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

FORM 10-K/A

(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, 2022

OR

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

For the transition period from to

Commission file number: 001-33277

MADRIGAL PHARMACEUTICALS, INC.

(Exact name of registrant as specified in its charter)

Delaware **(State or other jurisdiction of incorporation or organization)**	**04-3508648** **(I.R.S. Employer Identification No.)**
Four Tower Bridge **200 Barr Harbor Drive, Suite 200** **West Conshohocken, Pennsylvania** **(Address of Principal Executive Offices)**	**19428** **(Zip Code)**

Registrant's telephone number, including area code: (267) 824-2827
Former name, former address and former fiscal year, if changed since last report:
Securities registered pursuant to Section 12(b) of the Exchange Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, $0.0001 Par Value Per Share	**MDGL**	**The NASDAQ Stock Market LLC**

Securities registered pursuant to Section 12(g) of the Exchange 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 Exchange 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 the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

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

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

Indicate by check mark whether the registrant 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. ☒

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

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 stock held by non-affiliates of the registrant based upon the closing sale price of the registrant's common stock on June 30, 2022 (the last business day of the registrant's most recently completed second fiscal quarter), as reported on the Nasdaq Global Market, was $984,861,131. For purposes of this calculation, directors and executive officers of the registrant have been deemed affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

As of February 20, 2023, the registrant had 18,138,012 shares of common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Certain information required by Part III, Items 10-14 of this Form 10-K is incorporated by reference to the registrant's definitive Proxy Statement for the 2023 Annual Meeting of Stockholders to be filed with the Securities and Exchange Commission pursuant to Regulation 14A not later than 120 days after the end of the fiscal year covered by this Form 10-K, provided that if such Proxy Statement is not filed within such period, such information will be included in an amendment to this Form 10-K to be filed within such 120-day period.

Auditor Firm Id: 238 Auditor Name: PricewaterhouseCoopers LLP Auditor Location: Philadelphia, Pennsylvania

EXPLANATORY NOTE

This Amendment No. 1 on Form 10-K/A ("Amendment No. 1") to the Annual Report on Form 10-K of Madrigal Pharmaceuticals, Inc. for the fiscal year ended December 31, 2022, originally filed with the Securities and Exchange Commission on February 23, 2023 (the "Original Filing"), is being filed to correct a typographical error in the Original Filing to reflect the correct signing date of the Report of Independent Registered Public Accounting Firm of PricewaterhouseCoopers LLP and the correct date of the Report of Independent Registered Public Accounting Firm within the Consent of PricewaterhouseCoopers LLP, filed as an exhibit to the Original Filing.

This Amendment No. 1 is being filed solely to correct the dates within the Report of Independent Registered Public Accounting Firm and the Consent of PricewaterhouseCoopers LLP. This Amendment No. 1 includes: Item 8 of Part II, "Financial Statements and Supplementary Data" in its entirety and without change from the Original Filing other than the correction of the signing date of the Report of Independent Registered Public Accounting Firm; and Item 15 of Part IV, including Exhibit 23.1, which includes the correct date of the Report of Independent Registered Public Accounting Firm within the Consent of PricewaterhouseCoopers LLP.

In addition, pursuant to the rules of the SEC, the exhibit list included herewith reflects currently-dated certifications from the Company's Chief Executive Officer and Chief Financial Officer, which are filed as exhibits to this Amendment No. 1.

Except for the foregoing amended information, this Amendment No. 1 does not amend or update any other information contained in the Original Filing, or reflect any events that have occurred after the filing of the Original Filing. Accordingly, this Amendment No. 1 should be read in conjunction with the Original Filing.

Item 8. Financial Statements and Supplementary Data.

The information required by this Item 8 is referred to in Item 15, listed in the Index to Financial Statements as a part of this Annual Report on Form 10-K, and is incorporated herein by this reference.

PART IV

Item 15. **EXHIBITS AND FINANCIAL STATEMENT SCHEDULES**

Item 15(a) The following documents are filed as part of, or incorporated by reference into, this Annual Report on Form 10-K:

Item 15(a)(1) and (2) The Consolidated Financial Statements beginning on page F-1 are filed as part of this Annual Report on Form 10-K. Other financial statement schedules have been omitted because the information required to be presented in them is not applicable or is shown in the financial statements or related notes.

Item 15(a)(3) We have filed, or incorporated into this Annual Report on Form 10-K by reference, the exhibits listed on the accompanying Exhibit Index.

Item 15(b) See Item 15(a)(3) above.

Item 15(c) See Item 15(a)(2) above.

Exhibit Number	Exhibit Description	Filed Herewith	Incorporated by Reference herein from Form or Schedule	Filing Date	SEC File / Registration Number
3.1	Restated Certificate of Incorporation of the Registrant.		Form 10-K (Exhibit 3.1)	3/31/2017	001-33277
3.2	Certificate of Designation of Preferences, Rights and Limitations of Series A Convertible Preferred Stock.		Form 8-K (Exhibit 3.1)	6/21/2017	001-33277
3.3	Certificate of Designation of Preferences, Rights and Limitations of Series B Convertible Preferred Stock		Form 8-K (Exhibit 3.1)	12/23/2022	001-33277
3.4	Bylaws of the Registrant, as amended April 13, 2016.		DEFA14A; Form 8-K (Exhibit 3.1)	4/14/2016	001-33277
4.1	Form of Warrant Agreement, dated May 9, 2022, between the Registrant and Hercules Capital, Inc. and affiliates.		Form 10-Q (Exhibit 4.1)	08/04/2022	001-33277
4.2†	Form of Tranche 2 Warrant Agreement, dated February 3, 2023, by and among the Registrant and Hercules Capital, Inc. and affiliates.		Form 8-K (Exhibit 4.1)	2/9/2023	001-33277
4.3	Description of Securities of the Registrant		Form 10-K (Exhibit 4.3)	2/23/2023	001-33277
Equity Agreements					
10.1	Securities Purchase Agreement, dated June 20, 2017, by and among the Registrant and the investors party thereto, including the Registration Rights Agreement attached as Exhibit B thereto.		Form 8-K (Exhibit 10.1)	6/21/2017	001-33277

Exhibit Number	Exhibit Description	Filed Herewith	Incorporated by Reference herein from Form or Schedule	Filing Date	SEC File / Registration Number
10.2	Amendment No. 2, dated December 22, 2022, to Securities Purchase Agreement, dated June 20, 2017, by and among the Registrant and the investors listed on the signature pages thereto.		Form 8-K (Exhibit 10.2)	12/23/2022	001-33277
10.3	Sales Agreement, dated June 1, 2021, by and between Madrigal Pharmaceuticals, Inc. and Cowen and Company, LLC (concerning at-the-market offerings of Madrigal common stock).		Form 8-K (Exhibit 1.1)	6/1/2021	001-33277
10.4	Securities Purchase Agreement, dated December 21, 2022, by and among the Registrant and the institutional investors listed on the signature pages thereto.		Form 8-K (Exhibit 10.1)	12/23/2022	001-33277
Debt Agreements					
10.5†	Loan and Security Agreement, dated May 9, 2022, by and among the Registrant, Canticle Pharmaceuticals, Inc., the several banks and other financial institutions or entities from time to time party thereto and Hercules Capital, Inc.		Form 10-Q (Exhibit 10.1)	8/4/2022	001-33277
10.6†	Loan and Security Agreement, dated May 9, 2022, as amended by the First Amendment to Loan and Security Agreement, dated February 3, 2023, by and among the Registrant, Canticle Pharmaceuticals, Inc., the several banks and other financial institutions or entities from time to time party thereto and Hercules Capital, Inc.		Form 8-K (Exhibit 10.1)	2/09/2023	001-33277
Agreements with Respect to Collaborations, Licenses, Research and Development					
10.7	Research, Development and Commercialization Agreement, dated December 18, 2008, by and between Hoffmann-La Roche, Inc., F. Hoffmann-La Roche Ltd and the Registrant.†		Form 10-Q (Exhibit 10.5)	11/14/2016	001-33277
Equity Compensation Plans					
10.8*	Amended 2015 Stock Plan		Definitive Proxy Statement (Annex A)	4/30/2021	001-33277
10.9*	Form of Incentive Stock Option Agreement under Amended 2015 Stock Plan.		Form 10-K (Exhibit 10.10)	3/31/2017	001-33277

Exhibit Number	Exhibit Description	Filed Herewith	Incorporated by Reference herein from Form or Schedule	Filing Date	SEC File / Registration Number
10.10*	Form of Nonqualified Stock Option Agreement under Amended 2015 Stock Plan.		Form 10-K (Exhibit 10.11)	3/31/2017	001-33277
10.11*	Form of Nonqualified Stock Option Agreement for Directors under Amended 2015 Stock Plan.		Form 10-K (Exhibit 10.13)	3/31/2017	001-33277
10.12*	Form of Restricted Stock Unit Agreement under Amended 2015 Stock Plan.		Form 10-K (Exhibit 10.12)	2/23/2023	001-33277
10.13*	Non-Employee Director Equity Compensation Policy		Form 10-Q (Exhibit 10.1)	5/6/2021	001-33277
Agreements with Executive Officers and Directors					
10.14*	Form of Indemnification Agreement between the Registrant and certain directors and executive officers.		Form 8-K (Exhibit 10.2)	7/22/2016	001-33277
10.15*	Letter Agreement, dated April 13, 2016, by and between the Company and Paul A. Friedman, M.D.		Form 8-K (Exhibit 10.3)	7/22/2016	001-33277
10.16*	Letter Agreement, dated April 13, 2016, by and between the Company and Rebecca Taub, M.D.		Form 8-K (Exhibit 10.4)	7/22/2016	001-33277
21.1	List of Subsidiaries.		Form 10-K (Exhibit 21.1)	2/23/2023	001-33277
23.1	Consent of PricewaterhouseCoopers LLP, Independent Registered Public Accounting Firm.	X			
31.1	Certification of Principal Executive Officer required by Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	X			
31.2	Certification of Principal Financial Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	X			
32.1**	Certifications of Principal Executive Officer and Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.	X			

Exhibit Number	Exhibit Description	Filed Herewith	Incorporated by Reference herein from Form or Schedule	Filing Date	SEC File / Registration Number
101.INS	Inline XBRL Instance Document.	X			
101.SCH	Inline XBRL Taxonomy Extension Schema Document.	X			
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document.	X			
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document.	X			
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document.	X			
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document.	X			
104	Inline XBRL for the cover page of this Annual Report on Form 10-K, included in the Exhibit 101 Inline XBRL Document Set.	X			

* Indicates a management contract, compensatory plan or arrangement.

** The certifications attached as Exhibit 32.1 that accompany this Annual Report on Form 10-K are not deemed filed with the SEC and are not to be incorporated by reference into any filing of the registrant under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Annual Report on Form 10-K, regardless of any general incorporation language contained in any filing.

† Certain portions of this exhibit have been omitted pursuant to Item 601(b)(10)(iv) of Regulation S-K.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this Report to be signed on its behalf by the undersigned thereunto duly authorized.

MADRIGAL PHARMACEUTICALS INC.

Date: March 3, 2023

By: /s/ PAUL A. FRIEDMAN, M.D.
Paul A. Friedman, M.D.
Chief Executive Officer
(Principal Executive Officer)

Pursuant to the requirements of the Exchange Act, as amended, this Report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signatures	Title	Date
/s/ PAUL A. FRIEDMAN, M.D. Paul A. Friedman, M.D.	Chairman of the Board of Directors and Chief Executive Officer (Principal Executive Officer)	March 3, 2023
/s/ ALEX G. HOWARTH Alex G. Howarth	Chief Financial Officer (Principal Accounting and Financial Officer)	March 3, 2023

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of Madrigal Pharmaceuticals, Inc.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Madrigal Pharmaceuticals, Inc. and its subsidiaries (the "Company") as of December 31, 2022 and 2021, and the related consolidated statements of operations, of comprehensive loss, of stockholders' equity and of cash flows for each of the three years in the period ended December 31, 2022, including the related notes (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control—Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2022 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control—Integrated Framework (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report On Internal Control Over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting 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 audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated 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 consolidated 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 consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Emphasis of Matter

As discussed in Note 3 to the consolidated financial statements, the Company will require additional financing to fund future operations. Management's evaluation of the events and conditions and plans to mitigate this matter are also described in Note 3.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed 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. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) 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 matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Research and Development Costs

As described in Notes 2 and 5 to the consolidated financial statements, management uses significant judgment in estimating the amount of research and development costs recognized in each reporting period. Management analyzes and estimates the progress of its preclinical studies and clinical trials, completion of milestone events per underlying agreements, invoices received and contracted costs when estimating the research and development costs to accrue in each reporting period. Total research and development costs incurred during the year ended December 31, 2022 were $245.4 million and research and development costs accrued were $53.1 million as of December 31, 2022.

The principal considerations for our determination that performing procedures relating to research and development costs is a critical audit matter are (i) the significant judgment by management when estimating: the costs incurred for services performed by vendors that have not yet been invoiced, the completion of milestone events per underlying agreements, and invoices received and contracted costs, in estimating the research and development costs to accrue in the reporting period; and (ii) the high degree of auditor judgment, subjectivity and effort in evaluating management's significant assumption related to using contracted costs applied to the number of patients screened for and enrolled in the trials to reasonably estimate costs incurred that have not been invoiced.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls over management's process relating to accruing research and development costs, including controls over estimating the costs incurred for services performed by vendors that have not yet been invoiced. These procedures also included, among others, testing management's process for estimating the

research and development costs to accrue in the reporting period, evaluating the completeness and accuracy of underlying data used in management's estimate by testing for consistency with a sample of contracts and invoices, testing the number of patients screened for and enrolled in the trial, testing the mathematical accuracy of the calculation of the accrual for research and development costs incurred, and evaluating the reasonableness of assumptions used in the estimate. Evaluating the reasonableness of assumptions used in the estimate involved assessing management's ability to reasonably estimate costs incurred that have not been invoiced by performing a comparison of the estimated accrual to contracted costs applied to the number of patients screened for and enrolled in the trials.

/s/ PricewaterhouseCoopers LLP
Philadelphia, Pennsylvania
February 23, 2023

We have served as the Company's auditor since 2016.

MADRIGAL PHARMACEUTICALS, INC.

Consolidated Balance Sheets

(in thousands, except share and per share amounts)

	December 31, 2022	December 31, 2021
Assets		
Current assets:		
Cash and cash equivalents	$ 331,549	$ 36,269
Marketable securities	27,225	234,077
Prepaid expenses and other current assets	2,595	1,338
Total current assets	361,369	271,684
Property and equipment, net	601	851
Right-of-use asset	602	797
Total assets	$ 362,572	$ 273,332
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 23,831	$ 21,380
Accrued expenses	91,461	55,048
Lease liability	602	410
Total current liabilities	115,894	76,838
Long term liabilities:		
Loan payable, net of discount	49,289	—
Lease liability	—	387
Total long term liabilities	49,289	387
Total liabilities	165,183	77,225
Stockholders' equity:		
Preferred stock, par value $0.0001 per share authorized: 5,000,000 shares at December 31, 2022 and December 31, 2021; 2,369,797 and 1,969,797 shares issued and outstanding at December 31, 2022 and December 31, 2021, respectively	—	—
Common stock, par value $0.0001 per share authorized: 200,000,000 at December 31, 2022 and December 31, 2021; 18,102,523 and 17,103,395 shares issued and outstanding at December 31, 2022 and December 31, 2021, respectively	2	2
Additional paid-in-capital	1,160,079	863,495
Accumulated other comprehensive loss	(32)	(80)
Accumulated deficit	(962,660)	(667,310)
Total stockholders' equity	197,389	196,107
Total liabilities and stockholders' equity	$ 362,572	$ 273,332

See accompanying notes to consolidated financial statements.

MADRIGAL PHARMACEUTICALS, INC.

Consolidated Statements of Operations

(in thousands, except share and per share amounts)

	Year Ended December 31,		
	2022	2021	2020
Revenues:			
Total revenues	$ —	$ —	$ —
Operating expenses:			
Research and development	245,441	205,164	184,809
General and administrative	48,130	37,318	21,864
Total operating expenses	293,571	242,482	206,673
Loss from operations	(293,571)	(242,482)	(206,673)
Interest income	2,185	363	4,329
Interest expense	(3,964)	—	—
Other income	—	273	100
Net loss	$ (295,350)	$ (241,846)	$ (202,244)
Net loss per common share:			
Basic and diluted net loss per common share	$ (17.23)	$ (14.63)	$ (13.09)
Basic and diluted weighted average number of common shares outstanding	17,137,201	16,535,188	15,446,638

See accompanying notes to consolidated financial statements.

MADRIGAL PHARMACEUTICALS, INC.

Consolidated Statements of Comprehensive Loss

(in thousands, except share and per share amounts)

	Year Ended December 31,		
	2022	2021	2020
Net Loss	$ (295,350)	$ (241,846)	$ (202,244)
Other comprehensive income (loss):			
Unrealized gain (loss) on available-for-sale securities	48	(127)	(169)
Comprehensive loss	$ (295,302)	$ (241,973)	$ (202,413)

See accompanying notes to consolidated financial statements.

MADRIGAL PHARMACEUTICALS, INC.

Consolidated Statements of Stockholders' Equity

(in thousands, except share and per share amounts)

	Preferred stock		Common stock		Additional paid-in Capital	Accumulated other comprehensive income (loss)	Accumulated deficit	Total stockholders' equity
	Shares	Amount	Shares	Amount				
Balance at December 31, 2019	1,969,797	$ —	15,429,154	$ 2	$ 639,567	$ 216	$(223,220)	$ 416,565
Issuance of common shares in equity offering, excluding to related parties, net of transaction costs	—	—	39,607	—	4,421	—	—	4,421
Sale of common shares to related parties and exercise of common stock options, net of transaction costs	—	—	39,385	—	667	—	—	667
Compensation expense related to stock options for services	—	—	—	—	20,730	—	—	20,730
Unrealized loss on marketable securities	—	—	—	—	—	(169)	—	(169)
Net loss	—	—	—	—	—	—	(202,244)	(202,244)
Balance at December 31, 2020	1,969,797	$ —	15,508,146	$ 2	$ 665,385	$ 47	$(425,464)	$ 239,970
Issuance of common shares in equity offering, excluding to related parties, net of transaction costs	—	—	1,584,169	—	170,207	—	—	170,207
Sale of common shares to related parties and exercise of common stock options, net of transaction costs	—	—	11,080	—	1,030	—	—	1,030
Compensation expense related to stock options for services	—	—	—	—	26,873	—	—	26,873
Unrealized loss on marketable securities	—	—	—	—	—	(127)	—	(127)
Net loss	—	—	—	—	—	—	(241,846)	(241,846)
Balance at December 31, 2021	1,969,797	$ —	17,103,395	$ 2	$ 863,495	$ (80)	$(667,310)	$ 196,107
Issuance of common and preferred shares in equity offerings, excluding to related parties, net of transaction costs	400,000	—	783,344	—	255,382	—	—	255,382
Sale of common shares to related parties and exercise of common stock options, net of transaction costs	—	—	215,784	—	8,955	—	—	8,955
Compensation expense related to stock options for services	—	—	—	—	31,625	—	—	31,625
Unrealized loss on marketable securities	—	—	—	—	—	48	—	48
Hercules warrant	—	—	—	—	622	—	—	622
Net loss	—	—	—	—	—	—	(295,350)	(295,350)
Balance at December 31, 2022	2,369,797	$ —	18,102,523	$ 2	$1,160,079	$ (32)	$(962,660)	$ 197,389

See accompanying notes to consolidated financial statements.

MADRIGAL PHARMACEUTICALS, INC.

Consolidated Statements of Cash Flows

(in thousands, except share and per share amounts)

	Year Ended December 31,		
	2022	2021	2020
Cash flows from operating activities:			
Net loss	$ (295,350)	$ (241,846)	$ (202,244)
Adjustments to reconcile net loss to net cash used in operating activities:			
Stock-based compensation expense	31,625	26,873	20,730
Depreciation and amortization expense	467	405	471
Amortization of debt issuance costs and discount	797	—	—
Changes in operating assets and liabilities:			
Prepaid expenses and other current assets	(1,257)	(325)	138
Accounts payable	2,451	20,363	(161)
Accrued expense	36,413	9,826	21,585
Accrued interest, net of interest received on maturity of investments	(3)	787	1,920
Net cash used in operating activities	(224,857)	(183,917)	(157,561)
Cash flows from investing activities:			
Purchases of marketable securities	(143,478)	(394,120)	(329,342)
Sales and maturities of marketable securities	350,381	389,274	489,456
Purchases of property and equipment, net of disposals	(217)	(209)	(334)
Net cash provided by (used in) investing activities	206,686	(5,055)	159,780
Cash flows from financing activities:			
Proceeds from issuances of stock, excluding related parties, net of transaction costs	255,382	170,207	4,421
Proceeds from the sale of related party stock and exercise of common stock options, net of transaction costs	8,955	1,030	667
Proceeds from issuance of loan payable	50,000	—	—
Payment of debt issuance costs	(886)	—	—
Net cash provided by financing activities	313,451	171,237	5,088
Net increase (decrease) in cash and cash equivalents	295,280	(17,735)	7,307
Cash and cash equivalents at beginning of period	36,269	54,004	46,697
Cash and cash equivalents at end of period	$ 331,549	$ 36,269	$ 54,004
Supplemental disclosure of cash flow information:			
Obtaining a right-of-use asset in exchange for a lease liability	$ 583	$ 376	$ 451

See accompanying notes to consolidated financial statements.

MADRIGAL PHARMACEUTICALS, INC.

Notes to Consolidated Financial Statements

1. Organization, Business and Basis of Presentation

Organization and Business

Madrigal Pharmaceuticals, Inc. (the "Company" or "Madrigal") is a clinical-stage pharmaceutical company developing novel, high-quality, small-molecule drugs addressing major unmet needs in cardiovascular, metabolic, and liver diseases. The Company's lead compound, resmetirom, is being advanced for non-alcoholic steatohepatitis ("NASH"), a liver disease that commonly affects people with metabolic diseases such as obesity and diabetes, and non-alcoholic fatty liver disease ("NAFLD"). The Company initiated two Phase 3 studies of resmetirom in NASH in 2019 that are ongoing. The Company announced certain topline results from the MAESTRO-NAFLD-1 safety study of resmetirom in January 2022 and the MAESTRO-NASH study in December 2022. In August 2022, Madrigal initiated a third study, MAESTRO-NASH-OUTCOMES.

Certain prior period amounts have been reclassified to align with current period presentation.

2. Summary of Significant Accounting Policies

Principle of Consolidation

The consolidated financial statements include the financial statements of the Company and its wholly owned subsidiaries. All significant intercompany balances and transactions have been eliminated in consolidation.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect certain reported amounts of assets and liabilities, and the reported amounts of revenues and expenses during the reporting periods. The Company bases its estimates on historical experience and various other assumptions that management believes to be reasonable under the circumstances. Changes in estimates are recorded in the period in which they become known. Actual results could differ from those estimates.

Cash and Cash Equivalents

The Company considers all highly liquid investments with original maturities of three months or less at the date of purchase to be cash equivalents. The Company maintains its cash in bank accounts, the balance of which, at times, exceeds Federal Deposit Insurance Corporation insured limits.

The primary objective of the Company's investment activities is to preserve its capital for the purpose of funding operations and the Company does not enter into investments for trading or speculative purposes. The Company's cash is deposited in highly rated financial institutions in the United States. The Company invests in money market funds and high-grade, commercial paper and corporate bonds, which management believes are subject to minimal credit and market risk.

Marketable Securities

Marketable securities consist of investments in high-grade corporate obligations, and government and government agency obligations that are classified as available-for-sale. Since these securities are available to fund current operations they are classified as current assets on the consolidated balance sheets.

The Company adjusts the cost of available-for-sale debt securities for amortization of premiums and accretion of discounts to maturity. The Company includes such amortization and accretion as a component of interest income, net. Realized gains and losses and declines in value, if any, that the Company judges to be the result of impairment or as a result of recognizing an allowance for credit losses on available-for-sale securities are reported as a component of interest income. To determine whether an impairment exists, the Company considers whether it intends to sell the debt security and, if the Company does not intend to sell the debt security, it considers available evidence to assess whether it is more likely than not that it will be required to sell the security before the recovery of its amortized cost basis. During the years ended December 31, 2022, 2021 and 2020, the Company determined it did not have any securities that were impaired or that required an allowance for credit losses.

Marketable securities are stated at fair value, including accrued interest, with their unrealized gains and losses included as a component of accumulated other comprehensive income or loss, which is a separate component of stockholders' equity. The fair value of these securities is based on quoted prices and observable inputs on a recurring basis. Realized gains and losses are determined on the specific identification method. During the years ended December 31, 2022, 2021 and 2020, the Company did not have any realized gains or losses on marketable securities.

Fair Value of Financial Instruments

The carrying amounts of the Company's financial instruments, which include cash equivalents, and marketable securities, approximate their fair values. The fair value of the Company's financial instruments reflects the amounts that would be received upon sale of an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value hierarchy has the following three levels:

Level 1—quoted prices in active markets for identical assets and liabilities.

Level 2—observable inputs other than Level 1 inputs. Examples of Level 2 inputs include quoted prices in active markets for similar assets or liabilities and quoted prices for identical assets or liabilities in markets that are not active.

Level 3—unobservable inputs that reflect the Company's own assumptions about the assumptions market participants would use in pricing the asset or liability.

Financial assets and liabilities are classified in their entirety within the fair value hierarchy based on the lowest level of input that is significant to the fair value measurement. The Company measures the fair value of its marketable securities by taking into consideration valuations obtained from third-party pricing sources. The pricing services utilize industry standard valuation models, including both income and market-based approaches, for which all significant inputs are observable, either directly or indirectly, to estimate fair value. These inputs include reported trades of and broker-dealer quotes on the same or similar securities, issuer credit spreads, benchmark securities and other observable inputs.

As of December 31, 2022 and 2021, the Company's financial assets valued based on Level 1 inputs consisted of cash and cash equivalents in a money market fund and its financial assets valued based on Level 2 inputs consisted of high-grade corporate bonds and commercial paper. During the years ended December 31, 2022, 2021 and 2020, the Company did not have any transfers of financials assets between Levels 1 and 2. As of December 31, 2022 and 2021, the Company did not have any financial liabilities that were recorded at fair value on a recurring basis on the balance sheet.

Research and Development Costs

Research and development costs are expensed as incurred. Research and development costs are comprised of costs incurred in performing research and development activities, including internal costs (including

stock-based compensation), costs for consultants, milestone payments under licensing agreements, and other costs associated with the Company's preclinical and clinical programs. In particular, the Company has conducted safety studies in animals, optimized and implemented the manufacturing of our drug, and conducted Phase 1-3 clinical trials, all of which are considered research and development expenditures. Management uses significant judgment in estimating the amount of research and development costs recognized in each reporting period. Management analyzes and estimates the progress of its preclinical studies and clinical trials, completion of milestones events per underlying agreements, invoices received and contracted costs when estimating the research and development costs to accrue in each reporting period. Actual results could differ from the Company's estimates. The Company's historical estimates for research and development costs have not been materially different from the actual costs.

Patents

Costs to secure and defend patents are expensed as incurred and are classified as general and administrative expense in the Company's statements of operations. Patent expenses were approximately $0.5 million, $0.5 million and $0.4 million for the years ended December 31, 2022, 2021 and 2020, respectively.

Stock-Based Compensation

The Company recognizes stock-based compensation expense based on the grant date fair value of stock options granted to employees, officers and directors. The Company uses the Black-Scholes option pricing model to determine the grant date fair value as management believes it is the most appropriate valuation method for its option grants. The Black-Scholes model requires inputs for risk-free interest rate, dividend yield, volatility and expected lives of the options. The expected lives for options granted represent the period of time that options granted are expected to be outstanding. The Company uses the simplified method for determining the expected lives of options. Expected volatility is based upon an industry estimate or blended rate including the Company's historical trading activity. The risk-free rate for periods within the expected life of the option is based on the U.S. Treasury yield curve in effect at the time of the grant. The Company estimates the forfeiture rate based on historical data. This analysis is re-evaluated at least annually and the forfeiture rate is adjusted as necessary.

Certain of the employee stock options granted by the Company are structured to qualify as incentive stock options (ISOs). Under current tax regulations, the Company does not receive a tax deduction for the issuance, exercise or disposition of ISOs if the employee meets certain holding requirements. If the employee does not meet the holding requirements, a disqualifying disposition occurs, at which time the Company may receive a tax deduction. The Company does not record tax benefits related to ISOs unless and until a disqualifying disposition is reported. In the event of a disqualifying disposition, the entire tax benefit is recorded as a reduction of income tax expense. The Company has not recognized any income tax benefit for its share-based compensation arrangements due to the fact that the Company does not believe it is more likely than not it will realize the related deferred tax assets.

Income Taxes

The Company uses the asset and liability method to account for income taxes. Deferred tax assets and liabilities are determined based on the expected future tax consequences of temporary differences between the Company's financial statement carrying amounts and the tax basis of assets and liabilities using enacted tax rates expected to be in effect in the years in which the differences are expected to reverse. The Company currently maintains a 100% valuation allowance on its deferred tax assets.

Comprehensive Loss

Comprehensive loss is defined as the change in equity of a business enterprise during a period from transactions and other events and circumstances from non-owner sources. Changes in unrealized gains and losses on marketable securities represent the only difference between the Company's net loss and comprehensive loss.

Basic and Diluted Loss Per Common Share

Basic net loss per share is computed using the weighted average number of common shares outstanding during the period, excluding restricted stock that has been issued but is not yet vested. Diluted net loss per common share is computed using the weighted average number of common shares outstanding and the weighted average dilutive potential common shares outstanding using the treasury stock method. However, for the years ended December 31, 2022, 2021 and 2020, diluted net loss per share is the same as basic net loss per share because the inclusion of common stock issuable upon the exercise of stock options or warrants, and common stock issuable upon the conversion of preferred stock would be anti-dilutive. The following table summarizes outstanding securities not included in the computation of diluted net loss per common share as their inclusion would be anti-dilutive:

	As of December 31,		
	2022	2021	2020
Common stock options	2,857,054	2,301,574	1,837,540
Preferred stock	2,369,797	1,969,797	1,969,797
Warrants	14,899	—	—

Recent Accounting Pronouncements

None.

3. Liquidity and Uncertainties

The Company is subject to risks common to development stage companies in the biopharmaceutical industry including, but not limited to, uncertainty of product development and commercialization, dependence on key personnel, uncertainty of market acceptance of products and product reimbursement, product liability, uncertain protection of proprietary technology, potential inability to raise additional financing necessary for development and commercialization, and compliance with the U.S. Food and Drug Administration and other government regulations.

The Company has incurred losses since inception, including approximately $295.4 million for the year ended December 31, 2022, resulting in an accumulated deficit of approximately $962.7 million and $667.3 million as of December 31, 2022 and 2021, respectively. Management expects to incur losses for the foreseeable future. To date, the Company has funded its operations primarily through proceeds from sales of the Company's capital stock. The Company believes that its cash, cash equivalents and marketable securities at December 31, 2022 will be sufficient to fund operations past one year from the issuance of these financial statements. To meet its future capital needs, the Company intends to raise additional capital through debt or equity financings, collaborations, partnerships or other strategic transactions. However, there can be no assurance that the Company will be able to complete any such transactions on acceptable terms or otherwise. The inability of the Company to obtain sufficient funds on acceptable terms when needed could have a material adverse effect on the Company's business, results of operations and financial condition. The Company has the ability to delay certain research activities and related clinical expenses if necessary due to liquidity concerns until a date when those concerns are relieved.

4. Cash, Cash Equivalents and Marketable Securities

A summary of cash, cash equivalents and available-for-sale marketable securities held by the Company as of December 31, 2022 and 2021 is as follows (in thousands):

	December 31, 2022			
	Cost	Unrealized gains	Unrealized losses	Fair value
Cash and cash equivalents:				
Cash (Level 1)	$ 15,100	$ —	$ —	$ 15,100
Money market funds (Level 1)	316,449	—	—	316,449
Total cash and cash equivalents	331,549	—	—	331,549
Marketable securities:				
Corporate debt securities due within 1 year of date of purchase (Level 2)	27,257	7	(39)	27,225
Total cash, cash equivalents and marketable securities	$358,806	$ 7	$ (39)	$358,774

	December 31, 2021			
	Cost	Unrealized gains	Unrealized losses	Fair value
Cash and cash equivalents:				
Cash (Level 1)	$ 18,877	$ —	$ —	$ 18,877
Money market funds (Level 1)	17,392	—	—	17,392
Total cash and cash equivalents	36,269	—	—	36,269
Marketable securities:				
Corporate debt securities due within 1 year of date of purchase (Level 2)	228,348	6	(66)	228,288
Corporate debt securities due within 1 to 2 years of date of purchase (Level 2)	5,809	—	(20)	5,789
Total cash, cash equivalents and marketable securities	$270,426	$ 6	$ (86)	$270,346

5. Accrued Liabilities

Accrued liabilities as of December 31, 2022 and 2021 consisted of the following (in thousands):

	December 31, 2022	December 31, 2021
Contract research organization costs	$ 53,119	$ 38,349
Other clinical study related costs	6,582	3,957
Manufacturing and drug supply	11,262	3,239
Compensation and benefits	14,864	6,769
Professional fees	4,867	2,455
Other	767	279
Total accrued liabilities	$ 91,461	$ 55,048

6. Long Term Debt

In May 2022 the Company and its wholly-owned subsidiary, Canticle Pharmaceuticals, Inc., entered into the $250.0 million Loan Facility (the "Loan Facility") with the several banks and other financial institutions or entities party thereto (each, a "Lender" and collectively referred to as the "Lenders"), and Hercules Capital, Inc.

("Hercules"), in its capacity as administrative agent and collateral agent for itself and the Lenders. Under the terms of the Loan Facility, the first $50.0 million tranche was drawn at closing. The Company may also draw up to an additional $125.0 million in two separate tranches upon achievement of certain resmetirom clinical and regulatory milestones. A fourth tranche of $75.0 million may be drawn by the Company, subject to the approval of Hercules.

The Loan Facility had a minimum interest rate of 7.45% and adjusted with changes in the prime rate. The Company will pay interest-only monthly payments of accrued interest under the Loan Facility through May 1, 2025, for a period of 36 months, which period may be extended to May 1, 2026 and May 3, 2027, upon the achievement of regulatory approval milestones and future revenue covenants, subject to compliance with applicable covenants. The Loan Facility matures in May 2026 and may be extended an additional year upon the achievement of certain regulatory milestones. The Loan Facility is secured by a security interest in substantially all of the Company's assets, other than intellectual property. It includes an end of term charge of 5.35% of the aggregate principal amount, which is accounted for in the loan discount. In connection with the first tranche drawn at closing, the Company issued Hercules a warrant to purchase 14,899 shares of Company common stock, which had a Black-Scholes value of $0.6 million.

The Loan Facility includes affirmative and restrictive financial covenants commencing on January 1, 2023, including maintenance of a minimum cash, cash equivalents and liquid funds covenant of $35.0 million, which may decrease in certain circumstances if the Company achieves certain clinical milestones and a revenue milestone, and a revenue-based covenant that could apply commencing at or after the time that financial reporting is due for the quarter ending September 30, 2024. The Loan Facility contains event of default provisions for: the Company's failure to make required payments or maintain compliance with covenants under the Loan Facility; the Company's breach of certain representations or default under certain obligations outside the Loan Facility; insolvency, attachment or judgment events affecting the Company; and any circumstance which has occurred or could reasonably be expected to have a material adverse effect on the Company, provided that, any failure to achieve approval or certain other milestones under the Loan Facility shall not in and of itself constitute a material adverse effect. The Loan Facility also includes customary covenants associated with a secured loan facility, including covenants concerning financial reporting obligations, and certain limitations on indebtedness, liens (including a negative pledge on intellectual property and other assets), investments, distributions (including dividends), collateral, investments, distributions, transfers, mergers or acquisitions, taxes, corporate changes, and deposit accounts.

As of December 31, 2022, the outstanding principal under the Loan Facility was $50.0 million. The interest rate as of December 31, 2022 was 11.45%. As of December 31, 2022, the Company was in compliance with all loan covenants and provisions.

Future minimum payments, including interest and principal, under the loans payable outstanding as of December 31, 2022 are as follows (in thousands):

Period Ending December 31, 2022:	Amount
2023	$ 5,795
2024	5,820
2025	34,788
Thereafter	23,272
	$ 69,675
Less amount representing interest	(17,000)
Less unamortized discount	(3,386)
Loans payable, net of discount	$ 49,289

See Footnote 13 for a description of certain amended terms set forth in the First Amendment to this Loan Facility, which was entered into during the first quarter of 2023.

7. Stockholders' Equity

Common Stock

Each common stockholder is entitled to one vote for each share of common stock held. The common stock will vote together with all other classes and series of stock of the Company as a single class on all actions to be taken by the Company's stockholders. Each share of common stock is entitled to receive dividends, as and when declared by the Company's board of directors.

The Company has never declared cash dividends on its common stock and does not expect to do so in the foreseeable future.

Preferred Stock

The Series A and B Preferred Stock have a par value of $0.0001 per share and are convertible into shares of the common stock at a one-to-one ratio, subject to adjustment as provided in the Certificates of Designation of Preferences, Rights and Limitations of Series A Preferred Stock and Series B Preferred Stock that the Company filed with the Secretary of State of the State of Delaware on June 21, 2017 and December 22, 2022, respectively. The terms of the Series A and B Preferred Stock are set forth in such Certificates of Designation. Each share of the Series A and B Preferred Stock is convertible into shares of Common Stock following notice that may be given at the holder's option. Upon any liquidation, dissolution or winding-up of the Company, whether voluntary or involuntary, after the satisfaction in full of the debts of the Company and the payment of any liquidation preference owed to the holders of shares of capital stock of the Company ranking prior to the Series A and B Preferred Stock upon liquidation, the holders of the Series A and B Preferred Stock shall participate pari passu with the holders of the Common Stock (on an as-if-converted-to-Common-Stock basis) in the net assets of the Company. Shares of the Series A and B Preferred Stock will generally have no voting rights, except as required by law. Shares of the Series A and B Preferred Stock will be entitled to receive dividends before shares of any other class or series of capital stock of the Company (other than dividends in the form of the Common Stock) equal to the dividend payable on each share of the Common Stock, on an as-converted basis.

December 2022 Registered Direct Offering

In December 2022, the Company entered into a Securities Purchase Agreement (the "Purchase Agreement") with a group of institutional accredited investors, who were existing, non-controlling stockholders of the Company, pursuant to which the Company sold securities to the Investors in an offering that was registered under the Company's existing shelf registration statement (the "2022 Registered Direct Offering"). Under the terms of the Purchase Agreement, the Company sold 44,444 shares of its common stock at a price of $225 per share, and 400,000 shares of its Series B Convertible Preferred Stock at a price of $225 per share. The 2022 Registered Direct Offering resulted in gross proceeds to the Company of approximately $100.0 million, and net proceeds to the Company of approximately $99.5 million. The 2022 Registered Direct Offering closed on December 23, 2022.

At-The-Market Issuance Sales Agreement

In November 2020, the Company entered into an at-the-market sales agreement (the "2020 Sales Agreement"), with Cowen and Company, LLC ("Cowen"), pursuant to which the Company could, from time to time, issue and sell shares of its common stock. The 2020 Sales Agreement authorized an aggregate offering of up to $200 million in shares of our common stock, at the Company's option, through Cowen as its sales agent. Sales of common stock through Cowen could be made by any method that is deemed an "at-the-market" offering as defined in Rule 415 promulgated under the Securities Act of 1933, as amended, including by means of ordinary brokers' transactions at market prices, in block transactions or as otherwise agreed by the Company and Cowen. The 2020 Sales Agreement was terminated in June 2021 when the Company filed a new shelf registration statement.

Under the 2020 Sales Agreement the Company sold 1,126,733 shares for an aggregate of approximately $137.4 million in gross proceeds, with net proceeds to the Company of approximately $134.8 million after deducting commissions and other transaction costs. Of those shares sold, 1,087,126 were sold in 2021, and 39,607 were sold in 2020.

In June 2021, the Company entered into an at-the-market sales agreement (the "2021 Sales Agreement") with Cowen and Company, LLC ("Cowen"), pursuant to which the Company could, from time to time, issue and sell shares of its common stock. The 2021 Sales Agreement authorized an aggregate offering of up to $200 million in shares of our common stock, at the Company's option, through Cowen as its sales agent. Sales of common stock through Cowen could be made by any method that is deemed an "at-the-market" offering as defined in Rule 415 promulgated under the Securities Act of 1933, as amended, including by means of ordinary brokers' transactions at market prices, in block transactions or as otherwise agreed by the Company and Cowen. Subject to the terms and conditions of the 2021 Sales Agreement, Cowen would use commercially reasonable efforts consistent with its normal trading and sales practices to sell the common stock based upon the Company's instructions (including any price, time or size limits or other customary parameters or conditions the Company imposed).The 2021 Sales Agreement replaced the 2020 Sales Agreement.

In December 2022, the Company sold 738,900 shares under the 2021 Sales Agreement for an aggregate of $159.1 million in gross proceeds, with net proceeds to the Company of $155.9 million after deducting commissions and other transaction costs.

In total, under the 2021 Sales Agreement the Company sold 1,235,943 shares for an aggregate of $199.9 million in gross proceeds, with net proceeds to the Company of approximately $195.8 million after deducting commissions and other transaction costs. Of those shares sold, 738,900 were sold in 2022, and 497,043 were sold in 2021. All shares were sold pursuant to the Company's effective shelf registration statement and the prospectus supplement relating thereto. As of December 31, 2022, no amounts remained reserved and available for sale under the 2021 Sales Agreement and the related prospectus supplement.

8. Stock-based Compensation

The 2015 Stock Plan, as amended, is our primary plan through which equity based grants are awarded. We ceased making new awards under the 2006 Stock Plan upon adoption of the 2015 Stock Plan. The 2015 Stock Plan provides for the grant of incentive stock options, non-statutory stock options, restricted stock and other stock-based compensation awards to employees, officers, directors, and consultants of the Company. The administration of the 2015 Stock Plan is under the general supervision of the Compensation Committee of the Board of Directors. The terms of stock options awarded under the 2015 Stock Plan, in general, are determined by the Compensation Committee, provided the exercise price per share generally shall not be set at less than the fair market value of a share of the common stock on the date of grant and the term shall not be greater than ten years from the date the option is granted. As of December 31, 2022, the Company had options outstanding to purchase 2,857,054 shares of its common stock. As of December 31, 2022, 890,029 shares were available for future issuance.

The following table summarizes stock option activity during the twelve months ended December 31, 2022:

	Shares	Weighted average exercise price	Weighted average remaining contractual life (years)	Aggregate intrinsic value (in thousands)
Outstanding at January 1, 2022	2,301,574	$ 78.90		
Options granted	860,795	81.39		
Options exercised	(215,784)	41.50		
Options cancelled	(89,531)	100.71		
Outstanding at December 31, 2022	2,857,054	$ 81.78	6.49	$ 596,279
Exercisable at December 31, 2022	1,610,185	$ 76.31	4.90	$ 345,162

The total cash received by the Company as a result of stock option exercises was $9.0 million, $1.0 million and $0.7 million for the years ended December 31, 2022, 2021, and 2020. The total intrinsic value of options exercised was $47.3 million $0.1 million and $4.1 million for the years ended December 31, 2022, 2021, and 2020. The weighted-average grant date fair values, based on the Black-Scholes option model, of options granted during the year ended December 31, 2022, 2021 and 2020 was $54.68, $73.29, and $68.07, respectively.

Stock-Based Compensation Expense

Stock-based compensation expense during the years ended December 31, 2022, 2021 and 2020 was as follows (in thousands):

	Year Ended December 31,		
	2022	2021	2020
Stock-based compensation expense by type of award:			
Stock options	$31,625	$26,873	$20,730
Total stock-based compensation expense	$31,625	$26,873	$20,730
Effect of stock-based compensation expense by line item:			
Research and development	$13,876	$10,698	$ 8,833
General and administrative	17,749	16,175	11,897
Total stock-based compensation expense included in net loss	$31,625	$26,873	$20,730

Unrecognized stock-based compensation expense on stock options as of December 31, 2022 was $58.7 million with a weighted average remaining period of 2.57 years.

9. Leases

In 2019, the Company entered into an operating lease for office space, which was renewed and extended in 2020. We adopted ASU 2016-02, “Leases,” on January 1, 2019 requiring, among other changes, operating and finance leases with terms exceeding twelve months to be recognized as a right-of-use asset (or “ROU”) and lease liabilities on the balance sheet. Operating lease ROU assets and operating lease liabilities are recognized based on the present value of the future minimum lease payments over the lease term at the commencement date. The lease term is determined to be the non-cancelable period including any lessee renewal options that are considered reasonably certain of exercise. The interest rate implicit in lease contracts is typically not readily determinable. As such, the Company used judgment to determine an appropriate incremental borrowing rate, which is the rate incurred to borrow on a collateralized basis over a similar term in a similar economic environment.

Future minimum payments under the Company’s operating leases related to the ROU asset and lease liability as of December 31, 2022 was as follows (in thousand):

	Operating Leases
2023	622
Thereafter	—
Total minimum payments	$ 622
Less: imputed interest	(20)
Present value of lease liabilities	$ 602

As of December 31, 2022, the weighted average remaining operating lease term was 0.7 years and the weighted average discount rate used to determine the operating lease liabilities was 6.72%. Cash paid related to

the lease liability was $0.7 and $0.4 million for years ended December 31, 2022 and 2021 respectively. Operating lease costs were $0.8 and $0.4 million for years ended December 31, 2022 and 2021 respectively. Rent, short term and variable leases costs were immaterial during the years ended December 31, 2022, 2021 and 2020.

10. Commitments and Contingencies

The Company has a Research, Development and Commercialization Agreement with Hoffmann-La Roche ("Roche") which grants the Company a sole and exclusive license to develop, use, sell, offer for sale and import any Licensed Product as defined by the agreement.

The agreement requires future milestone payments to Roche. In 2019, the Company commenced a Phase 3 study in Non-Alcoholic Steatohepatitis (NASH), which triggered a $2 million milestone payment under the agreement. Remaining milestones under the agreement total $8 million and are earned by achieving specified objectives related to future regulatory approval in the United States and Europe of a product developed from resmetirom. A single-digit royalty payment range is based on net sales of products developed from resmetirom, subject to certain reductions. Except as described above, the Company has not achieved any additional product development or regulatory milestones and had no Licensed Product sales for the years ended December 31, 2022, 2021 and 2020.

The Company has entered into customary contractual arrangements and letters of intent in preparation for and in support of the clinical trials.

11. Income Taxes

At December 31, 2022, the Company had federal net operating loss ("NOL") carryforwards of approximately $275.5 million available to reduce future taxable income, of which $40.4 million will expire between 2031 and 2037. The Company also has state operating loss carryforwards of approximately $264.2 million, available to reduce future taxable income, which expire between 2031 and 2041. The Company has unused federal research and development carryforwards of approximately $33.1 million which will begin to expire in 2031.

The Internal Revenue Code ("IRC") limits the amounts of NOL carryforwards that a Company may use in any one year in the event of certain cumulative changes in ownership over a three-year period as described in Section 382 of the IRC. Such change in ownership could limit the Company's utilization of the NOL, and could be triggered by subsequent sales of securities by the Company or stockholders. The deferred tax asset related to the NOL reflected on the financial statements could be affected by this limitation. Although a formal analysis has not been completed, the Company has determined that an ownership change likely occurred for Madrigal during the year ended December 31, 2017.

In assessing the realizability of deferred tax assets, management considers whether it is more likely than not that some portion of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. As there is no assurance of future taxable income, a full valuation allowance has been established to offset the deferred tax assets. The valuation allowance increased $59.5 million for the year ended December 31, 2022. Changes in the deferred tax asset will be recorded as an income tax benefit or expense on the accompanying consolidated statements of operations.

Entities are also required to evaluate, measure, recognize and disclose any uncertain income tax provisions taken on their income tax returns. The Company has analyzed its tax positions and has concluded that as of December 31, 2022 there were no uncertain positions. The 2018 through 2022 tax returns are open to review by the IRS and state taxing authorities. Interest and penalties, if any, as they relate to income taxes assessed, are included in the income tax provision. There was no income tax related interest and penalties included in the income tax provision for 2022.

Temporary differences that give rise to deferred tax assets and liabilities are as follows (in thousands):

	For the years ended December 31,		
	2022	2021	2020
Deferred Tax Liabilities			
Unrealized gains on investments	$ —	$ —	$ 14
Total Deferred Tax Liabilities	$ —	$ —	$ 14
Deferred Tax Assets			
Charitable contributions	$ 45	$ 53	$ 51
Accrued expenses	2,398	1,857	1,318
Intangibles	589	783	883
Stock compensation	27,226	24,335	16,812
Property, plant & equipment	106	80	68
Unrealized loss on investment	8	23	—
Net operating losses	68,305	47,864	27,933
Capitalized R&D	137,328	112,848	71,128
R&D credit	35,103	23,799	14,205
Total deferred tax assets before valuation allowance	271,108	211,642	132,398
Valuation allowance	(271,108)	(211,642)	(132,384)
Total deferred tax assets	—	—	14
Net deferred tax assets	$ —	$ —	$ —

Differences between the effective income tax rate and the US statutory rate were as follows (in thousands):

	For the years ended December 31,		
	2022	2021	2020
Tax benefit at U.S. federal statutory rate	$ (62,023)	$ (50,788)	$ (17,629)
Stock based compensation	(7,844)	—	(47)
162M limitation	7,996	22	—
Other nondeductible expenses	16	5	14
State income taxes benefit before valuation allowance, net of federal benefit	13,090	(19,622)	(6,613)
Increase in domestic valuation allowance	59,466	79,258	26,843
Research and development credit	(10,712)	(9,002)	(2,636)
Other adjustments	11	127	68
Income tax expense (benefit)	$ —	$ —	$ —

12. Quarterly Financial Data (unaudited)

The following tables present a summary of quarterly results of operations for 2022 and 2021 (in thousands, except shares and per share data):

	Three months ended			
	March 31, 2022	June 30, 2022	September 30, 2022	December 31, 2022
Revenues:				
Total revenues	$ —	$ —	$ —	$ —
Operating expenses:				
Research and development	47,929	58,499	68,271	70,742
General and administrative	9,658	11,774	12,141	14,557
Total operating expenses	57,587	70,273	80,412	85,299
Loss from operations	(57,587)	(70,273)	(80,412)	(85,299)
Interest income	69	323	717	1,076
Interest expense	—	(780)	(1,502)	(1,682)
Other income	—	—	—	—
Net loss	$ (57,518)	$ (70,730)	$ (81,197)	$ (85,905)
Net loss per common share:				
Basic and diluted net loss per common share	$ (3.36)	$ (4.14)	$ (4.75)	$ (4.98)
Basic and diluted weighted average number of common shares outstanding	17,103,395	17,103,395	17,103,395	17,237,517

	Three months ended			
	March 31, 2021	June 30, 2021	September 30, 2021	December 31, 2021
Revenues:				
Total revenues	$ —	$ —	$ —	$ —
Operating expenses:				
Research and development	45,770	51,632	54,873	52,889
General and administrative	7,209	10,110	8,287	11,712
Total operating expenses	52,979	61,742	63,160	64,601
Loss from operations	(52,979)	(61,742)	(63,160)	(64,601)
Interest income	160	91	60	52
Interest expense	—	—	—	—
Other income	273	—	—	—
Net loss	$ (52,546)	$ (61,651)	$ (63,100)	$ (64,549)
Net loss per common share:				
Basic and diluted net loss per common share	$ (3.32)	$ (3.72)	$ (3.79)	$ (3.78)
Basic and diluted weighted average number of common shares outstanding	15,840,401	16,571,322	16,639,776	17,074,543

13. Subsequent Event

On February 3, 2023, the Company entered into the First Amendment (the “Amendment”) to the Loan Facility described in Footnote 6 (as amended, the “Amended Loan Facility”). Under the terms of the Loan

Facility, the first $50.0 million tranche was drawn at closing in May 2022. Under the Amended Loan Facility, an additional $35.0 million was drawn under a second, expanded, $65.0 million tranche ("Tranche 2") in February of 2023 following the Company's achievement of the Phase 3 clinical development milestone. The Company has the ability to draw an additional $15.0 million under Tranche 2 by June 19, 2023 and an additional $15.0 million under Tranche 2 by September 30, 2023 (for a total of $30.0 million in additional committed Tranche 2 capacity). The third tranche ("Tranche 3") of $75.0 million remains unchanged by the Amendment, and such borrowings are available subject to the Company obtaining a certain FDA approval for resmetirom. Coincident with the expansion of Tranche 2 borrowing capacity by $15 million, the Amendment reduced the fourth tranche under the Loan Facility ("Tranche 4") by $15.0 million to $60.0 million , which amount is available subject to Hercules' sole discretion. In connection with the $35.0 million drawn under the second tranche at the closing of the Amendment, the Company issued to Hercules and affiliates Tranche 2 Warrants to purchase 2,453 shares of common stock at an exercise price of $285.31 per share. The Amendment reduced the interest rate under the Amended Loan Facility to the greater of (i) the prime rate as reported in The Wall Street Journal plus 2.45% and (ii) 8.25%. The Amendment and the Amended Loan Facility summary terms were disclosed in the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on February 9, 2023.

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-3 (Nos. 333-256666 and 333-219304) and Form S-8 (Nos. 333-141903, 333-152824, 333-173862, 333-181117, 333-187243, 333-194477, 333-202680, 333-206128, 333-212615, 333-224503, 333-249866 and 333-257506) of Madrigal Pharmaceuticals, Inc. of our report dated February 23, 2023 relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP
Philadelphia, Pennsylvania
February 23, 2023

Exhibit 31.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER PURSUANT TO SECURITIES EXCHANGE ACT RULES 13A-14(a) AND 15D-14(a) AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Paul A. Friedman, M.D., certify that:

1. I have reviewed this Annual Report on Form 10-K of Madrigal Pharmaceuticals, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ PAUL A. FRIEDMAN, M.D.
Paul A. Friedman, M.D.
Chief Executive Officer and Chairman of the Board
(Principal Executive Officer)
Date: March 3, 2023

Exhibit 31.2

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER PURSUANT TO SECURITIES EXCHANGE ACT RULES 13A-14(a) AND 15D-14(a) AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Alex G. Howarth, certify that:

1. I have reviewed this Annual Report on Form 10-K of Madrigal Pharmaceuticals, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ ALEX G. HOWARTH
Alex G. Howarth
Chief Financial Officer (Principal Financial Officer)
Date: March 3, 2023

Exhibit 32.1

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

Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (Subsections (a) and (b) of Section 1350 of Chapter 63 of Title 18 of the United States Code (18 U.S.C. Section 1350)), each of the undersigned officers of Madrigal Pharmaceuticals, Inc., a Delaware corporation (the "Company"), does hereby certify, to such officer's knowledge, that:

The Annual Report on Form 10-K for the fiscal year ended December 31, 2022 (the "Form 10-K") of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and the information contained in the Form 10-K fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated March 3, 2023

/s/ PAUL A. FRIEDMAN, M.D.
Paul A. Friedman, M.D.
Chief Executive Officer and Chairman of the Board
(Principal Executive Officer)

Dated: March 3, 2023

/s/ ALEX G. HOWARTH
Alex G. Howarth
Chief Financial Officer (Principal Financial Officer)

A signed original of this written statement required by Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended, and Section 1350 of Chapter 63 of Title 18 of the United States Code (18 U.S.C. Section 1350), has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request. These certifications accompany the Form 10-K, are not deemed filed with the Securities and Exchange Commission, and are not to be incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of the Form 10-K), irrespective of any general incorporation language contained in such filing.