the financial statements, certain of the Company's investees have complex structures and agreements which must be evaluated for consolidation, including determining whether the investee is a variable interest entity ("VIE"), and if so, whether the Company is the primary beneficiary. This assessment is performed at the inception of the investment and upon the occurrence of reconsideration events and requires significant judgment by management.

As of December 31, 2021, the carrying values of the Company's consolidated VIEs' total assets and total liabilities aggregated to $326.8 million and $0.5 million, respectively. As of December 31, 2021, the Company's investments in unconsolidated VIEs was $250.4 million.

We identified the assessment of consolidation of investees as a critical audit matter. The principal consideration for our determination that the consolidation determination for the Company's investees either at inception or upon a reconsideration event is a critical audit matter is that there is significant judgment required by management to interpret complex structures and agreements. This required a high degree of auditor judgment and an increased audit effort.

Our audit procedures related to consolidation assessment included the following, among others.

- We tested the design and operating effectiveness of controls related to management's initial accounting assessment for each investment and the reassessment upon reconsideration events.
- We evaluated the Company's consolidation accounting analysis for all significant investees by performing procedures including, but not limited to:
  - Obtaining an understanding of the composition and governance of the investee, its board of directors and management.
  - Reading the purchase agreements and other related documents and evaluating the structures and terms of the agreements to verify whether the investees should be considered VIEs.
  - If an investee is determined to be a VIE, considering whether the Company appropriately determined the primary beneficiary of the VIE by evaluating the investment arrangements of the entity to determine if the Company has the power to direct activities and if the Company has the obligation to absorb losses of the entity or the right to receive benefits from the entity that could be significant to the VIE.
  - For those investees for which the Company has determined consolidation is appropriate, evaluating whether the Company consolidated the balances at the appropriate amounts, including applying appropriate audit procedures to the investees' financial statements.
  - Evaluating other audit evidence obtained to determine if there were additional reconsideration events that had not been identified by the Company, including reading board minutes and confirming the terms of certain agreements, as applicable.

/s/ GRANT THORNTON LLP

We have served as the Company's auditor since 2019.

San Francisco, California
February 28, 2022

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) The following documents are filed as part of this Annual Report on Form 10-K/A:

1. Financial Statements:

The following financial statements and schedules of the Registrant are contained in Part II, Item 8, “Financial Statements and Supplementary Data” of this Annual Report on Form 10-K/A:

2. Financial Statement Schedules:

All schedules have been omitted because of the absence of conditions under which they are required or because the required information, where material, is shown in the financial statements, financial notes or supplementary financial information.

(b) Exhibits required by Item 601 of Regulation S-K:

The information required by this Item is set forth on the exhibit index that follows the signature page of this report.

Exhibits

Exhibit Number	Description	Incorporated by Reference		
		Form	Exhibit	Filing Date/Period End Date
3.1	Amended and Restated Certificate of Incorporation	S-1	3.3	7/26/2004
3.2	Certificate of Amendment of Restated Certificate of Incorporation	10-Q	3.4	3/31/2007
3.3	Certificate of Ownership and Merger Merging LABA Merger Sub, Inc. with and into Theravance, Inc., as filed with the Secretary of State of the State of Delaware, effective on January 7, 2016	8-K	3.1	1/8/2016
3.4	Amended and Restated Bylaws, amended and restated as of February 8, 2017	8-K	3.1	2/9/2017
4.1	Specimen certificate representing the common stock of the registrant	10-K	4.1	12/31/2006
4.2	Indenture, dated as of January 24, 2013 by and between Theravance, Inc. and The Bank of New York Mellon Trust Company, N.A., as trustee	8-K	4.1	1/25/2013
4.3	Form of 2.125% Convertible Subordinated Note Due 2023 (included in Exhibit 4.4)			
4.4	Indenture (including form of Note) with respect to Innoviva's 2.50% Convertible Senior Notes due 2025, dated as of August 7, 2017, between Innoviva and The Bank of New York Mellon Trust Company, N.A., as trustee	8-K	4.1	8/7/2017
4.5	Description of Registrant's Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934	10-K	4.9	2/19/2020
10.1	Employee Stock Purchase Plan, as amended April 27, 2010	10-Q	10.4	6/30/2010
10.2	Collaboration Agreement between the registrant and Glaxo Group Limited, dated as of November 14, 2002	10-Q	10.1	6/30/2014
10.3	Amended and Restated Investors' Rights Agreement by and among the registrant and the parties listed therein, dated as of May 11, 2004	S-1	10.13	6/10/2004
10.4*	Strategic Alliance Agreement between the registrant and Glaxo Group Limited, dated as of March 30, 2004	10-K	10.13	12/31/2013
10.5+	Description of Cash Bonus Program, as amended	10-K	10.22	12/31/2009
10.6+	Amendment to Change in Control Severance Plan effective December 16, 2009	10-K	10.47	12/31/2009
10.7+	2009 Change in Control Severance Plan adopted December 16, 2009	10-K	10.48	12/31/2009
10.8	Second Amendment to Amended and Restated Governance Agreement among the registrant, Glaxo Group Limited, GlaxoSmithKline plc and GlaxoSmithKline LLC, dated as of November 29, 2010	8-K	10.2	11/29/2010
10.9	Amendment to Strategic Alliance Agreement, dated October 3, 2011	10-K	10.34	12/31/2011
10.10+	2012 Equity Incentive Plan, as approved by the board of directors February 8, 2012 and approved by stockholders May 16, 2012 and forms of equity award	10-Q	10.38	6/30/2012
10.11	Base Capped Call Transaction, dated January 17, 2013	8-K	10.1	1/23/2013
10.12	Additional Capped Call Transaction, dated January 18, 2013	8-K	10.2	1/23/2013
10.13	Master Agreement by and among Theravance, Inc., Theravance Biopharma, Inc. and Glaxo Group Limited, dated March 3, 2014	8-K/A	10.1	3/6/2014
10.14*	Collaboration Agreement Amendment by and between Theravance, Inc. and Glaxo Group Limited, dated March 3, 2014	8-K/A	10.2	3/6/2014
10.15*	Strategic Alliance Agreement Amendment by and between Theravance, Inc. and Glaxo Group Limited, dated March 3, 2014	8-K/A	10.3	3/6/2014
10.16	Transition Services Agreement between Theravance and Theravance Biopharma, dated June 2, 2014.	8-K	10.2	6/5/2014
10.17	Tax Matters Agreement between Theravance and Theravance Biopharma, dated June 2, 2014.	8-K	10.3	6/5/2014
10.18	Employee Matters Agreement between Theravance and Theravance Biopharma, dated June 1, 2014.	8-K	10.4	6/5/2014
10.19	Theravance Respiratory Company, LLC Limited Liability Company Agreement between Theravance and Theravance Biopharma, dated May 31, 2014.	8-K	10.5	6/5/2014

10.20	Amendment/Clarification to Transition Services Agreement between Theravance and Theravance Biopharma, dated March 2, 2015	10-Q	10.64	3/31/2015
10.21+	First Amendment to 2009 Change In Control Severance Plan (Renamed 2009 Severance Plan)	8-K	10.2	7/29/2015
10.22	Form of Notice of Performance-Based Restricted Stock Award and Restricted Stock Award Agreement under 2012 Equity Incentive Plan (director form)	10-K	10.76	2/23/2018
10.23+	Second Amendment to 2009 Severance Plan	10-Q	10.81	7/26/2018
10.24+	Offer Letter with Marianne Zhen, dated September 7, 2018	8-K	10.1	9/11/2018
10.25+	Offer Letter between Innoviva, Inc. and Pavel Raifeld, dated May 20, 2020.	8-K	10.1	5/26/2020
10.26	Strategic Advisory Agreement, dated as of December 11, 2020, by and between Sarissa Capital Management LP and Innoviva, Inc.	8-K	10.1	12/14/2020
10.27	Amended and Restated Limited Partnership Agreement of ISP Fund LP, dated as of December 11, 2020, by and among ISP Fund LP, Sarissa Capital Fund GP LP, Innoviva Strategic Partners LLC and the other parties named therein.	8-K	10.2	12/14/2020
10.28	Share Repurchase Agreement, dated as of May 2021, by and between Innoviva, Inc. and Glaxo Group Limited	8-K	10.1	5/20/2021
10.29	Letter Agreement, dated as of May 20, 2021, by and among Innoviva Strategic Partners LLC, ISP Fund LP and Sarissa Capital Fung GP LP	8-K	10.2	5/20/2021
21.1	List of Subsidiaries			
23.1	Consent of Independent Registered Public Accounting Firm			
23.2	Consent of Independent Registered Public Accounting Firm of Armata Pharmaceuticals, Inc.			
24.1	Power of Attorney (see signature page to the Original Filing)			
31.1	Certification of Principal Executive Officer Pursuant to Rule 13a-14 under the Securities Exchange Act of 1934			
31.2	Certification of Principal Financial Officer Pursuant to Rule 13a-14 under the Securities Exchange Act of 1934			
32	Certifications Pursuant to 18 U.S.C. Section 1350			
99.1	Audited Consolidated Financial Statements of Armata Pharmaceuticals, Inc. at December 31, 2021 and 2020 and for the two years ended December 31, 2021			
101	The following materials from Registrant's Annual Report on Form 10-K for the year ended December 31, 2021, formatted in Extensible Business Reporting Language (XBRL) includes: (i) Consolidated Balance Sheets as of December 31, 2021 and 2020, (ii) Consolidated Statements of Income for the years ended December 31, 2021, 2020 and 2019, (iii) Consolidated Statements of Comprehensive Income for the years ended December 31, 2021, 2020 and 2019, (iv) Consolidated Statements of Stockholders' Equity (Deficit) for the years ended December 31, 2021, 2020 and 2019, (v) Consolidated Statements of Cash Flows for years ended December 31, 2021, 2020 and 2019, and (vi) Notes to Consolidated Financial Statements.			
104	Cover Page Interactive Data File (embedded within the Inline XBRL document and included in Exhibit 101)			

+ Management contract or compensatory plan or arrangement required to be filed pursuant to Item 15(b) of Form 10-K.

* Confidential treatment has been granted for certain portions which are omitted in the copy of the exhibit electronically filed with the Securities and Exchange Commission. The omitted information has been filed separately with the Securities and Exchange Commission pursuant to Innoviva, Inc.'s application for confidential treatment.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) 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.

INNOVIVA, INC.

Date: March 17, 2022

By: /s/ PAVEL RAIFELD
Pavel Raifeld
Chief Executive Officer

Exhibit 21.1

LIST OF SUBSIDIARIES

Name	Jurisdiction	Ownership Interest
Theravance Respiratory Company, LLC	Delaware	(1)
Advanced Medicine East, Inc	Delaware	100 %
Innoviva Strategic Partners LLC	Delaware	100 %
Innoviva Royalty Sub LLC	Delaware	100 %
Innoviva TRC Holdings LLC	Delaware	100 %
Innoviva Strategic Opportunities LLC	Delaware	100 %

(1) The Company owns 15% of the economic interests in Theravance Respiratory Company, LLC ("TRC") but has the power to direct TRC's economically significant activities and the obligation to absorb losses of, or the right to receive benefits from them. Accordingly, TRC's financial results are consolidated in the Company’s financial statements.

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We have issued our reports dated February 28, 2022, with respect to the consolidated financial statements and internal control over financial reporting included in the Annual Report of Innoviva, Inc. on Form 10-K for the year ended December 31, 2021. We consent to the incorporation by reference of said reports in the Registration Statements of Innoviva, Inc. on Forms S-8 (File No. 333-119559, File No. 333-129669, File No. 333-150753, File No. 333-159042, File No. 333-173923, File No. 333-181763, and File No. 333-197950).

/s/ GRANT THORNTON LLP

San Francisco, California
February 28, 2022

Exhibit 23.2

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM OF ARMATA PHARMACEUTICALS, INC.

We consent to the use of our report dated March 17, 2022, with respect to the consolidated financial statements of Armata Pharmaceuticals, Inc., included in the Annual Report (Form 10-K/A) of Innoviva, Inc. for the year ended December 31, 2021, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

San Diego, California
March 17, 2022

Exhibit 31.1

Certification of Principal Executive Officer
Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Pavel Raifeld, certify that:

1. I have reviewed this Amendment to the Annual Report on Form 10-K of Innoviva, 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 15(d)-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: March 17, 2022

/s/ PAVEL RAIFELD
Pavel Raifeld
Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

Certification of Principal Accounting Officer
Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Marianne Zhen, certify that:

1. I have reviewed this Amendment to the Annual Report on Form 10-K of Innoviva, 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 15(d)-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: March 17, 2022

/s/ MARIANNE ZHEN
Marianne Zhen
Chief Accounting Officer
(Principal Financial Officer)

Exhibit 32

CERTIFICATIONS OF PRINCIPAL EXECUTIVE OFFICER
AND PRINCIPAL ACCOUNTING OFFICER
PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with this Amendment to the Annual Report on Form 10-K of Innoviva, Inc., I, Pavel Raifeld, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Annual Report of Innoviva, Inc. on Form 10-K for the fiscal year ended December 31, 2021 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended and that information contained in such Annual Report on Form 10-K fairly presents in all material respects the financial condition of Innoviva, Inc. at the end of the periods covered by such Annual Report on Form 10-K and results of operations of Innoviva, Inc. for the periods covered by such Annual Report on Form 10-K.

Date: March 17, 2022

By: /s/ PAVEL RAIFELD
Pavel Raifeld
Chief Executive Officer
(Principal Executive Officer)

In connection with this Amendment to the Annual Report on Form 10-K of Innoviva, Inc., I, Marianne Zhen, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Annual Report of Innoviva, Inc. on Form 10-K for the fiscal year ended December 31, 2021 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended and that information contained in such Annual Report on Form 10-K fairly presents in all material respects the financial condition of Innoviva, Inc. at the end of the periods covered by such Annual Report on Form 10-K and results of operations of Innoviva, Inc. for the periods covered by such Annual Report on Form 10-K.

Date: March 17, 2022

By: /s/ MARIANNE ZHEN
Marianne Zhen
Chief Accounting Officer
(Principal Financial Officer)

A signed original of this written statement required by Section 906 has been provided to Innoviva, Inc. and will be retained by it and furnished to the Securities and Exchange Commission or its staff upon request.

Exhibit 99.1

ARMATA PHARMACEUTICALS, INC.

INDEX TO AUDITED CONSOLIDATED FINANCIAL STATEMENTS

Armata Pharmaceuticals, Inc.

Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders of Armata Pharmaceuticals, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Armata Pharmaceuticals, Inc. (the Company) as of December 31, 2021 and 2020, and the related consolidated statements of operations, stockholders' equity, and cash flows for the years then ended, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2021 and 2020, and the results of its operations and its cash flows for the years then ended, in conformity with U.S. generally accepted accounting principles.

The Company's Ability to Continue as a Going Concern

The accompanying consolidated financial statements have been prepared assuming the Company will continue as a going concern. As discussed in Note 2 to the financial statements, the Company has suffered recurring losses and negative cash flows from operations and has stated that substantial doubt exists about the Company's ability to continue as a going concern. Management's evaluation of the events and conditions and management's plans regarding these matters are also described in Note 2. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Accrued clinical trial expenses and related research and development costs

Description of the Matter	During 2021, the Company incurred $20.0 million for research and development costs and as of December 31, 2021, the Company recorded $0.5 million for accrued clinical trial expenses. As described in Note 3 of the consolidated financial statements, the Company records accruals for estimated ongoing research and development costs, comprising payments for work performed by third party contractors, laboratories, participating clinical trial sites, and others. The Company accrues for the estimated ongoing clinical trial site costs based on patient enrollment and progress of the trial. Auditing management's accounting for accrued clinical trial expenses and related research and development costs is especially challenging as evaluating the progress or stage of completion of the activities under the Company's research and development agreements is dependent upon a high volume of data from third-party service providers and internal clinical personnel, which is tracked in spreadsheets and other end user computing programs.
How We Addressed the Matter in Our Audit	To test the completeness of the Company's accrued clinical trial expenses and related research and development costs, we obtained supporting evidence of the research and development activities performed for significant clinical trials. To assess the appropriate measurement of accrued clinical trial expenses and related research and development costs, our audit procedures included, among others, obtaining and inspecting significant agreements and agreement amendments, evaluating the Company's documentation of trial timelines and future projections of trial progress, confirming amounts incurred to-date with third-party service providers, and testing a sample of transactions and comparing the costs against related invoices and contracts. We also tested a sample of subsequent payments to evaluate the completeness of the accrued expenses and compared the results to the current year accrual.

Determination of incremental borrowing rate for lease right-of-use assets and lease liabilities

Description of the Matter	As of December 31, 2021, the Company's operating lease right-of-use assets were $35.9 million and operating lease liabilities were $38.0 million (of which $1.5 million was current and $36.5 million was long-term). As discussed in Note 3 to the consolidated financial statements, the Company recognizes operating lease assets and corresponding operating lease liabilities for all leases greater than one year on the consolidated balance sheet. As discussed in Note 8 to the consolidated financial statements, the Company entered into an operating lease during the audit period for office and research space. As the operating lease does not provide a determinable implicit interest rate, the Company used a third party to assist in determining its incremental borrowing rate ("IBR"), which was used to calculate the operating lease right-of-use asset and lease liability specific to the new lease. Auditing the Company's estimate of the IBR in calculating the operating right-of-use assets and operating lease liabilities resulting from the operating lease entered into during the audit period was challenging as it involved a high degree of subjective auditor judgment because of the significant judgments required for management to develop the estimate and changes in the IBR assumption could have a material effect on the recorded right-of-use assets and lease liabilities.
How We Addressed the Matter in Our Audit	To test the operating lease right-of-use asset and operating lease liability recorded by the Company for the new lease entered into during the year ended December 31, 2021, our audit procedures included, among others, evaluating the methodology, significant assumptions and underlying data used by the Company. We involved our valuation specialists to assist in evaluating the Company's methodology to develop the incremental borrowing rate and preparing an independent calculation of the rate, which we compared to management's estimate.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2019.

San Diego, California

March 17, 2022

Armata Pharmaceuticals, Inc.
Consolidated Balance Sheets

	December 31, 2021	December 31, 2020
Assets		
Current assets		
Cash and cash equivalents	$ 10,288,000	$ 9,649,000
Awards receivable	2,989,000	561,000
Prepaid expenses and other current assets	1,718,000	636,000
Total current assets	14,995,000	10,846,000
Restricted cash	1,200,000	1,200,000
Property and equipment, net	2,220,000	2,047,000
Operating lease right-of-use asset	35,852,000	10,790,000
In-process research and development	10,256,000	10,256,000
Goodwill	3,490,000	3,490,000
Other assets	1,755,000	887,000
Total assets	$ 69,768,000	$ 39,516,000
Liabilities and stockholders' equity		
Current liabilities		
Accounts payable and accrued liabilities	$ 2,270,000	$ 1,929,000
Accrued compensation	1,035,000	563,000
Current portion of operating lease liabilities	1,509,000	1,551,000
Paycheck Protection Program loan	—	722,000
Deferred asset acquisition consideration	—	1,940,000
Total current liabilities	4,814,000	6,705,000
Operating lease liabilities, net of current portion	36,480,000	10,877,000
Deferred tax liability	3,077,000	3,077,000
Total liabilities	44,371,000	20,659,000
Stockholders' equity		
Common stock, $0.01 par value; 217,000,000 shares authorized; 27,112,299 and 18,688,461 shares issued and outstanding at December 31, 2021 and December 31, 2020, respectively	271,000	187,000
Additional paid-in capital	227,983,000	198,372,000
Accumulated deficit	(202,857,000)	(179,702,000)
Total stockholders' equity	25,397,000	18,857,000
Total liabilities and stockholders' equity	$ 69,768,000	$ 39,516,000

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

Armata Pharmaceuticals, Inc.
Consolidated Statements of Operations

	Year Ended December 31,	
	2021	**2020**
Grant revenue	$ 4,474,000	$ 823,000
Operating expenses		
Research and development	20,015,000	14,444,000
General and administrative	8,281,000	7,966,000
Total operating expenses	28,296,000	22,410,000
Loss from operations	(23,822,000)	(21,587,000)
Other income (expense)		
Gain upon extinguishment of Paycheck Protection Program loan	726,000	—
Interest income	5,000	28,000
Interest expense	(64,000)	(628,000)
Other income (expense)	—	6,000
Total other income (expense), net	667,000	(594,000)
Net loss	$ (23,155,000)	$ (22,181,000)
Per share information:		
Net loss per share, basic and diluted	$ (0.96)	$ (1.35)
Weighted average shares outstanding, basic and diluted	24,104,146	16,415,012

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

Armata Pharmaceuticals, Inc.
Consolidated Statements of Stockholders' Equity

	Stockholders' Equity				
	Common Stock				
	Shares	Amount	Additional Paid-in Capital	Accumulated Deficit	Total Stockholders' Equity
Balances, December 31, 2019	9,922,758	$ 99,000	$ 172,015,000	$ (157,521,000)	$ 14,593,000
Sale of common stock, net of issuance costs	8,710,800	87,000	22,723,000	—	22,810,000
Exercise of warrants	14,464	—	81,000	—	81,000
Return of restricted stock awards for tax withholdings	(2,511)	—	(8,000)	—	(8,000)
Forfeiture of restricted stock awards	(4,010)	—	—	—	—
Exercise of stock options	27,382	1,000	86,000	—	87,000
Issuance of stock awards, net of tax withholding	19,578				
Stock-based compensation	—	—	3,475,000	—	3,475,000
Net loss	—	—	—	(22,181,000)	(22,181,000)
Balances, December 31, 2020	18,688,461	$ 187,000	$ 198,372,000	$ (179,702,000)	$ 18,857,000
Sale of common stock, net of issuance costs	8,275,060	83,000	26,223,000	—	26,306,000
Exercises of warrants	52,000	1,000	290,000	—	291,000
Return of restricted stock awards for tax withholdings	(25,424)	—	(106,000)	—	(106,000)
Forfeiture of restricted stock awards	(1,047)	—	—	—	—
Exercise of stock options	99,517	—	322,000	—	322,000
Issuance of inducement stock awards	23,732	—	—	—	—
Stock-based compensation	—	—	2,882,000	—	2,882,000
Net loss	—	—	—	(23,155,000)	(23,155,000)
Balances, December 31, 2021	27,112,299	$ 271,000	$ 227,983,000	$ (202,857,000)	$ 25,397,000

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

Armata Pharmaceuticals, Inc.
Consolidated Statements of Cash Flows

	Year Ended December 31,	
	2021	**2020**
Operating activities:		
Net loss	$ (23,155,000)	$ (22,181,000)
Adjustments required to reconcile net loss to net cash used in operating activities:		
Depreciation	1,169,000	1,114,000
Gain upon extinguishment of Paycheck Protection Program loan	(722,000)	—
Stock-based compensation	2,882,000	3,475,000
Non-cash interest expense	60,000	628,000
Payment of accreted interest for deferred consideration for asset acquisition	(586,000)	(432,000)
Changes in operating assets and liabilities:		
Award receivable	(2,428,000)	(467,000)
Accounts payable and accrued liabilities	184,000	544,000
Accrued compensation	472,000	(760,000)
Operating lease right-of-use asset and liability, net	499,000	803,000
Prepaid expenses and other current assets	(1,950,000)	(994,000)
Net cash used in operating activities	(23,575,000)	(18,270,000)
Investing activities:		
Purchases of property and equipment	(1,304,000)	(824,000)
Net cash used in investing activities	(1,304,000)	(824,000)
Financing activities:		
Principal payment of deferred consideration for asset acquisition	(1,414,000)	(568,000)
Proceeds from Paycheck Protection Program Loan	—	717,000
Proceeds from sale of common stock, net of offering costs	26,319,000	22,893,000
Proceeds from exercise of warrants and stock options	613,000	168,000
Net cash provided by financing activities	25,518,000	23,210,000
Net increase in cash, cash equivalents and restricted cash	639,000	4,116,000
Cash, cash equivalents and restricted cash, beginning of period	10,849,000	6,733,000
Cash, cash equivalents and restricted cash, end of period	$ 11,488,000	$ 10,849,000
Supplemental disclosure of cash flow information:		
ROU asset obtained by assuming operating lease liabilities	$ 26,056,000	$ —
Paycheck Protection Program loan forgiveness	$ 722,000	$ —
Unpaid offering costs	$ 13,000	$ 65,000
Property and equipment included in accounts payable	$ 38,000	$ 150,000

	Year Ended December 31,	
	2021	**2020**
Cash and cash equivalents	$ 10,288,000	$ 9,649,000
Restricted cash	1,200,000	1,200,000
Cash, cash equivalents and restricted cash	$ 11,488,000	$ 10,849,000

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

1. Organization and Description of the Business

Armata Pharmaceuticals, Inc. ("Armata"), and together with its subsidiaries referred to herein as, the "Company") is a clinical-stage biotechnology company focused on the development of pathogen-specific bacteriophage therapeutics for the treatment of antibiotic-resistant infections using its proprietary bacteriophage-based technology. The Company was created as a result of a business combination between C3J Therapeutics, Inc. ("C3J") and AmpliPhi Biosciences Corporation ("AmpliPhi") that closed on May 9, 2019, where Ceres Merger Sub, Inc., a wholly owned subsidiary of AmpliPhi, merged with and into C3J (the "Merger"), with C3J surviving the Merger as a wholly owned subsidiary of AmpliPhi. In the Merger, each share of C3J common stock outstanding immediately prior to the Merger was converted into the right to receive approximately 0.6906 shares of AmpliPhi common stock. The shares were then adjusted further to account for a reverse split of AmpliPhi common stock at a reverse split ratio of 1-for-14. All share and per share amounts have been retrospectively adjusted to give effect to the exchange of C3J common stock and the reverse split of AmpliPhi common stock.

Immediately prior to the closing of the Merger, AmpliPhi changed its name to Armata Pharmaceuticals, Inc. Armata's common stock is traded on the NYSE American exchange under the ticker symbol "ARMP."

Immediately following the Merger, certain existing C3J shareholders purchased $10.0 million in Armata common stock. After the Merger and such concurrent private placement, the former C3J security holders owned approximately 76% of the aggregate number of shares of Armata's common stock and the security holders of AmpliPhi as of immediately prior to the Merger owned approximately 24% of the aggregate number of shares of Armata's common stock. In addition, upon closing of the Merger, five of the seven members of the board of directors were appointed by C3J.

In connection with the Merger, C3J was considered the accounting acquirer of AmpliPhi because C3J's shareholders retained a majority control of ownership of the Company subsequent to the Merger. In addition, the seven-member board of directors of the combined company include five members established by C3J. Therefore, the historical financial statements presented herein prior to the closing of the Merger are the historical financial statements of C3J.

C3J's predecessor, C3 Jian, Inc., was incorporated under the laws of the State of California on November 4, 2005. On February 26, 2016, as part of a reorganization transaction, C3 Jian, Inc. merged with a wholly owned subsidiary of C3J, and as part of this process, C3 Jian, Inc. was converted to a limited liability company organized under the laws of the State of California named C3 Jian, LLC. Prior to the Merger, C3J was privately held and was financed principally through a series of equity financings.

2. Liquidity

The Company has prepared its consolidated financial statements on a going concern basis, which assumes that the Company will realize its assets and satisfy its liabilities in the normal course of business. However, the Company has incurred net losses since its inception and has negative operating cash flows. These circumstances raise substantial doubt about the Company's ability to continue as a going concern. The accompanying financial statements do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classifications of liabilities that may result from the outcome of the uncertainty concerning the Company's ability to continue as a going concern.

On February 9, 2022, the Company entered into a securities purchase agreement ("February 2022 Securities Purchase Agreement") to sell its common stock and warrants to Innoviva Strategic Opportunities LLC, a wholly-owned subsidiary of Innoviva, Inc. (Nasdaq: INVA) (collectively, "Innoviva"). The gross proceeds to the Company from the transaction are expected to be $45 million.

Pursuant and subject to the terms and conditions of the securities purchase agreement and related agreements, Innoviva will purchase 9,000,000 newly issued shares of the Company's common stock, at a price of $5.00 per share, and warrants to purchase up to 4,500,000 additional shares of common stock, with an exercise price of $5.00 per share. The stock purchases are expected to occur in two tranches. Upon execution , Innoviva purchased 3,614,792 shares of common stock and warrants to purchase 1,807,396 shares of common stock for an aggregate purchase price of approximately $18.1 million. At the closing of the second tranche, upon the Company's stockholders voting in favor of the transaction, Innoviva will purchase 5,385,208 shares of common stock and warrants to purchase 2,692,604 shares of common stock for an aggregate purchase price of $26.9 million. Subject to the satisfaction of certain closing conditions, including the approval of the Company's stockholders, the second closing contemplated by the securities purchase agreement is expected to occur near the end of the first quarter of 2022.

On October 28, 2021, the Company entered into a securities purchase agreement (the "October 2021 Securities Purchase Agreement") with the Cystic Fibrosis Foundation ("CFF"), a Delaware corporation, the Company's partner for its lead Phase 1b/2a clinical development program, and Innoviva Strategic Opportunities LLC, a wholly-owned subsidiary of Innoviva, Inc. (Nasdaq: INVA) (collectively, "Innoviva") for the private placement of newly issued shares of common stock, par value $0.01 per share, of the Company ("Common Stock"). Pursuant to the October 2021 Securities Purchase Agreement, the Company issued and sold 909,091 shares to CFF and 1,212,122 shares to Innoviva, each at a per share price of $3.30 (the "October 2021 Private Placements"). The Company received aggregate gross proceeds from the October 2021 Private Placements of approximately $7.0 million, before deducting transaction expenses.

On January 26, 2021, the Company entered into a securities purchase agreement (the "January 2021 Securities Purchase Agreement") with Innoviva, pursuant to which the Company issued and sold to Innoviva, in a private placement, up to 6,153,847 newly issued shares of Common Stock, and warrants (the "Common Warrants") to purchase up to 6,153,847 shares of Common Stock, with an exercise price per share of $3.25 (the "January 2021 Private Placement").

On March 27, 2020, the Company completed a private placement transaction and sold to Innoviva Inc. 8,710,800 newly issued shares of Common Stock and warrants to purchase 8,710,800 shares of common stock, with an exercise price per share of $2.87 (the "2020 Private Placement"). Each share of common stock was sold together with one common warrant granting the warrant holder the right to purchase an additional share of common stock at $2.87 per share. The 2020 Private Placement was closed in two tranches raising total gross proceeds of $25.0 million.

Management plans to raise additional capital through equity offerings, debt financings, or other capital sources, including potential collaborations, licenses and other similar arrangements. While management believes this plan to raise additional funds will alleviate the conditions that raise substantial doubt, these plans are not entirely within its control and cannot be assessed as being probable of occurring. The Company's ability to raise additional capital may be adversely impacted by potential worsening global economic conditions and the recent disruptions to, and volatility in, financial markets in the United States and worldwide resulting from the ongoing COVID-19 pandemic. The Company may not be able to secure additional financing in a timely manner or on favorable terms, if at all. Furthermore, if the Company issues equity securities to raise additional funds, its existing stockholders may experience dilution, and the new equity securities may have rights, preferences and privileges senior to those of the Company's existing stockholders. If the Company raises additional funds through collaboration, licensing or other similar arrangements, it may be necessary to relinquish valuable rights to its potential products on terms that are not favorable to the Company. If the Company is unable to raise capital when needed or on attractive terms, it would be forced to delay, reduce or eliminate its research and development programs or other operations. If any of these events occur, the Company's ability to achieve the development and commercialization goals would be adversely affected.

3. Significant Accounting Policies

Basis of Presentation

The consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries including C3J, Biocontrol Limited and AmpliPhi Australia Pty Ltd. All significant intercompany accounts and transactions have been eliminated.

Use of Estimates

The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States ("U.S. GAAP") requires management to make estimates and assumptions that affect the amounts reported in its consolidated financial statements and accompanying notes. On an ongoing basis, management evaluates these estimates and judgments, which are based on historical and anticipated results and trends and on various other assumptions that management believes to be reasonable under the circumstances. By their nature, estimates are subject to an inherent degree of uncertainty and, as such, actual results may differ from management's estimates.

Cash and Cash Equivalents

Cash and cash equivalents consist primarily of deposits with commercial banks and financial institutions.

Fair Value of Financial Instruments

Financial instruments include cash equivalents, prepaid expenses and other assets, restricted cash, accounts payable, accrued expenses and deferred asset acquisition consideration. The carrying amount of cash equivalents prepaid expenses and other assets, restricted cash, accounts payable and accrued expenses are generally considered to be representative of their respective fair values because of the short-term nature of those instruments.

Property and Equipment

Property and equipment are recorded at cost and depreciated over their estimated useful lives using the straight-line method. Maintenance and repairs that do not improve or extend the lives of the respective assets are expensed to operations as incurred. Upon disposal, retirement, or sale of an asset, the related cost and accumulated depreciation is removed from the accounts and any resulting gain or loss is included in the results of operations. Estimated useful lives for property and equipment are as follows:

	Estimated Useful Lives
Laboratory equipment	5 – 10 years
Office and computer equipment	3 – 5 years
Leasehold improvements	Shorter of lease term or useful life

Fair Value Measurements

Fair value measurements are market-based measurements, not entity-specific measurements. Therefore, fair value measurements are determined based on the assumptions that market participants would use in pricing the asset or liability. The Company follows a three-level hierarchy to prioritize the inputs used in the valuation techniques to derive fair values. The basis for fair value measurements for each level within the hierarchy is described below:

- Level 1—Valuations based on unadjusted quoted prices in active markets for identical assets or liabilities that the Company has the ability to access.

- Level 2—Valuations based on quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active and models for which all significant inputs are observable, either directly or indirectly.

- Level 3—Valuations based on inputs that are unobservable and significant to the overall fair value measurement.

The Company did not have any assets or liabilities that require recurring or nonrecurring measurements.

Impairment of Long-Lived Assets

The Company reviews long-lived assets for impairment when events or changes in circumstances indicate the carrying value of the assets may not be recoverable. Recoverability is measured by comparison of the book values of the assets to future net undiscounted cash flows that the assets or the asset groups are expected to generate. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the book value of the assets exceed their fair value, which is measured based on the estimated discounted future net cash flows arising from the assets or asset groups. No impairment losses on long-lived assets have been recorded through December 31, 2021 or 2020.

In-Process Research and Development ("IPR&D") and Acquired IPR&D

IPR&D assets are intangible assets with indefinite lives and are not subject to amortization. The Company's IPR&D assets represent a capitalized in-process bacteriophage development programs for S. aureus infections that the Company acquired through the Merger. Such assets are initially measured at their acquisition-date fair values and are subject to impairment testing at least annually until completion or abandonment of research and development efforts associated with the projects. Upon successful completion of each project, the Company makes a determination as to the then remaining useful life of the intangible asset and begins amortization.

The Company tests IPR&D assets for impairment as of December 31 of each year or more frequently if indicators of impairment are present. The authoritative accounting guidance provides an optional qualitative assessment for any indicators that indefinite-lived intangible assets are impaired. If it is determined that it is more likely than not that the indefinite-lived intangible assets, including IPR&D, are impaired, the fair value of the indefinite-lived intangible assets is compared with the carrying amount and impairment is recorded for any excess of the carrying amount over the fair value of the indefinite-lived intangible assets.

If and when a quantitative analysis of IPR&D assets is required based on the result of the optional qualitative assessment, the estimated fair value of IPR&D assets is calculated based on the income approach, which includes discounting expected future net cash flows associated with the assets to a net present value. The fair value measurements utilized to perform the impairment analysis are categorized within Level 3 of the fair value hierarchy. Significant management judgment is required in the forecast of future operating results that are used in the Company's impairment analysis. The estimates the Company uses are consistent with the plans and estimates that it uses to manage its business. Significant assumptions utilized in the Company's income approach model include the discount rate, timing of clinical studies and regulatory approvals, the probability of success of its research and development programs, timing of commercialization of these programs, forecasted sales, gross margin, selling, general and administrative expenses, capital expenditures, as well as anticipated growth rates.

During the fourth quarter ended December 31, 2021, the Company performed the annual evaluation of its IPR&D assets for impairment. The Company considered the development timelines for its S. aureus development program and noted no qualitative factors that would indicate potential impairment of its IPR&D asset. The Company also performed a quantitative analysis for impairment analysis and based on this analysis, the fair value of this phage program was greater than its carrying value as of December 31, 2021. Consequently, no impairment was noted for the IPR&D asset.

Goodwill

Goodwill, which has an indefinite useful life, represents the excess of purchase consideration over the fair value of net assets acquired. The Company's goodwill as of December 31, 2021 is associated with AmpliPhi's business prior to the Merger. Goodwill is not subject to amortization and is required to be tested for impairment at least on an annual basis. The Company tests goodwill for impairment as of December 31 of each year. The Company determines whether goodwill may be impaired by comparing the carrying value of the single reporting unit, including goodwill, to the fair value of the reporting unit. If the fair value is less than the carrying amount, a more detailed analysis is performed to determine whether goodwill is impaired. The impairment loss, if any, is measured as the excess of the carrying value of the goodwill over the implied fair value of the goodwill and is recorded in the Company's consolidated statements of operations. There was no impairment of goodwill during the year ended December 31, 2021 or 2020.

Research and Development

All research and development costs are expensed as incurred. Research and development costs consist primarily of salaries, employee benefits, costs associated with preclinical studies and clinical trials (including amounts paid to clinical research organizations and other professional services). Payments made prior to the receipt of goods or services to be used in research and development are capitalized until the goods or services are received.

The Company records accruals for estimated research and development costs, comprising payments for work performed by third party contractors, laboratories, participating clinical trial sites, and others. Some of these contractor's bill monthly based on actual services performed, while others bill periodically based upon achieving certain contractual milestones. For the latter, the Company accrues the expenses as goods or services are used or rendered. Clinical trial site costs related to patient enrollment are accrued as patients enter and progress through the trial. Judgments and estimates are made in determining the accrued balances at the end of the reporting period.

Research and development expenses are partially offset by the benefit of tax incentive payments for qualified research and development expenditures from the Australian tax authority ("AU Tax Rebates"). The Company does not record AU Tax Rebates until payment is received due to the uncertainty of receipt. In January 2022, the Company received AU Tax Rebates of approximately $0.2 million related to calendar year 2020, and such rebates have been recorded as an offset to research and development expense in the Company's consolidated statements of operations for the three months ending March 31, 2022. During the year ended December 31, 2020, the Company applied for AU Tax Rebates for the calendar year 2019 and received $0.7 million in January 2021 which was recognized in 2021 as an offset to research and development expenses.

Stock-Based Compensation

Compensation expense related to stock options granted to employees and non-employees is measured at the grant date based on the estimated fair value of the award and is recognized on the accelerated attribution method over the requisite service period. Forfeitures are recognized as a reduction of stock-based compensation expense as they occur. Stock-based compensation expense for an award with a performance condition is recognized when the achievement of such performance condition is determined to be probable. If the outcome of such performance condition is not determined to be probable or is not met, no compensation expense is recognized and any previously recognized compensation expense is reversed.

Foreign Currency Translations and Transactions

The functional currency of the Company and its wholly owned subsidiaries is the U.S. dollar.

Revenue Recognition

The Company recognizes revenue when it transfers promised goods or services to customers in an amount that reflects the consideration to which it expects to be entitled in exchange for those goods or services. To determine revenue recognition for contracts with customers, the Company performs the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) the Company satisfies its performance obligations. At contract inception, the Company assesses the goods or services agreed upon within each contract and assess whether each good or service is distinct and determine those that are performance obligations. The Company then recognizes as revenue the amount of the transaction price that is allocated to the respective performance obligation when (or as) the performance obligation is satisfied. During the years ended December 31, 2021 and 2020, the Company did not recognize revenue or deferred revenue from contracts with customers.

Grants and Awards

In applying the provisions of ASC Topic 606, *Revenue from Contracts with Customers* ("ASC 606"), Armata has determined that grants and awards are out of the scope of ASC 606 because the funding entities do not meet the definition of a "customer", as defined by ASC 606, as there is not considered to be a transfer of control of goods or services. With respect to each grant or award, the Company determines if it has a collaboration in accordance with ASC Topic 808, *Collaborative Arrangements* ("ASC 808"). To the extent the grant or award is within the scope of ASC 808, the Company recognizes the award upon achievement of certain milestones as credits to research and development expenses. For grant and awards outside the scope of ASC 808, the Company applies ASC 606 or International Accounting Standards No. 20, *Accounting for Government Grants and Disclosure of Government Assistance*, by analogy, and revenue is recognized when the Company incurs expenses related to the grants for the amount the Company is entitled to under the provisions of the contract.

Armata also considers the guidance in ASC Topic 730, *Research and Development* ("ASC 730"), which requires an assessment, at the inception of the grant or award, of whether the agreement is a liability. If Armata is obligated to repay funds received regardless of the outcome of the related research and development activities, then Armata is required to estimate and recognize that liability. Alternatively, if Armata is not required to repay the funds, then payments received are recorded as revenue or contra-expense as the expenses are incurred.

Deferred grant or award liability represents award funds received or receivable for which the allowable expenses have not yet been incurred as of the balance sheet date.

Leases

The Company determines if an arrangement contains a lease at inception. The Company currently only has operating leases. The Company recognizes a right-of-use operating lease asset and associated short- and long-term operating lease liability on its consolidated balance sheet for operating leases greater than one year. The right-of-use assets represent the Company's right to use an underlying asset for the lease term and the lease liabilities represent the Company's obligation to make lease payments arising from the lease arrangements. Right-of-use operating lease assets and lease liabilities are recognized based on the present value of the future minimum lease payments the Company will pay over the lease term. The Company determines the lease term at the inception of each lease, which includes renewal options only if the Company concludes that such options are reasonably certain to be exercised.

As the Company's leases do not provide an interest rate implicit in the lease, the Company uses its incremental borrowing rate, based on the information available on the date of adoption of Topic 842, *Leases*, as of the lease inception date or at the lease option extension date in determining the present value of future payments. The Company recognizes rent expense for the minimum lease payments on a straight-line basis over the expected term of the leases. The Company recognizes period expenses, such as common area maintenance expenses, in the period such expenses are incurred.

Income Taxes

The Company utilizes the asset and liability method of accounting for income taxes. Deferred income taxes are recognized for the future tax consequences of temporary differences using enacted statutory tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. Temporary differences include the differences between the financial statement carrying amounts and the tax basis of existing assets and liabilities and net operating loss and tax credit carryforwards. The effect on deferred taxes of a change in tax rates is recognized in income (expense) in the period that includes the enactment date. The Company evaluates the likelihood that deferred tax assets will be recovered from future taxable income. Valuation allowances are provided if, based upon the weight of available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized.

The Company's income tax returns are based on calculations and assumptions that are subject to examination by the Internal Revenue Service and other tax authorities. In addition, the calculation of tax liabilities involves dealing with uncertainties in the application of complex tax regulations. The Company recognizes liabilities for uncertain tax positions based on a two-step process. The first step is to evaluate the tax position for recognition by determining if the weight of available evidence indicates that it is more likely than not that the position will be sustained on audit, including resolution of related appeals or litigation processes, if any. The second step is to measure the tax benefit as the largest amount that is more than 50% likely of being realized upon settlement.

Basic and Diluted Net Loss per Share

Net earnings or loss per share ("EPS") is calculated in accordance with the applicable accounting guidance provided in ASC 260, *Earnings per Share.* Basic EPS is calculated by dividing net income or loss by the weighted-average number of common shares outstanding. Diluted net loss per share is computed in accordance with the treasury stock method and reflects the potential dilution that would occur if securities or other contracts to issue common stock were exercised or converted to common stock. The calculation of diluted loss per share requires that, to the extent the average market price of the underlying shares for the reporting period exceeds the exercise price of the warrants, and the presumed exercise of such securities are dilutive to net loss per share for the period, an adjustment to net loss available to common stockholders used in the calculation is required to remove the change in fair value of the warrants from the numerator for the period. Likewise, an adjustment to the denominator is required to reflect the related dilutive shares, if any, under the treasury stock method.

Settlement of Zero-coupon Debt Instrument

The Company's deferred purchase consideration arrangement with Synthetic Genomics (Note 9) does not have a stated interest rate. Upon repayment of deferred purchase consideration, the Company classifies the portion attributable to accreted interest as a cash outflow for operating activities, and the portion relating to principal as a cash outflow for financing activities.

Recent Accounting Pronouncements Not Yet Adopted

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments - Credit Losses (Topic 326), Measurement of Credit Losses on Financial Instruments*. The standard amends the impairment model by requiring entities to use a forward-looking approach based on expected losses to estimate credit losses for most financial assets and certain other instruments that aren't measured at fair value through net income. For available-for-sale debt securities, entities will be required to recognize an allowance for credit losses rather than a reduction in carrying value of the asset. Entities will no longer be permitted to consider the length of time that fair value has been less than amortized cost when evaluating when credit losses should be recognized. This new guidance is effective for calendar-year smaller reporting public entities in the first quarter of 2023. The Company is currently evaluating the impact of this ASU and does not expect that adoption of this standard will have a material impact on its consolidated financial statements or related disclosures.

In August 2020, the FASB issued ASU No. 2020-06, *Debt - Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging - Contracts in Entity's Own Equity (Subtopic 815-40)* ("ASU 2020-06"). ASU 2020-06 eliminates the beneficial conversion and cash conversion accounting models for convertible instruments. It also amends the accounting for certain contracts in an entity's own equity that are currently accounted for as derivatives because of specific settlement provisions. In addition, ASU 2020-06 modifies how particular convertible instruments and certain contracts that may be settled in cash or shares impact the diluted EPS computation. The amendments in ASU 2020-06 are effective for the Company as of January 1, 2024. Early adoption is permitted. The Company is currently evaluating the impact of ASU 2020-06 on its financial statements and does not expect the adoption of this ASU to have a material impact on the Company's consolidated financial statements.

Recently Adopted Accounting Standards

In December 2019, the FASB issued ASU 2019-12, *Income Taxes (Topic 740) Simplying the Accounting for Income Taxes*, which simplifies the accounting for income taxes by eliminating certain exceptions to the guidance in ASC 740 related to the approach for intra-period tax allocation, the methodology for calculating income taxes in an interim period and the recognition of deferred tax liabilities for outside basis differences. The new guidance also simplifies aspects of the accounting for franchise taxes and enacted changes in tax laws or rates and clarifies the accounting for transactions that result in a step-up in the tax basis of goodwill. The guidance became effective for the Company on January 1, 2021 and the adoption did not have a material impact on its consolidated financial statements or related disclosures.

4. Net Loss per Share

The following outstanding securities at December 31, 2021 and 2020 have been excluded from the computation of diluted weighted average shares outstanding for the years ended December 31, 2021 and 2020, as they would have been anti-dilutive:

	December 31, 2021	December 31, 2020
Options	2,409,682	1,668,926
Unvested restricted stock units	30,000	—
Restricted stock awards	124,018	322,756
Warrants	16,647,219	10,547,618
Total	19,210,919	12,539,300

5. Balance Sheet Details

Property and Equipment, net

Property and equipment consisted of the following:

	December 31, 2021	December 31, 2020
Laboratory equipment	$ 7,754,000	$ 6,547,000
Furniture and fixtures	817,000	719,000
Office and computer equipment	451,000	413,000
Leasehold improvements	3,423,000	3,423,000
Total	12,445,000	11,102,000
Less: accumulated depreciation	(10,225,000)	(9,055,000)
Property and equipment, net	$ 2,220,000	$ 2,047,000

Depreciation expense totaled $1.2 million and $1.1 million the years ended December 31, 2021 and 2020, respectively.

Accounts Payable and Accrued Liabilities

Accounts payable and accrued liabilities consisted of the following:

	December 31, 2021	December 31, 2020
Accounts payable	$ 1,138,000	$ 956,000
Accrued clinical trial expenses	529,000	248,000
Other accrued expenses	603,000	725,000
	$ 2,270,000	$ 1,929,000

6. Income Taxes

Loss before income taxes consisted of the following components:

	Year Ended December 31,	
	2021	2020
United States	$ (21,714,000)	$ (21,583,000)
Foreign	(1,441,000)	(598,000)
Total	$ (23,155,000)	$ (22,181,000)

The company has not recognized any current or deferred tax expense on its US and Foreign pre-tax losses for the years ended December 31, 2021 and 2020.

The differences between the Company's effective tax rate and the U.S. federal statutory tax rate were as follows:

	December 31,	
	2021	2020
U.S. federal statutory income tax rate	21.0 %	21.0 %
Adjustments for tax effects of:		
State income taxes, net of federal tax	6.2 %	6.6 %
Stock-based compensation	(0.8)%	(0.7)%
Change in valuation allowance	(27.2)%	(28.5)%
Other	0.8 %	1.6 %
Effective income tax rate	0.0 %	0.0 %

Significant components of the Company's deferred tax assets and liabilities were as follows:

	December 31,	
	2021	2020
Deferred tax assets:		
Net operating loss carryforwards	$ 36,405,000	$ 31,243,000
Capitalized research and development	16,306,000	15,789,000
Stock-based compensation	2,467,000	2,087,000
Depreciation and amortization	1,301,000	1,405,000
Lease accounting	10,631,000	3,478,000
Other	1,174,000	989,000
Total deferred tax assets before valuation allowance	68,284,000	54,991,000
Less: valuation allowance	(58,251,000)	(51,972,000)
Total deferred tax assets after valuation allowance	10,033,000	3,019,000
Deferred tax liabilities:		
Right-of-use asset	(10,033,000)	(3,019,000)
In-process research and development	(3,077,000)	(3,077,000)
Total deferred tax liabilities	(13,110,000)	(6,096,000)
Net deferred tax liability	$ (3,077,000)	$ (3,077,000)

The Company's net operating loss carryforwards at December 31, 2021 are $128.4 million and $94.4 million for federal and state income tax purposes, respectively. Federal and state net operating loss carryforwards are available to offset future taxable income, if any, and will begin to expire in 2026 to 2028, respectively. The federal NOL's generated in tax years 2018 and forward will carryforward indefinitely.

The ability of the Company to utilize net operating loss carryforwards to reduce future domestic taxable income and domestic income tax is subject to various limitations under the Internal Revenue Code (Code). The utilization of such carryforwards may be limited upon the occurrence of certain ownership changes during any three-year period resulting in an aggregate change of more than 50% in beneficial ownership. The Company previously determined an ownership change occurred on May 9, 2019 as a result of the Merger. The resulting limitation significantly reduced the Company's ability to utilize its net operating loss and credit carryovers before the expire. Accordingly, in 2019 the Company reduced its deferred tax assets for the net operating loss and credit carryforwards that were expected to expire unused with a corresponding offset to the valuation allowance recorded against such assets. Future ownership changes under Section 382 may also limit the Company's ability to fully utilize any remaining tax benefits.

The Company has generated federal and state income tax losses in all years since its inception. Accordingly, management has determined that significant negative evidence precludes the Company from recording a net deferred tax asset for financial statement purposes as it is more likely than not that its deferred tax assets will not be realized.

The Company files income tax returns in the U.S. federal jurisdiction, state of California and certain foreign jurisdictions. As of December 31, 2021, the Company is no longer subject to U.S. federal income tax examinations for tax years ended on or before December 31, 2017 or to California state income tax examinations for tax years ended on or before December 31, 2016. However, to the extent allowed by law, the tax authorities may have the right to examine prior periods where net operating losses or tax credits were generated and carried forward, and make adjustments up to the amount of the net operating loss or credit carryforward.

The Company did not have a liability for unrecognized tax benefits at December 31, 2021 and 2020.

The Company's policy is to classify interest and penalties on uncertain tax positions as a component of tax expense. As of December 31, 2021, the Company has no accrued interest or penalties related to uncertain tax positions.

7. Paycheck Protection Program Loan

In April 2020, the Company received loan proceeds of $717,000 ("PPP Loan") under the Paycheck Protection Program ("PPP"). The PPP, established as part of the Coronavirus Aid, Relief and Economic Security Act, provides for loans to qualifying businesses for amounts up to 2.5 times the average monthly payroll expenses of the qualifying business, calculated as provided under the PPP. The PPP Loan was unsecured, evidenced by a promissory note (the "Note") given by the Company as borrower through its bank, serving as the lender. The interest rate on the Note was 1.0% per annum.

In July 2021, the Company received notification of forgiveness of the full loan amount and associated interest from the Small Business Administration. The Company recorded a gain of $0.7 million from the PPP loan extinguishment in the statement of operations during the year ended December 31, 2021.

8. Commitments and Contingencies

Operating Leases

The Company leases office and research and development space under a non-cancelable operating lease in Marina del Rey, CA. The lease commenced January 1, 2012 and in April 2020, the Company amended the lease ("2020 Lease Amendment") which, among other things, extended the lease term through December 31, 2031. Base annual rent for calendar year 2022, the first year under the Lease Amendment extended term, will be approximately $1.9 million, and base rent increases by 3% annually and will be $2.5 million by the end of the amended term. In addition, the Company received a six-month rent abatement in 2020. The Company did not use an allowance for tenant improvements of $0.8 million during 2021, which will offset rent payments as prescribed by the 2020 Lease Amendment starting in 2022. In accordance with authoritative guidance, the Company re-measured the lease liability in April 2020 to be $11.7 million and related right of use asset of $11.0 million as of the Lease Amendment date with an incremental borrowing rate of 12.89%.

Concurrent with the Company's execution of the 2020 Lease Amendment, an irrevocable letter of credit in the amount of $1.2 million was delivered to the landlord. Starting on February 1, 2022, and each year thereafter the letter of credit will be reduced by 20% of the then outstanding amount.

On October 28, 2021, the Company entered into a lease for office and research and development space under a non-cancellable lease in Los Angeles, CA (the "2021 Lease"). The 2021 Lease payment start date is May 1, 2022 and the total lease term is for 16 years and runs through 2038. Monthly rent for 2022 and 2023 will be fully or partially abated while the lessor and the Company complete planned tenant improvements to the facility. Base monthly rent will be approximately $0.25 million in 2024. The Company is entitled to receive an allowance for tenant improvements of up to $7.3 million.

In connection with the 2021 Lease, in 2022 the Company delivered an irrevocable standby letter of credit in the total amount of $5.0 million to the landlord.

Future minimum annual lease payments under the Company's noncancelable operating leases as of December 31, 2021, are as follows:

	Operating Leases
2022	$ 1,593,000
2023	2,904,000
2024	4,512,000
2025	5,139,000
2026	5,293,000
Thereafter	54,847,000
Total minimum lease payments	74,288,000
Less: amount representing interest	(36,299,000)
Present value of operating lease obligations	37,989,000
Less: current portion	(1,509,000)
Noncurrent operating lease obligations	$ 36,480,000

Rent expense was $2.7 million and $1.9 million for the years ended December 31, 2021 and 2020, respectively. Total cash payments for operating leases as included in the consolidated statements of cash flows during the year ended December 31, 2021 and 2020 was $2.2 million and $1.1 million, respectively.

Legal Proceedings

From time to time, the Company may be involved in disputes, including litigation, relating to claims arising out of operations in the normal course of business. Any of these claims could subject the Company to costly legal expenses and, while management generally believes that there is adequate insurance to cover many different types of liabilities, the Company's insurance carriers may deny coverage or policy limits may be inadequate to fully satisfy any damage awards or settlements. If this were to happen, the payment of any such awards could have a material adverse effect on the consolidated results of operations and financial position. Additionally, any such claims, whether or not successful, could damage the Company's reputation and business. The Company is currently not a party to any legal proceedings, the adverse outcome of which, in management's opinion, individually or in the aggregate, would have a material adverse effect on its consolidated results of operations or financial position.

9. Synthetic Genomics Asset Acquisition

On February 28, 2018, C3J completed an acquisition of certain synthetic phage assets (the "synthetic phage assets") from Synthetic Genomics, Inc. ("SGI") for consideration consisting of $8.0 million in cash and $27.0 million in equity. The cash payments consisted of: $1.0 million paid at closing on February 28, 2018, $1.0 million at one year from closing, $1.0 million at two years from closing, and $5.0 million at three years from closing (the payments due on the one, two, three year anniversary are collectively the "time-based payment obligation"). The equity payment (the "equity payment" and, together with the time-based payment obligation, the "deferred purchase price arrangement") was due upon the earlier of the initial public offering of shares of C3J's common stock pursuant to an effective registration statement under the Securities Act of 1933, as amended, the sale of all or substantially all of C3J's assets to a third party, or a consolidation or merger into a third party. On December 20, 2018, in contemplation of the Merger (see Note 1), the deferred purchase price arrangement was amended. Under the amended agreement, the purchase consideration consisted of (i) closing consideration of $1.0 million paid on February 28, 2018, (ii) cash payments of $1.0 million on January 31, 2019, $1.0 million on January 31, 2020, and $2.0 million on January 31, 2021, (iii) an issuance of that number of shares of C3J's common stock equal to ten percent of C3J's fully-diluted capitalization, excluding options and restricted stock awards, immediately prior to the closing of the Merger, and (iv) potential milestone payments of up to $39.5 million related to the development and relevant regulatory approval of products utilizing bacteriophage from the synthetic phage assets acquired from SGI (the "milestone payment obligation").

The equity payment was settled on May 9, 2019, the date of the Merger (Note 1).

The present value of the time-based payment obligations was included in the Company's balance sheet, with interest accreted to the maturity date. The Company paid the last installment of the time-based payment obligation in the amount of $2.0 million during the year ended December 31, 2021. For the year ended December 31, 2021 and 2020, the Company recognized $0.1 million and $0.6 million of interest expense related to the time-based payment obligations, respectively.

10. Research Collaboration Arrangement

In connection with the Synthetic Phage Asset Acquisition discussed in Note 12, the Company was assigned a research collaboration agreement ("Research and Option Agreement") with Merck.

In May 2019, the Research and Option Agreement was amended and extended for four years. During the research term, the Company will be entitled to milestone payments tied to the achievement of product development milestone events in the amount of $1.5 million. The collaboration agreement also provides for the initiation of a second research program should Merck exercise that option during the initial research term and pays the option fee of $1.5 million. To date, Merck has not exercised its license option nor has the Company reached any milestones or earned any revenue under the Research and Option Agreement. Merck has the right to terminate the agreement at any time with 90 days' notice. Each party to the Research and Option Agreement is responsible for its costs and expenses in connection with the research program.

11. Grants and Awards

MTEC Grant

On June 15, 2020, the Company entered into an Research Project Award agreement (the "MTEC Agreement") with the Medical Technology Enterprise Consortium ("MTEC"), pursuant to which the Company will receive a $15.0 million grant and entered into a three-year program administered by DoD through MTEC with funding from the Defense Health Agency and Joint Warfighter Medical Research Program. The Company plans to use the grant to partially fund a Phase 1b/2a, randomized, double-blind, placebo-controlled, dose escalation clinical study of Armata's therapeutic phage-based candidate, AP-SA02, for the treatment of *S. aureus* bacteremia infections. The MTEC Agreement specifies that the grant will be paid to the Company through a cost reimbursable model, based on agreed upon cost share percentages, and the grant money received is not refundable to MTEC.

Upon license or commercialization of intellectual property developed with the funding from the MTEC Agreement, additional fees will be due to MTEC. The Company will elect whether to (a) pay a fixed royalty amount, which is subject to a cap based upon total funding received, or (b) pay an additional assessment fee, which would also be subject to a cap based upon a percentage of total funding received.

The MTEC Agreement will be effective through January 25, 2024. The MTEC Agreement may be terminated in whole or in part, 30 calendar days following the written notice from the Company to MTEC. In addition, MTEC has the right to terminate the MTEC Agreement upon material breach by the Company.

The Company determined that the MTEC Agreement is not in the scope of ASC 808 or ASC 606. Applying ASC 606 by analogy the Company recognizes proceeds received under the MTEC Agreement as grant revenue on the statement of operations when related costs are incurred. The Company recognized $4.5 million and $0.8 million in grant revenue from the MTEC Agreement during the year ended December 31, 2021 and 2020, respectively.

CFF Therapeutics Development Award

On March 13, 2020, the Company entered into an award agreement (the "Agreement") with CFF, pursuant to which it received a Therapeutics Development Award of up to $5.0 million (the "Award"). The Award will be used to fund a portion of the Company's Phase 1b/2a clinical trial of the *P. aeruginosa* phage candidate, AP-PA02, as a treatment for *P. aeruginosa* airway infections in people with CF.

The first payment under the Agreement, in the amount of $1.0 million, became due upon signing the Agreement and was received in April 2020. The remainder of the Award will be paid to the Company incrementally in installments upon the achievement of certain milestones related to the development program and progress of the Phase 1b/2a clinical trial of AP-PA02, as set forth in the Agreement.

If the Company ceases to use commercially reasonable efforts directed to the development of AP-PA02, or any other Product (as defined in the Agreement), for a period of 360 days (an "Interruption") and fails to resume the development of the Product after receiving from CFF notice of an Interruption, then the Company must either repay the amount of the Award actually received by the Company, plus interest, or grant to CFF (1) an exclusive (even as to the Company), worldwide, perpetual, sublicensable license under technology developed under the Agreement that covers the Product for use in treating infections in CF patients (the "CF Field"), and (2) a non-exclusive, worldwide, perpetual, sublicensable license under certain background intellectual property covering the Product, to the extent necessary to commercialize the Product in the CF Field.

Upon commercialization by the Company of any Product, the Company will owe a fixed royalty amount to CFF, which is to be paid in installments determined, in part, based on commercial sales volumes of the Product. The Company will be obligated to make an additional fixed royalty payment upon achieving specified sales milestones. The Company may also be obligated to make a payment to CFF if the Company transfers, sells or licenses the Product in the CF Field, or if the Company enters into a change of control transaction.

The term of the Agreement commenced on March 10, 2020 and expires on the earlier of the date on which the Company has paid CFF all of the fixed royalty payments set forth therein, the effective date of any license granted to CFF following an Interruption, or upon earlier termination of the Agreement. Either CFF or the Company may terminate the agreement for cause, which includes the Company's material failure to achieve certain development milestones. The Company's payment obligations survive the termination of the Agreement.

The Company concluded that the CFF Award is in the scope of ASC 808. Accordingly, as discussed in Note 3, the Company recognizes the award upon achievement of certain milestones as credits to research and development expenses. During year ended December 31, 2021 and 2020, the Company recognized $2.8 million and $1.0 million as credits to research and development expenses related to the CFF Award, respectively. In addition, the Company concluded under the guidance in ASC 730 that it does not have an obligation to repay funds received once related research and development expenses are incurred.

12. Stockholders' Equity

The Company is authorized to issue one class of shares designated as "Common Stock". The number of shares of common stock authorized to be issued is 217,000,000 shares.

Private Investments

On February 9, 2022, the Company entered into the February 2022 Securities Purchase Agreement to sell its common stock and warrants to Innoviva. The gross proceeds to the Company from the transaction are expected to be $45 million, before deducting estimated offering expenses.

Pursuant and subject to the terms and conditions of the securities purchase agreement and related agreements, Innoviva will purchase 9,000,000 newly issued shares of the Company's common stock, at a price of $5.00 per share, and warrants to purchase up to 4,500,000 additional shares of common stock, with an exercise price of $5.00 per share. The stock purchases are expected to occur in two tranches. Upon execution of the February 2022 Securities Purchase Agreement, Innoviva purchased 3,614,792 shares of common stock and warrants to purchase 1,807,396 shares of common stock for an aggregate purchase price of approximately $18.1 million. At the closing of the second tranche, upon the Company's stockholders voting in favor of the transaction, Innoviva will purchase 5,385,208 shares of common stock and warrants to purchase 2,692,604 shares of common stock for an aggregate purchase price of $26.9 million. Subject to the satisfaction of certain closing conditions, including the approval of the Company's stockholders, the second closing contemplated by the securities purchase agreement is expected to occur near the end of the first quarter of 2022.

On October 28, 2021, the Company entered into a securities purchase agreement (the "October 2021 Securities Purchase Agreement") with the Cystic Fibrosis Foundation ("CFF"), a Delaware corporation, the Company's partner for its lead Phase 1b/2a clinical development program, and Innoviva Strategic Opportunities LLC, a wholly-owned subsidiary of Innoviva, Inc. (Nasdaq: INVA) (collectively, "Innoviva") for the private placement of newly issued shares of common stock, par value $0.01 per share, of the Company ("Common Stock"). Pursuant to the October 2021 Securities Purchase Agreement, the Company issued and sold 909,091 shares to CFF and 1,212,122 shares to Innoviva, each at a per share price of $3.30 (the "October 2021 Private Placements"). The Company received aggregate gross proceeds from the October 2021 Private Placements of approximately $7.0 million, before deducting transaction expenses.

On January 26, 2021, the Company entered into a securities purchase agreement (the "January 2021 Securities Purchase Agreement") with Innoviva, pursuant to which the Company issued and sold to Innoviva, in a private placement, up to 6,153,847 newly issued shares of Common Stock, and warrants (the "Common Warrants") to purchase up to 6,153,847 shares of Common Stock, with an exercise price per share of $3.25 (the "January 2021 Private Placement").

On January 27, 2020, the Company entered into the Securities Purchase Agreement with Innoviva, pursuant to which the Company agreed to issue and sell to Innoviva, in the 2020 Private Placement, 8,710,800 newly issued shares of the Company's common stock and warrants to purchase 8,710,800 shares of common stock, with an exercise price per share of $2.87. Each share of common stock was sold together with one common warrant granting the warrant holder the right to purchase an additional share of common stock ("Common Unit") at $2.87 per share. The 2020 Private Placement occurred in two tranches. The first closing occurred on February 12, 2020, at which time Innoviva purchased 993,139 Common Units in exchange for an aggregate gross cash payment of approximately $2.8 million. On March 27, 2020, the second closing occurred subsequent to stockholder approval, at which time Innoviva purchased 7,717,661 Common Units in exchange for aggregate gross proceeds of $22.2 million.

The warrants expire five years from the issuance date. The Company reviewed the authoritative accounting guidance and determined that the warrants meet the criteria to be accounted for as permanent equity.

Warrants

At December 31, 2021, outstanding warrants to purchase shares of common stock are as follows:

Shares Underlying Outstanding Warrants		Exercise Price	Expiration Date
597,881	$	21.00	May 10, 2022
1,183,491	$	5.60	October 16, 2023
993,139	$	2.87	February 11, 2025
7,717,661	$	2.87	March 27, 2025
1,867,912	$	3.25	January 26, 2026
4,285,935	$	3.25	March 16, 2026
1,200	$	1,680.00	None
16,647,219			

13. Stock-based Compensation

Stock Award Plans

The Company maintains a 2016 Equity Incentive Plan (the "2016 Plan"), which provides for the issuance of incentive share awards in the form of non-qualified and incentive stock options, stock appreciation rights, restricted stock awards, restricted stock unit awards and performance-based stock awards. The awards may be granted by the Company's board of directors to its employees, directors and officers and to consultants, agents, advisors and independent contractors who provide services to the Company or to a subsidiary of the Company. The exercise price for stock options must not be less than the fair market value of the underlying shares on the date of grant. Stock options expire no later than ten years from the date of grant and generally vest and typically become exercisable over a four-year period following the date of grant. Upon the exercise of stock options, the Company issues the resulting shares from shares reserved for issuance under the 2016 Plan. Under the 2016 Plan, the number of shares authorized for issuance automatically increases annually beginning January 1, 2017 and through January 1, 2026.

In connection with the Merger, the Company assumed the C3J Jian, Inc. Amended 2006 Stock Option Plan (the "Assumed 2006 Plan") and the C3J Therapeutics, Inc. 2016 Stock Plan (the "Assumed 2016 Plan"). These plans provided for stock option and restricted stock awards ("RSAs") to C3J employees in years prior to the Merger with AmpliPhi. The number of shares subject to each outstanding stock option and RSA under those assumed plans, along with the exercise price of stock options, were equitably adjusted pursuant to the terms of the plans to reflect the impact of the Merger and the one-for-fourteen reverse stock split, in each case in a manner intended to preserve the then-current intrinsic value of the awards. No additional awards will be made under either plan. The assumed C3J stock options were substantially vested and expensed as of the merger date. Vesting of the assumed C3J RSAs is based on the occurrence of a public liquidity event, or a change in control. In the event of a public liquidity event, service or milestone based vesting schedules begins. Service periods are generally two to four years. In the event of a change in control, 100% vesting occurs upon the closing of such an event. The merger with AmpliPhi constituted a public liquidity event and triggered the start of vesting of RSAs.

In November 2020, the Company made an inducement grant of a restricted stock unit award outside of its 2016 Plan to a new employee for 70,000 shares of the Company's common stock, of which 40,000 shares will vest six months from the grant date and the remaining 30,000 shares will vest three years from the grant date. In addition, the Company granted this new employee 33,000 shares of its common stock which were immediately vested upon issuance.

Stock-based Compensation

The Company estimates the fair value of stock options with performance and service conditions using the Black-Scholes valuation model. Compensation expense related to stock options granted is measured at the grant date based on the estimated fair value of the award and is recognized on the accelerated attribution method over the requisite service period.

The assumptions used in the Black-Scholes model for options granted during the year ended December 31, 2021 and 2020 are presented below:

	Year ended	
	December 31, 2021	December 31, 2020
Risk-free interest rate	0.73% - 1.29%	0.13% - 1.48%
Expected volatility	84.07% - 93.37%	90.43% - 94.0%
Expected term (in years)	5.50 - 7.00	5.50 - 7.00
Expected dividend yield	0%	0%

The risk-free interest rate is based on the U.S. Treasury yield for a period consistent with the expected term of the option in effect at the time of the grant. Expected volatility is based on an analysis of the historical volatility of Armata and peer companies' common stock. The expected term represents the period that the Company expects its stock options to be outstanding. The expected term assumption is estimated using the simplified method set forth in the U.S. Securities and Exchange Commission Staff Accounting Bulletin 110, which is the mid-point between the option vesting date and the expiration date. For stock options granted to parties other than employees or directors, the Company elects, on a grant by grant basis, to use the expected term or the contractual term of the option award. The Company has never declared or paid dividends on its common stock and has no plans to do so in the foreseeable future. Forfeitures are recognized as a reduction of stock-based compensation expense as they occur.

The tables below summarize the total stock-based compensation expense included in the Company's consolidated statements of operations for the periods presented:

	Year Ended December 31,	
	2021	2020
Research and development	$ 1,505,000	$ 1,252,000
General and administrative	1,377,000	2,223,000
Total stock-based compensation	$ 2,882,000	$ 3,475,000

Stock option transactions during the year ended December 31, 2021 are presented below:

	Options Outstanding			
	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Outstanding at December 31, 2020	1,668,926	$ 6.30	8.32	—
Granted	856,150	4.77		—
Exercised	(99,517)	3.24		$ 121,000
Forfeited/Cancelled	(15,877)	42.20		—
Outstanding at December 31, 2021	2,409,682	$ 5.64	8.00	$ 3,630,000
Vested and expected to vest at December 31, 2021	2,409,682	$ 5.64	8.00	$ 3,630,000
Exercisable at December 31, 2021	829,624	$ 8.67	6.90	$ 1,564,000

Restricted stock award transactions under the Assumed 2016 Plan and restricted stock unit award transactions during the year ended December 31, 2021 are presented below:

	Shares	Weighted Avg Grant Date Fair Value
Outstanding at December 31, 2020	322,756	$ 19.55
Granted	—	—
Forfeited/Cancelled	(1,047)	6.89
Vested and Issued as Common Stock	(167,691)	20.29
Outstanding at December 31, 2021	154,018	$ 27.49

The aggregate intrinsic value of options at December 31, 2021 is based on the Company's closing stock price on that date of $5.48 per share. As of December 31, 2021, there was $2.4 million of total unrecognized compensation expense related to unvested stock options and RSAs, excluding unvested RSAs with performance conditions deemed to be improbable for the period ended December 31, 2021, which the Company expects to recognize over the weighted average remaining period of 1.7 years.

Shares Reserved For Future Issuance

As of December 31, 2021, the Company had reserved shares of its common stock for future issuance as follows:

	Shares Reserved
Stock options outstanding	2,409,682
Unvested restricted stock units	30,000
Employee stock purchase plan	9,748
Available for future grants under the 2016 Plan	228,797
Warrants outstanding	16,647,219
Total shares reserved	19,325,446

14. Employee Retirement Plan

The Company's employees participate in an employee retirement plan under Section 401(k) of the Internal Revenue Code of 1986, as amended. All of the Company's employees who meet minimum eligibility requirements are eligible to participate in the plan. Matching contributions to the 401(k) plan are made for certain eligible employees to meet non-discrimination provisions of the plan. The Company did not make matching contributions to the 401(k) plan for the years ended December 31, 2021 and 2020.