UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

(Mark One)

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

For the quarterly period ended June 30, 2023

or

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

For the transition period from to

Commission File Number: 001-40323

RECURSION PHARMACEUTICALS, INC.

(Exact name of registrant as specified in its charter)

Delaware 46-4099738

(State or other jurisdiction of incorporation or organization) (I.R.S. Employer Identification No.)

41 S Rio Grande Street
Salt Lake City, UT 84101
(Address of principal executive offices) (Zip code)
(385) 269 - 0203
(Registrant's telephone number, including area code)

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

Title of each class	Trading symbol(s)	Name of each exchange on which registered
Class A Common Stock, par value $0.00001	RXRX	Nasdaq Global Select Market

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes x 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 x 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	x	Non-accelerated filer	☐
Accelerated filer	☐	Smaller reporting company	☐
		Emerging growth company	☐

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

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

As of July 31, 2023, there were 204,038,332, 7,644,871 and 3,905,069 of the registrant's Class A, B and exchangeable common stock, par value $0.00001 per share, outstanding, respectively.

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Cautionary Note Regarding Forward-Looking Statements

This Quarterly Report on Form 10-Q contains "forward-looking statements" about us and our industry within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. All statements other than statements of historical facts are forward-looking statements. In some cases, you can identify forward-looking statements by terms such as "may," "will," "should," "would," "expect," "plan," "anticipate," "could," "intend," "target," "project," "contemplate," "believe," "estimate," "predict," "potential," or "continue" or the negative of these terms or other similar expressions. Forward-looking statements contained in this report may include without limitation those regarding:

- our research and development programs;
- the initiation, timing, progress, results, and cost of our current and future preclinical and clinical studies, including statements regarding the design of, and the timing of initiation and completion of, studies and related preparatory work, as well as the period during which the results of the studies will become available;
- the ability of our clinical trials to demonstrate the safety and efficacy of our drug candidates, and other positive results;
- the ability and willingness of our collaborators to continue research and development activities relating to our development candidates and investigational medicines;
- future agreements with third parties in connection with the commercialization of our investigational medicines and any other approved product;
- the timing, scope, or likelihood of regulatory filings and approvals, including the timing of Investigational New Drug applications and final approval by the U.S. Food and Drug Administration, or FDA, of our current drug candidates and any other future drug candidates, as well as our ability to maintain any such approvals;
- the timing, scope, or likelihood of foreign regulatory filings and approvals, including our ability to maintain any such approvals;
- the size of the potential market opportunity for our drug candidates, including our estimates of the number of patients who suffer from the diseases we are targeting and potential annual sales;
- our ability to identify viable new drug candidates for clinical development and the rate at which we expect to identify such candidates, whether through an inferential approach or otherwise;
- our expectation that the assets that will drive the most value for us are those that we will identify in the future using our datasets and tools;
- our ability to develop and advance our current drug candidates and programs into, and successfully complete, clinical studies;
- our ability to reduce the time or cost or increase the likelihood of success of our research and development relative to the traditional drug discovery paradigm;
- our ability to improve, and the rate of improvement in, our infrastructure, datasets, biology, technology tools and drug discovery platform, and our ability to realize benefits from such improvements;
- our expectations related to the performance and benefits of our BioHive supercomputer;
- our ability to realize a return on our investment of resources and cash in our drug discovery collaborations;
- our ability to integrate acquired businesses with our existing programs and platform and realize a return on acquired assets;
- our ability to scale like a technology company and to add more programs to our pipeline each year;
- our ability to successfully compete in a highly competitive market;
- our manufacturing, commercialization and marketing capabilities and strategies;
- our plans relating to commercializing our drug candidates, if approved, including the geographic areas of focus and sales strategy;
- our expectations regarding the approval and use of our drug candidates in combination with other drugs;
- the rate and degree of market acceptance and clinical utility of our current drug candidates, if approved, and other drug candidates we may develop;
- our competitive position and the success of competing approaches that are or may become available;
- our estimates of the number of patients that we will enroll in our clinical trials and the timing of their enrollment;
- the beneficial characteristics, safety, efficacy and therapeutic effects of our drug candidates;
- our plans for further development of our drug candidates, including additional indications we may pursue;
- our ability to adequately protect and enforce our intellectual property and proprietary technology, including the scope of protection we are able to establish and maintain for intellectual property rights covering our current drug candidates and other drug candidates we may develop, receipt of patent protection, the extensions of existing patent terms where available, the validity of intellectual property rights held by third parties, the

protection of our trade secrets, and our ability not to infringe, misappropriate or otherwise violate any third-party intellectual property rights;
- the impact of any intellectual property disputes and our ability to defend against claims of infringement, misappropriation, or other violations of intellectual property rights;
- our ability to keep pace with new technological developments;
- our ability to utilize third-party open source software and cloud-based infrastructure, on which we are dependent;
- the adequacy of our insurance policies and the scope of their coverage;
- the potential impact of a pandemic, epidemic, or outbreak of an infectious disease, such as COVID-19, or natural disaster, global political instability or warfare, and the effect of such outbreak or natural disaster, global political instability or warfare on our business and financial results;
- our ability to maintain our technical operations infrastructure to avoid errors, delays, or cybersecurity breaches;
- our continued reliance on third parties to conduct additional clinical trials of our drug candidates, and for the manufacture of our drug candidates for preclinical studies and clinical trials;
- our ability to obtain and negotiate favorable terms of, any collaboration, licensing, or other arrangements that may be necessary or desirable to research, develop, manufacture, or commercialize our platform and drug candidates;
- the pricing and reimbursement of our current drug candidates and other drug candidates we may develop, if approved;
- our estimates regarding expenses, future revenue, capital requirements and need for additional financing;
- our financial performance;
- the period over which we estimate our existing cash and cash equivalents will be sufficient to fund our future operating expenses and capital expenditure requirements;
- our ability to raise substantial additional funding;
- the impact of current and future laws and regulations, and our ability to comply with all regulations that we are, or may become, subject to;
- the need to hire additional personnel and our ability to attract and retain such personnel;
- the impact of any current or future litigation, which may arise during the ordinary course of business and be costly to defend;
- the need to raise additional capital may cause dilution to our stockholders, restrict our operations, require us to relinquish rights to our technologies or drug candidates, and divert management's attention from our core business;
- our anticipated use of our existing resources and the net proceeds from our initial public offering; and
- other risks and uncertainties, including those listed in the section titled "Risk Factors."

We have based these forward-looking statements largely on our current expectations and projections about our business, the industry in which we operate, and financial trends that we believe may affect our business, financial condition, results of operations and prospects. These forward-looking statements are not guarantees of future performance or development. These statements speak only as of the date of this report and are subject to a number of risks, uncertainties and assumptions described in the section titled "Risk Factors" and elsewhere in this report. Because forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified, you should not rely on these forward-looking statements as predictions of future events. The events and circumstances reflected in our forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking statements. Except as required by applicable law, we undertake no obligation to update or revise any forward-looking statements contained herein, whether as a result of any new information, future events, or otherwise.

In addition, statements that "we believe" and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this report. While we believe such information forms a reasonable basis for such statements, the information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and you are cautioned not to unduly rely upon them.

PART I - FINANCIAL INFORMATION

Item 1. Financial Statements.

Recursion Pharmaceuticals, Inc.
Condensed Consolidated Balance Sheets (unaudited)
(in thousands, except share and per share amounts)

	June 30, 2023	December 31, 2022
Assets		
Current assets		
Cash and cash equivalents	$ 405,870	$ 549,912
Restricted cash	3,325	1,280
Other receivables	3,051	2,753
Other current assets	18,774	15,869
Total current assets	431,020	569,814
Restricted cash, non-current	7,629	7,920
Property and equipment, net	89,768	88,192
Operating lease right-of-use assets	34,899	33,255
Intangible assets, net	42,757	1,306
Goodwill	60,516	801
Other assets, non-current	110	—
Total assets	$ 666,699	$ 701,288
Liabilities and stockholders' equity		
Current liabilities		
Accounts payable	$ 2,086	$ 4,586
Accrued expenses and other liabilities	32,873	32,904
Unearned revenue	73,105	56,726
Notes payable	676	97
Operating lease liabilities	5,219	5,952
Total current liabilities	113,959	100,265
Unearned revenue, non-current	32,436	70,261
Notes payable, non-current	1,155	536
Operating lease liabilities, non-current	45,850	44,420
Deferred tax liabilities	4,336	—
Total liabilities	197,736	215,482
Commitments and contingencies (Note 7)		
Stockholders' equity		
Common stock, $0.00001 par value; 2,000,000,000 shares (Class A 1,989,032,117 and Class B 10,967,883) authorized as of June 30, 2023 and December 31, 2022; 206,737,332 shares (Class A 195,051,012, Class B 7,679,871 and Exchangeable 4,006,449) and 191,022,864 shares (Class A 183,209,655, Class B 7,813,209 and Exchangeable 0) issued and outstanding as of June 30, 2023 and December 31, 2022, respectively	2	2
Additional paid-in capital	1,250,570	1,125,360
Accumulated deficit	(781,609)	(639,556)
Total stockholders' equity	468,963	485,806
Total liabilities and stockholders' equity	$ 666,699	$ 701,288

See the accompanying notes to these condensed consolidated financial statements.

Recursion Pharmaceuticals, Inc.
Condensed Consolidated Statements of Operations (unaudited)
(in thousands, except share and per share amounts)

	Three months ended June 30,		Six months ended June 30,	
	2023	**2022**	**2023**	**2022**
Revenue				
Operating revenue	$ 11,016	$ 7,653	$ 23,150	$ 12,952
Grant revenue	1	21	1	55
Total revenue	11,017	7,674	23,151	13,007
Operating costs and expenses				
Cost of revenue	9,382	14,227	21,829	22,026
Research and development	55,060	38,439	101,737	70,880
General and administrative	28,290	21,199	51,165	42,273
Total operating costs and expenses	92,732	73,865	174,731	135,179
Loss from operations	(81,715)	(66,191)	(151,580)	(122,172)
Other income, net	4,989	631	9,527	633
Net loss	$ (76,726)	$ (65,560)	$ (142,053)	$ (121,539)
Per share data				
Net loss per share of Class A, B and Exchangeable common stock, basic and diluted	$ (0.38)	$ (0.38)	$ (0.71)	$ (0.71)
Weighted-average shares (Class A, B and Exchangeable) outstanding, basic and diluted	201,415,475	172,212,390	198,957,804	171,455,595

See the accompanying notes to these condensed consolidated financial statements.

Recursion Pharmaceuticals, Inc.
Condensed Consolidated Statements of Comprehensive Loss (unaudited)
(in thousands)

	Three months ended June 30,		Six months ended June 30,	
	2023	**2022**	**2023**	**2022**
Net loss	$ (76,726)	$ (65,560)	$ (142,053)	$ (121,539)
Unrealized gain (loss) on investments	—	112	—	(110)
Net realized loss on investments reclassified into net loss	—	—	—	39
Other comprehensive income (loss)	—	112	—	(71)
Comprehensive loss	$ (76,726)	$ (65,448)	$ (142,053)	$ (121,610)

See the accompanying notes to these condensed consolidated financial statements.

Recursion Pharmaceuticals, Inc.
Condensed Consolidated Statements of Stockholders' Equity (unaudited)
(in thousands, except share amounts)

	Common Stock (Class A, B and Exchangeable)		Additional Paid-in-Capital	Accumulated Deficit	Accumulated other comprehensive loss	Stockholders' Equity
	Shares	Amount				
Balance as of March 31, 2023	192,230,854	$ 2	$ 1,135,056	$ (704,883)	$ —	$ 430,175
Net loss	—	—	—	(76,726)	—	(76,726)
Stock option exercises and other	2,394,131	—	4,912	—	—	4,912
Stock-based compensation	—	—	11,811	—	—	11,811
Class A shares and stock options issued for acquisitions	6,878,653	—	68,499	—	—	68,499
Exchangeable shares issued for acquisitions	5,233,694	—	30,292	—	—	30,292
Class A shares issued for exchangeable shares	1,227,245	—	—	—	—	—
Exchangeable shares redeemed	(1,227,245)	—	—	—	—	—
Balance as of June 30, 2023	206,737,332	$ 2	$ 1,250,570	$ (781,609)	$ —	$ 468,963

	Common Stock (Class A, B and Exchangeable)		Additional Paid-in-Capital	Accumulated Deficit	Accumulated other comprehensive loss	Stockholders' Equity
	Shares	Amount				
Balance as of December 31, 2022	191,022,864	$ 2	$ 1,125,360	$ (639,556)	$ —	$ 485,806
Net loss	—	—	—	(142,053)	—	(142,053)
Stock option exercises and other	3,602,121	—	5,794	—	—	5,794
Stock-based compensation	—	—	20,625	—	—	20,625
Class A shares and stock options issued for acquisitions	6,878,653	—	68,499	—	—	68,499
Exchangeable shares issued for acquisitions	5,233,694	—	30,292	—	—	30,292
Class A shares issued for exchangeable shares	1,227,245	—	—	—	—	—
Exchangeable shares redeemed	(1,227,245)	—	—	—	—	—
Balance as of June 30, 2023	206,737,332	$ 2	$ 1,250,570	$ (781,609)	$ —	$ 468,963

See the accompanying notes to these condensed consolidated financial statements.

Recursion Pharmaceuticals, Inc.
Condensed Consolidated Statements of Stockholders' Equity (unaudited)
(in thousands, except share amounts)

	Common Stock (Class A, B and Exchangeable)		Additional Paid-in-Capital	Accumulated Deficit	Accumulated other comprehensive loss	Stockholders' Equity
	Shares	Amount				
Balance as of March 31, 2022	171,078,088	$ 2	$ 949,932	$ (456,059)	$ (309)	$ 493,566
Net loss	—	—	—	(65,560)	—	(65,560)
Other comprehensive gain	—	—	—	—	112	112
Stock option exercises and other	1,737,321	—	3,787	—	—	3,787
Stock-based compensation	—	—	5,674	—	—	5,674
Balance as of June 30, 2022	172,815,409	$ 2	$ 959,393	$ (521,619)	$ (197)	$ 437,579

	Common Stock (Class A, B and Exchangeable)		Additional Paid-in-Capital	Accumulated Deficit	Accumulated other comprehensive loss	Stockholders' Equity
	Shares	Amount				
Balance as of December 31, 2021	170,272,462	$ 2	$ 943,142	$ (400,080)	$ (126)	$ 542,938
Net loss	—	—	—	(121,539)	—	(121,539)
Other comprehensive loss	—	—	—	—	(71)	(71)
Stock option exercises and other	2,542,947	—	4,944	—	—	4,944
Stock-based compensation	—	—	11,307	—	—	11,307
Balance as of June 30, 2022	172,815,409	$ 2	$ 959,393	$ (521,619)	$ (197)	$ 437,579

See the accompanying notes to these condensed consolidated financial statements.

Recursion Pharmaceuticals, Inc.
Condensed Consolidated Statements of Cash Flows (unaudited)
(in thousands)

	Six months ended June 30,	
	2023	**2022**
Cash flows from operating activities		
Net loss	$ (142,053)	$ (121,539)
Adjustments to reconcile net loss to net cash from operating activities:		
Depreciation and amortization	9,271	5,553
Stock-based compensation	20,625	11,307
Fixed asset impairment	1,169	2,806
Lease expense	3,991	3,757
Other, net	739	594
Changes in operating assets and liabilities:		
Other receivables and assets	(1,131)	(9,351)
Unearned revenue	(23,200)	137,048
Accounts payable	(2,856)	358
Accrued development expense	1,747	2,877
Accrued expenses and other current liabilities	(3,643)	(14,833)
Operating lease liabilities	(5,442)	(2,812)
Net cash provided by (used in) operating activities	(140,783)	15,765
Cash flows from investing activities		
Net cash and restricted cash acquired in the acquisition of a business	1,915	—
Purchases of property and equipment	(9,143)	(20,817)
Purchase of an intangible asset	(165)	—
Sales and maturities of investments	—	169,061
Net cash provided by (used in) investing activities	(7,393)	148,244
Cash flows from financing activities		
Proceeds from equity incentive plans	5,757	4,796
Repayment of long-term debt	(48)	(44)
Net cash provided by financing activities	5,709	4,752
Effect of exchange rate changes on cash, cash equivalents and restricted cash	179	—
Net change in cash, cash equivalents and restricted cash	(142,288)	168,761
Cash, cash equivalents and restricted cash, beginning of period	559,112	295,349
Cash, cash equivalents and restricted cash, end of period	$ 416,824	$ 464,110
Supplemental schedule of non-cash investing and financing activities		
Issuance of shares for the acquisitions of businesses	$ 98,791	$ —
Accrued property and equipment	6	4,174
Right-of-use asset additions and modifications	4,160	3,990
Financed equipment purchase	1,214	—
Supplemental schedule of cash flow information		
Cash paid for operating leases	$ 5,442	$ 2,812
Cash paid for interest	25	28

See the accompanying notes to these condensed consolidated financial statements.

Recursion Pharmaceuticals, Inc.
Notes to Condensed Consolidated Financial Statements (unaudited)

Note 1. Description of the Business

Recursion Pharmaceuticals, Inc. (Recursion, the Company, we or our) was originally formed as a limited liability company on November 4, 2013 under the name Recursion Pharmaceuticals, LLC. In September 2016, the Company converted to a Delaware corporation and changed its name to Recursion Pharmaceuticals, Inc.

Recursion is a clinical stage TechBio company decoding biology to industrialize drug discovery. The Recursion Operating System (OS), a platform built across diverse technologies, enables the Company to map and navigate trillions of biological and chemical relationships within the Recursion Data Universe, one of the world's largest proprietary biological and chemical datasets. The Company integrates physical and digital components as iterative loops of atoms and bits scaling wet lab biology and chemistry data organized into virtuous cycles with computational tools to rapidly translate *in silico* hypotheses into validated insights and novel chemistry.

As of June 30, 2023, the Company had an accumulated deficit of $781.6 million. The Company expects to incur substantial operating losses in future periods and will require additional capital to advance its drug candidates. The Company does not expect to generate significant revenue until the Company successfully completes significant drug development milestones with its subsidiaries or in collaboration with third parties, which the Company expects will take a number of years. In order to commercialize its drug candidates, the Company or its partners need to complete clinical development and comply with comprehensive regulatory requirements. The Company is subject to a number of risks and uncertainties similar to those of other companies of the same size within the biotechnology industry, such as the uncertainty of clinical trial outcomes, uncertainty of additional funding and a history of operating losses.

The Company has funded its operations to date primarily through the issuance of convertible preferred stock and the issuance of Class A common stock (see Note 8, "Common Stock" for additional details). Additionally, we have received payments of $180.0 million from our strategic partnerships (see Note 9, "Collaborative Development Contracts" for additional details). Recursion will likely be required to raise additional capital. As of June 30, 2023, the Company did not have any unconditional outstanding commitments for additional funding. Subsequent to June 30, 2023, Recursion entered into a private placement with NVIDIA Corporation (see Note 14, "Subsequent Events" for additional details). If the Company is unable to access additional funds when needed, it may not be able to continue the development of its products or the Company could be required to delay, scale back or abandon some or all of its development programs and other operations. The Company's ability to access capital when needed is not assured and, if not achieved on a timely basis, could materially harm its business, financial condition and results of operations.

Recursion believes that the Company's existing cash and cash equivalents will be sufficient to fund the Company's operating expenses and capital expenditures for at least the next 12 months.

Note 2. Basis of Presentation

Basis of Presentation

The unaudited interim condensed consolidated financial statements have been prepared pursuant to the rules and regulations of the U.S. Securities and Exchange Commission (SEC). Accordingly, certain information and footnote disclosures normally included in annual financial statements prepared in accordance with generally accepted accounting principles in the United States (U.S. GAAP) have been condensed or omitted. These unaudited interim condensed consolidated financial statements should be read in conjunction with the Company's audited consolidated financial statements and notes for the year ended December 31, 2022.

It is management's opinion that these condensed consolidated financial statements include all normal and recurring adjustments necessary for a fair presentation of the Company's financial statements. Revenue and net loss for any interim period are not necessarily indicative of future or annual results.

Recent Accounting Pronouncements

New accounting pronouncements are routinely issued by the Financial Accounting Standards Board (FASB) or other standard setting bodies and adopted by Recursion as of the specified effective date. The Company does not expect the impact of recently issued standards that are not yet effective will have a material impact on its condensed consolidated financial statements and disclosures.

Note 3. Supplemental Financial Information

Property and Equipment

(in thousands)	June 30, 2023	December 31, 2022
Lab equipment	$ 58,436	$ 47,524
Leasehold improvements	46,714	41,872
Office equipment	22,006	20,164
Construction in progress	212	8,747
Property and equipment, gross	127,368	118,307
Less: Accumulated depreciation	(37,600)	(30,115)
Property and equipment, net	$ 89,768	$ 88,192

Depreciation expense on property and equipment was $4.0 million and $7.5 million during the three and six months ended June 30, 2023, respectively, and $2.7 million and $5.4 million during the three and six months ended June 30, 2022, respectively. The Company recorded an impairment of $1.2 million and $2.8 million during the six months ended June 30, 2023 and 2022, respectively, related to construction projects for leasehold improvements as the Company no longer intended to use them. The impairments were recorded in “General and Administrative” in the Condensed Consolidated Statements of Operations.

For the six months ended June 30, 2023, the Company initiated and completed a project to upgrade the BioHive supercomputer for $1.7 million. The supercomputer was classified as office equipment in the above table. The increase in lab equipment from the prior year was driven by the completion of several labs in the headquarters expansion. The majority of the balance was included in construction in progress in the prior year.

Accrued Expenses and Other Liabilities

(in thousands)	June 30, 2023	December 31, 2022
Accrued compensation	$ 15,851	$ 20,433
Accrued development expenses	5,119	3,372
Accrued early discovery expenses	3,009	3,192
Materials received not invoiced	2,304	2,028
Accrued other expenses	6,590	3,879
Accrued expense and other liabilities	$ 32,873	$ 32,904

Notes Payable

In January 2023, the Company entered into a financing agreement for borrowing $1.9 million as part of the supercomputer upgrade project. The debt will be repaid over a three-year period at a 7% interest rate. As of June 30, 2023, the outstanding balance was $1.2 million.

In 2018, the Company borrowed $992 thousand, which was available as part of a lease agreement for use on tenant improvements. The note will be repaid over a 10-year period at an 8% interest rate. As of June 30, 2023, the outstanding balance was $585 thousand.

Interest Income, net

	Three months ended June 30,		Six months ended June 30,	
(in thousands)	**2023**	**2022**	**2023**	**2022**
Interest income	$ 4,957	$ 652	$ 9,617	$ 739
Interest expense	(26)	(14)	(45)	(28)
Interest income, net	$ 4,931	$ 638	$ 9,572	$ 711

For the three and six months ended June 30, 2023 and 2022, interest income primarily related to earnings on cash and cash equivalents in money market funds. Interest income was included in “Other income, net” on the Condensed Consolidated Statements of Operations.

Note 4. Acquisitions

Results of operations of acquired companies are included in the Recursion results of operations as of the respective acquisition dates. The purchase price of each acquisition is allocated to the net assets acquired based on estimates of their fair values at the date of acquisition. Any purchase price in excess of these net assets is recorded as goodwill. The allocation of purchase price in certain cases may be subject to revision based on the final determination of fair values during the measurement period, which may be up to one year from the acquisition date.

Valence Discovery Inc.

On May 16, 2023, Recursion acquired all of the outstanding equity interests in Valence Discovery Inc. (Valence), a privately-held machine learning (ML) / artificial intelligence (AI) digital chemistry company. The integration of Valence’s AI-based chemistry engine into Recursion’s operating system will allow Recursion to expand its technology-enabled drug discovery process. This will accelerate Recursion’s digital chemistry capabilities and its drug discovery process.

The acquisition of Valence was accounted for as a business combination using the acquisition method of accounting. The aggregate upfront consideration for the acquisition of Valence consisted of 2,168,020 shares of Recursion Class A common stock, 5,904,827 shares of a subsidiary of Recursion, exchangeable for shares of Recursion’s Class A common stock, 792,011 shares issued upon exercise of stock options held by Valence equity award holders and deferred liabilities for additional consideration. An immaterial amount of the aforementioned share consideration had not yet been issued as of June 30, 2023. Additionally, the final number of shares to be issued had not yet been finalized and so are subject to change.

The following table summarizes total consideration:

(in thousands)	
Fair value of Recursion Class A common stock	$ 11,122
Fair value of Exchangeable stock	30,292
Fair value of equity awards issued to Valance equity award holders	1,933
Deferred liabilities for additional consideration	358
Total consideration	$ 43,705

The following table summarizes the fair value of assets acquired and liabilities assumed as of the acquisition date:

(in thousands)		
Cash	$	4,235
Other receivables		485
Intangible asset - technology		15,000
Accounts payable and accrued liabilities		(494)
Deferred income taxes		(2,892)
Other long-term liabilities		(378)
Total identifiable net assets	$	15,956
Goodwill		27,749
Total assets acquired and liabilities assumed	$	43,705

The intangible asset related to Valence's ML and AI digital chemistry platform. The estimated fair value of the intangible asset was determined using a cost approach. This valuation technique provides the fair value of an asset based on estimates of the total costs to develop the technology. Significant inputs used to determine the total cost includes the length of time required and service hours performed by Company employees. The technology intangible asset is being amortized on a straight-line basis over its four-year useful life.

Goodwill was calculated as the excess of the consideration transferred over the net assets recognized. The goodwill recognized represents the assembled workforce and expected synergies, including the ability to: (i) leverage Valence's digital chemistry platform across Recursion's business; (ii) leverage Valence's ML and AI capabilities; (iii) integrate Recursion's data and operating system into Valence's platform; and (iv) accelerate Recursion's pipeline. Goodwill was also impacted by the establishment of a deferred tax liability for the acquired identifiable intangible assets which have no tax basis. The goodwill is not deductible for tax purposes.

Recursion's condensed consolidated statement of operations included no net revenue and an immaterial operating loss associated with Valence's operations. As the acquisition occurred in May 2023, the Company is still finalizing the allocation of the purchase price to the individual assets acquired and liabilities assumed. The allocation of the purchase price included in the current period balance sheet is based on the best estimate of management and is preliminary and subject to change. The primary areas subject to change relate to the valuation of the intangible asset, other receivables and deferred taxes. To assist management in the allocation, the Company engaged external specialists. The Company will finalize the amounts recognized as the information necessary to complete the analysis is obtained. The Company expects to finalize these amounts as soon as possible but no later than one year from the acquisition date.

Cyclica Inc.

On May 25, 2023, Recursion acquired all of the outstanding equity interests in Cyclica Inc. (Cyclica), a privately-held Company that has built a digital chemistry software suite which enables mechanism of action deconvolution and generative chemistry suggestions based on desired targets. Cyclica's platform is expected to enhance the optimization of Recursion's compounds for efficacy while minimizing liabilities through generative machine learning approaches.

The acquisition of Cyclica was accounted for as a business combination using the acquisition method of accounting. The aggregate upfront consideration for the acquisition of Cyclica consisted of 5,706,089 shares of Recursion Class A common stock, cash payments, 1,000,873 shares issuable upon exercise of stock options held by Cyclica equity award holders and deferred liabilities for additional consideration. Approximately 753 thousand of the aforementioned shares of Class A common stock consideration had not yet been issued as of June 30, 2023.

The following table summarizes total consideration:

(in thousands)		
Fair value of Recursion Class A common stock	$	49,415
Cash		6,434
Fair value of equity awards issued to Cyclica equity award holders		6,030
Deferred liabilities for additional consideration		341
Total consideration	$	62,220

The following table summarizes the fair value of assets acquired and liabilities assumed as of the acquisition date:

(in thousands)		
Cash	$	2,429
Restricted cash		1,685
Other receivables		737
Investments		1,000
Other current assets		385
Intangible assets - technology		28,000
Accounts payable and accrued liabilities		(579)
Unearned revenue		(1,754)
Deferred income taxes		(1,443)
Other liabilities, current		(66)
Other liabilities, non-current		(139)
Total identifiable net assets	$	30,255
Goodwill		31,965
Total assets acquired and liabilities assumed	$	62,220

The intangible assets are related to Cyclica's digital chemistry platforms. The estimated fair value of the intangible assets were determined using a cost approach. This valuation technique provides the fair value of an asset based on estimates of the total costs to develop the technology. Significant inputs used to determine the total cost includes the length of time required and service hours performed by Company employees. The technology intangible assets are being amortized on a straight-line basis over their three-year useful lives.

Goodwill was calculated as the excess of the consideration transferred over the net assets recognized. The goodwill recognized represents the assembled workforce and expected synergies, including the ability to: (i) leverage Cyclica's digital chemistry platform across Recursion's business; (ii) leverage Cyclica's ML and AI capabilities; (iii) integrate Recursion's data and operating system into Cyclica's platform; and (iv) accelerate Recursion's pipeline. Goodwill was also impacted by the establishment of a deferred tax liability for the acquired identifiable intangible assets. The goodwill is not deductible for tax purposes.

Recursion's condensed consolidated statement of operations included immaterial net revenue and an immaterial operating loss associated with Cyclica's operations. As the acquisition occurred in May 2023, the Company is still finalizing the allocation of the purchase price to the individual assets acquired and liabilities assumed. The allocation of the purchase price included in the current period balance sheet is based on the best estimate of management and is preliminary and subject to change. The primary areas subject to change relate to the valuation of the intangible assets, other receivables and deferred taxes. To assist management in the allocation, the Company engaged external specialists. The Company will finalize the amounts recognized as the information necessary to complete the analysis is obtained. The Company expects to finalize these amounts as soon as possible but no later than one year from the acquisition date.

Pro forma financial information

The following table presents the unaudited pro forma combined results of operations of Recursion, Valence and Cyclica as if the acquisitions had occurred on January 1, 2022:

	Three months ended June 30,		Six months ended June 30,	
(in thousands)	**2023**	**2022**	**2023**	**2022**
Net revenue	$ 11,258	$ 7,837	$ 23,437	$ 13,463
Net loss	(79,586)	(71,447)	(153,037)	(138,213)

The unaudited pro forma financial information was prepared using the acquisition method of accounting and was based on the historical financial information of Recursion, Valence and Cyclica. In order to reflect the occurrence of the acquisition on January 1, 2022 as required, the unaudited pro forma financial information includes adjustments to reflect the incremental amortization expense to be incurred based on the fair values of the identifiable intangible assets acquired, the additional stock compensation expense associated with the issuance of equity compensation related to the acquisitions and the reclassification of acquisition costs incurred during the six months ended June 30, 2023 to the six months ended June 30, 2022. The unaudited pro forma financial information is not necessarily indicative of what the consolidated results of operations would have been had the acquisition been completed on January 1, 2022. In addition, the unaudited pro forma financial information is not a projection of the future results of operations of the combined company nor does it reflect the expected realization of any cost savings or synergies associated with the acquisition.

Note 5. Leases

The Company has entered into various long-term real estate leases primarily related to office, research and development and operating activities. The Company's leases have remaining terms from under 1 year to 9 years and some of those leases include options that provide Recursion with the ability to extend the lease term for five years. The options are included in the lease term when it is reasonably certain that the option will be exercised.

For the six months ended June 30, 2023, Recursion entered into lease modifications resulting in an increase to the right-of-use asset and lease liability of $3.4 million. The modifications had no impact to the Condensed Consolidated Statements of Operations.

In May 2022, the Company entered into a lease agreement for laboratory and office space in Toronto, Ontario with approximately 28,110 square feet (the "Toronto Lease"). This lease was separated into multiple lease components based on the intended use of the portions of the space. For some of those components, the right of use began May 2022 when the control of the assets was obtained. The right of use for the remaining component began June 2023 when the control of the asset was obtained. The Toronto Lease terms for each component are ten years with a five-year renewal option. The Toronto Lease includes provisions for escalating rent payments and a tenant improvement allowance of up to $1.6 million. Total fixed payments are expected to be approximately $11.1 million with additional variable expenses, including building expenses.

See Note 7, "Commitments and Contingencies" for information on the Industry lease.

The components of the lease cost are as follows:

	Three months ended June 30,		Six months ended June 30, 2023	
(in thousands)	**2023**	**2022**	**2023**	**2022**
Operating lease cost	$ 2,020	$ 1,957	$ 4,018	$ 3,784
Variable lease cost	499	465	1,157	669
Short-term lease cost	41	—	41	—
Lease cost	$ 2,560	$ 2,422	$ 5,216	$ 4,453

Lease term and discount rates as of June 30, 2023 were:

(in thousands)	June 30, 2023
Operating leases	
Weighted-average remaining lease term (years)	7.2
Weighted-average discount rate	7.8 %

Maturities of operating lease liabilities as of June 30, 2023 were:

(in thousands)		Operating leases
Remainder of 2023	$	4,258
2024		9,934
2025		10,155
2026		10,349
2027		10,593
Thereafter		24,249
Total lease payments		69,538
Less: imputed interest		(18,469)
Present value of lease liabilities	$	51,069

Note 6. Goodwill and Intangible Assets

Goodwill

The following table summarizes the changes in the carrying amount of goodwill:

(in thousands)		
Balance as of December 31, 2022	$	801
Additions from acquisitions		59,715
Balance as of June 30, 2023	$	60,516

The additions to goodwill relate to the acquisition of Cyclica and Valence during the three months ended June 30, 2023. See Note 4, “Acquisitions” for additional details. No goodwill impairment was recorded during the three and six months ended June 30, 2023 and 2022.

Intangible Assets, Net

The following table summarizes intangible assets:

	June 30, 2023			December 31, 2022		
(in thousands)	Gross carrying amount	Accumulated Amortization	Net carrying amount	Gross carrying amount	Accumulated Amortization	Net carrying amount
Definite-lived intangible assets	$ 44,376	$ (2,523)	$ 41,853	$ 1,211	$ (809)	$ 402
Indefinite-lived intangible asset	904	—	904	904	—	904
Intangible assets, net	$ 45,280	$ (2,523)	$ 42,757	$ 2,115	$ (809)	$ 1,306

The definite-lived intangible assets balance increased during the three and six months ended June 30, 2023 due to the Company’s acquisitions. See Note 4, “Acquisitions” for additional details on the intangible assets acquired.

Amortization expense was $1.6 million and $1.7 million during the three and six months ended June 30, 2023, respectively. Amortization expense was $76 thousand and $152 thousand during the three and six months ended

June 30, 2022, respectively. Amortization expense was included in research and development in the Condensed Consolidated Statements of Operations.

The indefinite-lived intangible asset represents the Recursion domain name that the Company purchased. No indefinite-lived intangible asset impairment charges were recorded during the three and six months ended June 30, 2023 and 2022.

Note 7. Commitments and Contingencies

Contract Obligations

In the normal course of business, the Company enters into contracts with clinical research organizations, drug manufacturers and other vendors for preclinical and clinical research studies, research and development supplies and other services and products for operating purposes. These contracts generally provide for termination on notice and are cancellable contracts.

Indemnification

The Company has agreed to indemnify its officers and directors for certain events or occurrences, while the officer or director is or was serving at the Company's request in such capacity. The Company purchases directors and officers liability insurance coverage that provides for reimbursement to the Company for covered obligations and this is intended to limit the Company's exposure and enable it to recover a portion of any amounts it pays under its indemnification obligations. The Company had no liabilities recorded for these agreements as of June 30, 2023 and December 31, 2022, as no amounts were probable.

Employee Agreements

The Company has signed employment agreements with certain key employees pursuant to which, if their employment is terminated following a change of control of the Company, the employees are entitled to receive certain benefits, including accelerated vesting of equity incentives.

Legal Matters

In February 2021, the Company entered into a lease agreement for laboratory and office space (the Industry Lease) with Industry Office SLC, LLC (the landlord). In March 2023, the Company sent a letter to the landlord detailing numerous construction delays and irregularities, deficiencies and deviations from applicable structural drawings and/or non-conforming conditions with applicable building codes. On June 23, 2023, the landlord filed a lawsuit against the Company (*Industry Office SLC, LLC v. Recursion Pharmaceuticals, Inc.*, Case No. 230904627) in the Third District Court for Salt Lake County, State of Utah, alleging anticipatory repudiation and breach of contract. The Plaintiff seeks monetary damages and attorney's fees. In July 2023, the Company filed a motion to dismiss. The Company is unable to estimate the possible damages or range of damages associated with the Landlord's complaint. As of June 30, 2023, the Company had no liability recorded for these events as an unfavorable outcome was not probable.

Note 8. Common Stock

Each share of Class A common stock entitles the holder to one vote per share and each share of Class B common stock entitles the holder to 10 votes per share on all matters submitted to a vote of the Company's stockholders. Common stockholders are entitled to receive dividends, as may be declared by the Company's Board of Directors. As of June 30, 2023 and December 31, 2022, no dividends had been declared.

Valence Acquisition Exchangeable Shares

In May 2023, in connection with the acquisition of Valence, the Company entered into an agreement to issue up to 5,904,827 shares of Class A common stock (the "Exchange Shares"), that may be issued upon exchange, retraction or redemption of exchangeable shares of 14998685 Canada Inc., a corporation governed by the laws of Canada and an indirect wholly-owned subsidiary of Recursion. Each exchangeable share of a subsidiary of Recursion entitles the holder to exchange those shares on a one-for-one basis for Recursion's Class A common stock. The shares are entitled to receive dividends economically equivalent to dividends declared by Recursion, are non-voting and are subject to customary adjustments for stock splits or other reorganizations. In addition, the Company may

require all outstanding exchangeable shares to be exchanged into an equal number of Class A common stock upon the occurrence of certain events and at any time following the seventh anniversary of the closing of the Valence acquisition. The exchangeable shares are substantially the economic equivalent of the Class A shares. The Company's calculation of weighted-average shares outstanding includes the exchangeable shares.

Private Placement

In October 2022, Recursion issued 15,336,734 shares of the Company's Class A common stock (the Shares) at a purchase price of $9.80 per share in a private placement (the 2022 Private Placement) to qualified institutional buyers and institutional accredited investors (the Purchasers) for net proceeds of $143.7 million, after deducting fees and offering costs of $6.6 million.

Registration Rights Agreements

Acquisitions
In May 2023, in connection with the acquisition of Valence, the Company entered into a Registration Agreement providing for the registration for resale of the shares of Class A common stock and Exchange Shares issued or issuable in such transaction. A registration statement on Form S-3ASR (File No. 333-272281) was filed to register the resale shares by the Sellers. The agreement must remain effective for a period of not less than three years.

In May 2023, in connection with the acquisition of Cylica, the Company entered into a Registration Agreement providing for the registration for resale of the shares of Class A common stock issued in such transaction. A prospectus supplement to a registration statement (File No. 333-264845) was subsequently filed in June 2023 to register the resale shares by the Sellers. The agreement must be continuously effective until the earlier of the date that all shares have been sold thereunder or are able to be publicly sold by relying on Rule 144 of the Securities Act without registration.

Private Placement
In October 2022, in connection with the 2022 Private Placement, the Company entered into a Registration Rights Agreement providing for the registration for resale of the shares of Class A common stock issued in such transaction. A prospectus supplement to a registration statement (File No. 333-264845) was subsequently filed in October 2022 to register the resale of the shares of Class A common stock by the Purchasers. The agreement must remain effective until registrable securities covered by the agreement have been publicly sold by the holders or all shares cease to be registrable securities. In the event the holders cannot sell their shares due to certain circumstances causing the agreement to be ineffective, the Company must pay each holder of shares outstanding on the date and each month thereafter 1.0% of the aggregate purchase price paid by the holder without limit until the agreement is cured. As of June 30, 2023, there was no accrued liability related to this agreement, as it was not probable that a payment would be required.

Class A and B Common Shares Authorization

In April 2021, the Company's Board of Directors authorized two classes of common stock, Class A and Class B. The rights of the holders of Class A and B common stock are identical, except with respect to voting and conversion. Each share of Class A common stock is entitled to one vote per share. Each share of Class B common stock is entitled to 10 votes per share and is convertible at any time into one share of Class A common stock.

All Class B common stock is held by Christopher Gibson, Ph.D., the Company's Chief Executive Officer (CEO), or his affiliates. As of June 30, 2023, Dr. Gibson and his affiliates held outstanding shares of Class B common stock representing approximately 28% of the voting power of the Company's outstanding shares. This voting power may increase over time as Dr. Gibson vests in and exercises equity awards outstanding. If all the exchangeable equity awards held by Dr. Gibson had been fully vested, exercised and exchanged for shares of Class B common stock as of June 30, 2023, Dr. Gibson and his affiliates would hold approximately 31% of the voting power of the Company's outstanding shares. As a result, Dr. Gibson will be able to significantly influence any action requiring the approval of Recursion stockholders, including the election of the Board of Directors; the adoption of amendments to the Company's certificate of incorporation and bylaws; and the approval of any merger, consolidation, sale of all or substantially all of the Company's assets, or other major corporate transaction.

Note 9. Collaborative Development Contracts

Roche and Genentech

Description
In December 2021, Recursion entered into a collaboration and license agreement with Roche and Genentech (collectively referred to as Roche). Recursion is constructing, using the Company's imaging technology and proprietary machine-learning algorithms, unique maps of the inferred relationships amongst perturbation phenotypes in a given cellular context with the goal to discover and develop therapeutic small molecule programs in a gastrointestinal cancer indication and in key areas of neuroscience. Roche and Recursion will collaborate to select certain novel inferences with respect to small molecules or targets generated from the Phenomaps for further validation and optimization as collaboration programs. Roche and Recursion may also combine sequencing datasets from Roche with Recursion's Phenomaps and collaborate to generate new algorithms to produce multi-modal maps from which additional collaboration programs may be initiated. For every collaboration program that successfully identifies potential therapeutic small molecules or validates a target, Roche will have an option to obtain an exclusive license to develop and commercialize such potential therapeutic small molecules or to exploit such target in the applicable exclusive field.

Pricing
In January 2022, Recursion received a $150.0 million non-refundable upfront payment from the Company's collaboration with Roche. Recursion is eligible for additional milestone payments based on performance progress of the collaboration. Each of the Phenomaps requested by Roche and created by Recursion may be subject to either an initiation fee, acceptance fee or both. Such fees could exceed $250.0 million for 16 accepted Phenomaps. In addition, for a period of time after Roche's acceptance of certain Phenomaps, Roche will have the option to obtain, subject to payment of an exercise fee, rights to use outside the collaboration the raw images generated in the course of creating those Phenomaps. If Roche exercises its external use option for all 12 eligible Phenomaps, Roche's associated exercise fee payments to Recursion could exceed $250.0 million. Under the collaboration, Roche may initiate up to 40 programs, each of which, if successfully developed and commercialized, could yield more than $300.0 million in development, commercialization and net revenue milestones for Recursion, as well as tiered royalties on net revenue.

Accounting
This agreement represents a transaction with a customer and therefore is accounted for in accordance with Accounting Standards Codification (ASC) 606. Recursion has determined that it has three performance obligations, one related to gastrointestinal cancer and two in neuroscience. These performance obligations are for performing research and development services for Roche to identify targets and medicines. The performance obligations also include potential licenses related to the intellectual property. The Company concluded that licenses within the contract are not distinct from the research and development services as they are interrelated due to the fact that the research and development services significantly impact the potential licenses. Any additional services are considered customer options and will be considered as separate contracts for accounting purposes.

The Company has determined the transaction price to be $150.0 million, comprised of the upfront payment. Recursion will fully constrain the amounts of variable consideration to be received from potential milestones considering the stage of development and the risks associated with the remaining development required to achieve each milestone. Recursion will re-evaluate the transaction price each reporting period.

The transaction price was allocated to the performance obligations based on the estimated relative stand-alone selling price of each performance obligation as determined using an expected cost plus margin approach. The Company recognizes revenue over time based on costs incurred relative to total expected costs to perform the research and development services. Recursion determined that this method provides a faithful depiction of the transfer of control to the customer. This method of recognizing revenue requires the Company to make estimates of total costs to provide the services required under the performance obligations. Significant inputs used to determine the total costs included the length of time required, service hours performed by Company employees and materials

costs. A significant change in these estimates could have a material effect on the timing and amount of revenue recognized in future periods. Recursion has estimated the completion of the performance obligations by 2025.

Bayer AG

Description
In August 2020, the Company entered into a Research Collaboration and Option Agreement (the Bayer Agreement) with Bayer AG (Bayer) for a five-year term pursuant to which the Company and Bayer may initiate approximately 10 research projects related to fibrosis across multiple organ systems, including the lung, liver and heart. Under the agreement, the Company contributed compounds from its proprietary library and Bayer contributed compounds from its proprietary library and will contribute scientific expertise throughout the collaboration. Under each research project, the Company will work with Bayer to identify potential candidates for development. Under the agreement, Bayer has the first option for licenses to potential candidates.

Pricing
In October 2020, the Company received a $30.0 million non-refundable upfront payment. Each such license could potentially result in option exercise fees and development and commercial milestone payments payable to the Company, with an aggregate value of up to approximately $100.0 million (for an option on a lead series) or up to approximately $120.0 million (for an option on a development candidate), as well as tiered royalties for each such license, ranging from low- to mid-single digit percentages of sales, depending on commercial success.

Accounting
The Company determined that it has one performance obligation under the agreement, which is to perform research and development services for Bayer. Recursion determined the transaction price to be $30.0 million, comprised of the upfront payment. The Company allocated the amount to the single performance obligation. The Company is recognizing revenue over time by measuring progress towards completion of the performance obligation. This method of recognizing revenue requires the Company to make estimates of the total time to provide the services required under the performance obligation. A significant change in these estimates could have a material effect on the timing and amount of revenue recognized in future periods. Recursion has estimated the completion of the performance obligation by 2023.

Additional Revenue Disclosures
Recursion recognized $11.0 million and $23.1 million of operating revenue during the three and six months ended June 30, 2023, respectively, primarily all of which was included in the unearned revenue balance as of December 31, 2022. Of the revenue recognized during the three and six months ended June 30, 2022, $2.5 million and $5.0 million, respectively, were included in the unearned revenue balance as of December 31, 2021. Revenue recognized was from upfront payments received at the inception of the related contracts, which decreased the initial unearned revenue recognized. As of June 30, 2023, the Company had $7.1 million of costs incurred to fulfill a contract on its Condensed Consolidated Balance Sheet within “Other current assets.”

Unearned revenue was classified as short-term and long-term on the Condensed Consolidated Balance Sheets based on the Company’s estimate of revenue that will be recognized during the next twelve months.

Note 10. Stock-Based Compensation

In April 2021, the Board of Directors and the stockholders of the Company adopted the 2021 Equity Incentive Plan (the 2021 Plan). Under the 2021 Plan, 16,186,000 shares of Class A common stock were reserved. Additionally, shares were reserved for all outstanding awards under the previous 2016 Plan. The Company may grant stock options, restricted stock units (RSUs), stock appreciation rights, restricted stock awards and other forms of stock-based compensation.

As of June 30, 2023, 7,218,696 shares of Class A common stock were available for grant.

The following table presents the classification of stock-based compensation expense for stock options and RSUs for employees and non-employees within the Condensed Consolidated Statements of Operations:

	Three months ended June 30,		Six months ended June 30,	
(in thousands)	2023	2022	2023	2022
Cost of revenue	$ 1,415	$ 480	$ 2,426	$ 828
Research and development	4,329	2,095	7,012	3,729
General and administrative	5,643	2,926	10,221	6,288
Total	$ 11,387	$ 5,501	$ 19,659	$ 10,845

Stock Options

Stock options are primarily granted to executive leaders at the Company, generally vest over four years and expire no later than 10 years from the date of grant.

Stock option activity during the six months ended June 30, 2023 was as follows:

(in thousands except share data)	Shares	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Life (in years)	Aggregate Intrinsic Value
Outstanding as of December 31, 2022	16,154,924	$ 5.10	7.5	$ 67,997
Granted	5,083,268	6.23		
Cancelled	(769,263)	8.50		
Exercised	(1,974,737)	2.18		12,508
Outstanding as of June 30, 2023	18,494,192	$ 5.59	7.3	$ 62,653
Exercisable as of June 30, 2023	10,429,518	$ 4.22	6.6	$ 47,163

The fair value of options granted to employees is calculated on the grant date using the Black-Scholes option valuation model. The weighted-average grant-date fair values of stock options granted during the six months ended June 30, 2023 and 2022 were $5.55 and $6.57, respectively.

The following weighted-average assumptions were used to calculate the grant-date fair value of stock options:

	Six months ended June 30,	
	2023	2022
Expected term (in years)	5.8	6.2
Expected volatility	66 %	63 %
Expected dividend yield	—	—
Risk-free interest rate	3.6 %	1.9 %

As of June 30, 2023, $37.6 million of unrecognized compensation cost related to stock options is expected to be recognized as expense over approximately the next three years.

RSUs

Equity awards granted to employees primarily consist of RSUs and generally vest over four years. The weighted-average grant-date fair value of RSUs generally is determined based on the number of units granted and the quoted price of Recursion's common stock on the date of grant.

The following table summarizes Recursion's RSU activity during the six months ended June 30, 2023:

	Stock units	Weighted-average grant date fair value
Outstanding as of December 31, 2022	6,894,525	$ 8.17
Granted	13,306,404	8.68
Vested	(1,235,509)	4.70
Forfeited	(473,167)	8.08
Outstanding as of June 30, 2023	18,492,253	$ 8.48

The fair market value of RSUs vested was $9.8 million during the six months ended June 30, 2023. As of June 30, 2023, $150.1 million of unrecognized compensation cost related to RSUs is expected to be recognized as expense over approximately the next four years.

Note 11. Income Taxes

The Company did not record any U.S. income tax expense during the three and six months ended June 30, 2023 and 2022. The Company has historically incurred operating losses and maintains a full valuation allowance against its net deferred tax assets. Foreign taxes were insignificant during the three and six months ended June 30, 2023 and 2022.

Net operating losses (NOLs) and tax credit carry-forwards are subject to review and possible adjustment by the Internal Revenue Service ("IRS") and may become subject to annual limitation due to ownership changes that have occurred previously or that could occur in the future under Section 382 of the Internal Revenue Code, as amended and similar state provisions. These ownership changes may limit the amount of carryforwards that can be utilized annually to offset future taxable income. In general, an ownership change, as defined by Section 382, results from transactions increasing the ownership of certain shareholders or public groups in the stock of a corporation by more than 50% over a three-year period. The Company has not conducted a study to assess whether a change of ownership has occurred or whether there have been multiple ownership changes since inception due to the significant complexity and cost associated with such a study. If the Company has experienced a change of ownership, as defined by Section 382, at any time since inception, utilization of the net operating loss carryforwards or research and development tax credit carryforwards would be subject to an annual limitation under Section 382, which is determined by first multiplying the value of the Company's stock at the time of the ownership change by the applicable long-term tax-exempt rate and then could be subject to additional adjustments, as required. Any limitation may result in expiration of a portion of the net operating loss carryforwards or research and development tax credit carryforwards before utilization. Further, until a study is completed and any limitation is known, no amounts are being presented as an uncertain tax position.

The Company files income tax returns in the United States, Canada, United Kingdom, Utah, California and Massachusetts. The Company is not currently under examination in any of these jurisdictions. The Company is subject to income tax examinations on all federal returns since the 2016 tax return.

Note 12. Net Loss Per Share

For the three and six months ended June 30, 2023 and 2022, Recursion calculated net loss per share of Class A, Class B and Exchangeable common stock using the two-class method. Basic net loss per share is computed using the weighted-average number of shares outstanding during the period. Diluted net loss per share is computed using the weighted-average number of shares and the effect of potentially dilutive securities outstanding during the period. Potentially dilutive securities consist of stock options and other contingently issuable shares. For periods presented in which the Company reports a net loss, all potentially dilutive shares are anti-dilutive and as such are excluded from the calculation. For the three and six months ended June 30, 2023 and 2022, the Company reported a net loss and therefore basic and diluted loss per share were the same.

The rights, including the liquidation and dividend rights, of the holders of the Company's Class A, Class B and Exchangeable common stock are substantially identical, except with respect to voting. As a result, the undistributed

earnings for each period are allocated based on the contractual participation rights of the Class A, Class B and Exchangeable common shares as if the earnings for the period had been distributed. As the liquidation and dividend rights are identical, the undistributed earnings are allocated on a proportionate basis and the resulting amount per share for Class A, Class B and Exchangeable common stock was the same during the three and six months ended June 30, 2023 and 2022.

The following tables set forth the computation of basic and diluted net loss per share of Class A, Class B and Exchangeable common stock:

	Three months ended June 30, 2023			Six months ended June 30, 2023		
(in thousands, except share amount)	**Class A**	**Class B**	**Exchangeable**	**Class A**	**Class B**	**Exchangeable**
Numerator:						
Allocation of undistributed earnings	$ (71,945)	$ (2,932)	$ (1,849)	$ (133,067)	$ (5,520)	$ (3,466)
Denominator:						
Weighted average common shares outstanding	188,863,596	7,697,294	4,854,585	186,371,442	7,731,777	4,854,585
Net loss per share, basic and diluted	$ (0.38)	$ (0.38)	$ (0.38)	$ (0.71)	$ (0.71)	$ (0.71)

	Three months ended June 30, 2022		Six months ended June 30, 2022	
(in thousands, except share amounts)	**Class A**	**Class B**	**Class A**	**Class B**
Numerator:				
Allocation of undistributed earnings	$ (62,479)	$ (3,081)	$ (115,476)	$ (6,063)
Denominator:				
Weighted average common shares outstanding	164,116,317	8,096,073	162,901,989	8,553,606
Net loss per share, basic and diluted	$ (0.38)	$ (0.38)	$ (0.71)	$ (0.71)

The Company excluded the following potential common shares from the computation of diluted net loss per share for the periods indicated because including them would have had an anti-dilutive effect:

	Three months ended June 30,		Six months ended June 30,	
	2023	**2022**	**2023**	**2022**
Stock based compensation	7,719,063	8,229,000	7,996,333	10,481,602

Note 13. Fair Value Measurements

The fair value hierarchy consists of the following three levels:

- Level 1 — Valuations based on unadjusted quoted prices in active markets for identical assets that the company has the ability to access;
- Level 2 — Valuations based on quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active and model-based valuations in which all significant inputs are observable in the market; and
- Level 3 — Valuations using significant inputs that are unobservable in the market and include the use of judgment by the company's management about the assumptions market participants would use in pricing the asset or liability.

The Company is required to maintain a cash balance in a collateralized account to secure the Company’s credit cards. Additionally, the Company holds restricted cash related to an outstanding letter of credit issued by J.P.

Morgan, which was obtained to secure certain Company obligations relating to tenant improvements. Recursion also holds restricted cash related to a Bill and Melinda Gates Foundation grant.

The following tables summarize the Company's assets and liabilities that are measured at fair value on a recurring basis:

		Basis of fair value measurement		
(in thousands)	June 30, 2023	Level 1	Level 2	Level 3
Assets				
Cash equivalents:				
Money market funds	$ 363,545	$ 363,545	$ —	$ —
Restricted cash	10,954	10,954	—	—
Total assets	$ 374,499	$ 374,499	$ —	$ —

		Basis of fair value measurement		
(in thousands)	December 31, 2022	Level 1	Level 2	Level 3
Assets				
Cash equivalents:				
Money market funds	$ 404,613	$ 404,613	$ —	$ —
Restricted cash	9,200	9,200	—	—
Total assets	$ 413,813	$ 413,813	$ —	$ —

In addition to the financial instruments that are recognized at fair value on the Condensed Consolidated Balance Sheet, the Company has certain financial instruments that are recognized at amortized cost or some basis other than fair value. The carrying amount of these instruments are considered to be representative of their approximate fair values.

The following tables summarize the Company's financial instruments that are not measured at fair value:

	Book values		Fair values	
(in thousands)	June 30, 2023	December 31, 2022	June 30, 2023	December 31, 2022
Liabilities				
Current portion of notes payable	$ 676	$ 97	$ 676	$ 97
Notes payable, net of current portion	1,155	536	1,155	536
Total liabilities	$ 1,831	$ 633	$ 1,831	$ 633

Note 14. Subsequent Events

Stock purchase agreement

On July 11, 2023, Recursion entered into a Stock Purchase Agreement for a private placement with NVIDIA Corporation (2023 Private Placement), pursuant to which the Company sold an aggregate of 7,706,363 shares of the Company's Class A common stock at a price of $6.49 per share for gross proceeds of approximately $50.0 million, before deducting expenses. As of the time of the closing of the 2023 Private Placement, the shares issued were not registered under the Securities Act of 1933, as amended. In connection with the 2023 Private Placement, the Company and the purchasers entered into a Registration Rights Agreement providing for the registration for resale of the shares. The Company is required to use commercially reasonable efforts to prepare and file a registration statement (or a prospectus supplement within 30 days after the closing date of the 2023 Private Placement, and to use commercially reasonable efforts to have the registration statement declared effective as soon as practicable and in any event within 90 days following the closing date). After the registration, the Company has

agreed to use commercially reasonable efforts to keep the registration statement continuously effective until such date that all Registrable Securities (as such term is defined in the Registration Rights Agreement) covered by the registration statement or prospectus supplement have been sold.

At-the-Market offering program

On August 8, 2023, the Company entered into an Open Market Sales agreement (the “Sales Agreement”) with Jefferies LLC, whereby the Company may issue shares of Class A common stock, representing an aggregate offering price of up to $300.0 million, from time to time, through an “at the market offering” program under which Jefferies acts as the sales agent.

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

The following is a discussion and analysis of the financial condition of Recursion Pharmaceuticals, Inc. (Recursion, the Company, we, us or our) and the results of operations. This commentary should be read in conjunction with the unaudited Condensed Consolidated Financial Statements and accompanying notes appearing in Item 1, "Financial Statements" and the Company's audited consolidated financial statements and accompanying notes and "Management's Discussion and Analysis of Financial Condition and Results of Operations" included in the Annual Report on Form 10-K for the year ended December 31, 2022. This discussion, particularly information with respect to our future results of operations or financial condition, business strategy and plans and objectives of management for future operations, includes forward-looking statements that involve risks and uncertainties as described under the heading "Note About Forward-Looking Statements" in this Quarterly Report on Form 10-Q. You should review the disclosure under the heading "Risk Factors" in the Annual Report on Form 10-K for a discussion of important factors that could cause our actual results to differ materially from those anticipated in these forward-looking statements. We assume no obligation to revise or publicly release any revision to any forward-looking statements contained in this Quarterly Report on Form 10-Q, unless required by law.

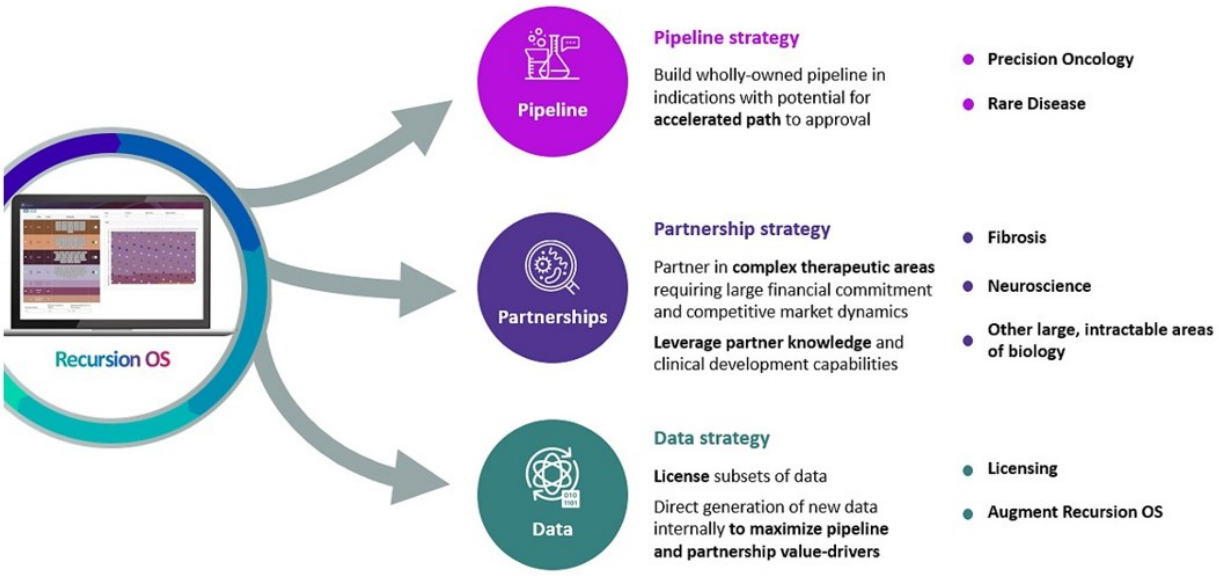
Investors and others should note that we announce material financial and other information to our investors using our investor relations website (https://ir.recursion.com/), SEC filings, press releases, public conference calls and webcasts. We use these channels as well as social media and blogs to communicate with our stakeholders and the public about our company, our services and other issues. It is possible that the information we post on social media and blogs could be deemed to be material information. Therefore, we encourage investors, the media and others interested in our company to review the information we post on the social media channels and blogs listed on our investor relations website. Information contained in, or that can be accessed through, our website is not a part of, and is not incorporated into, this report.

Overview

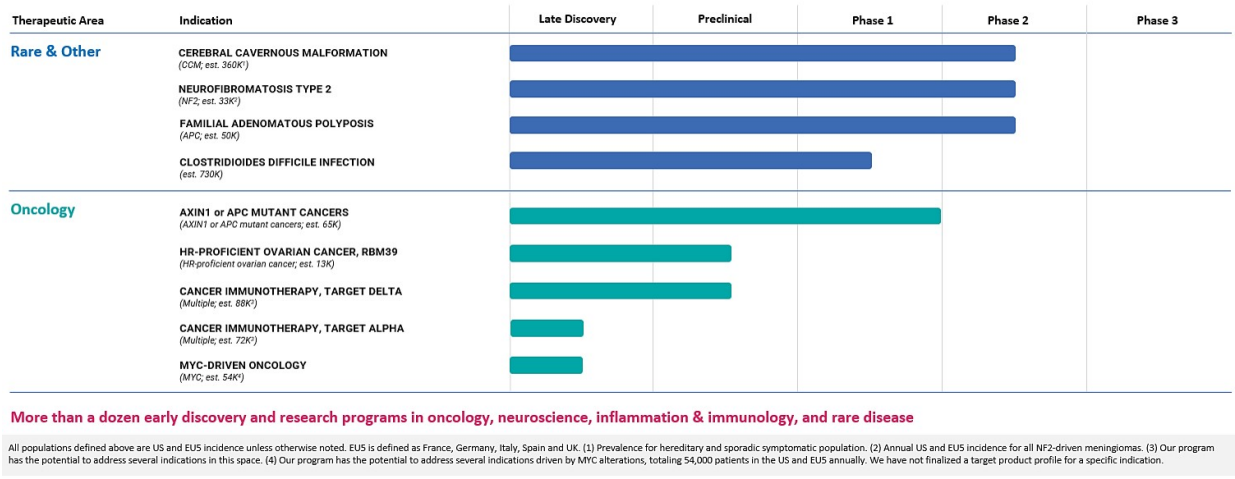
Recursion is a clinical stage TechBio company leading this burgeoning space by decoding biology and chemistry to industrialize drug discovery. Central to our mission is the Recursion Operating System (OS), a platform built across diverse technologies that enables us to map and navigate trillions of biological and chemical relationships within the Recursion Data Universe, one of the world's largest proprietary biological and chemical datasets. We frame this integration of the physical and digital components as iterative loops of atoms and bits. Scaled 'wet-lab' biology and chemistry data built in-house (atoms) are organized into virtuous cycles with 'dry-lab' computational tools (bits) to rapidly translate *in silico* hypotheses into validated insights and novel chemistry. Our focus on mapping and navigating the complexities of biology and chemistry beyond the published literature and in a target-agnostic way differentiates us from other companies in our space and leads us to confront a fundamental cause of failure for the majority of clinical-stage programs - the wrong target is chosen due to an incomplete and reductionist view of biology. Our balanced team of life scientists and computational and technical experts creates an environment where empirical data, statistical rigor and creative thinking are brought to bear on our decisions.

We leverage our Recursion OS to enable three key value drivers:

1. An expansive **pipeline** of internally-developed clinical and preclinical programs focused on genetically-driven rare diseases and oncology with significant unmet need and market opportunities in some cases potentially in excess of $1 billion in annual sales
2. Transformational **partnerships** with leading biopharma companies to map and navigate intractable areas of biology, identify novel targets and develop potential new medicines that are further developed in resource-heavy clinical trials overseen by our partners
3. Development of one of the largest fit-for-purpose proprietary biological and chemical **datasets** in the world at a time when advances in AI paired with the right training data are creating disruptive value.



Recursion has a portfolio of clinical-stage, preclinical and discovery programs and continues scaling its Recursion OS with more than 200 million total phenomics experiments, the initiation of multi-timepoint live-cell microscopy, transcriptomics, proteomics, inVivomics, data related to multi-target compound interactions and physicochemical properties, as well as large language model derived disease relevance and target-compound relationships. The total size of the proprietary Recursion Data Universe is over 25 petabytes and the number of predicted biological and chemical relationships is approximately 4 trillion. Data have been generated by the Recursion OS across 50 human cell types, an in-house chemical library of approximately 1.7 million compounds, and an *in silico* library of over 1 trillion small molecules, by a team of over 550 Recursionauts that is balanced between life scientists and computational and technical experts.



Summary of Business Highlights

Pipeline

- **Cerebral Cavernous Malformation (CCM) (REC-994):** Our Phase 2 SYCAMORE clinical trial is a double-blind, placebo-controlled safety, tolerability and exploratory efficacy study of this drug candidate in participants with CCM. This study was fully enrolled as of June 2023 with 62 participants and all participants

who have thus far finished their first year of treatment have enrolled in the long-term extension study. We expect to share Phase 2 proof-of-concept data in H2 2024.

- **Neurofibromatosis Type 2 (NF2) (REC-2282):** Our Phase 2/3 POPLAR clinical trial is a two part study of REC-2282 in participants with progressive NF2-mutated meningiomas. Part A of the study is ongoing and is exploring two doses of REC-2282 in approximately 23 adults and 9 adolescents. We expect to share Phase 2 safety, tolerability, pharmacokinetics and preliminary efficacy in H2 2024.
- **Familial Adenomatous Polyposis (FAP) (REC-4881):** We have enrolled multiple participants in our TUPELO clinical trial which evaluates REC-4881 in patients with FAP. We are now providing guidance on a data readout and expect to share Phase 2 safety, tolerability, pharmacokinetics and preliminary efficacy in H1 2025.
- **AXIN1 or APC Mutant Cancers (REC-4881):** We will evaluate REC-4881 in a Phase 2 biomarker enriched study in patients with unresectable, locally advanced or metastatic cancer with AXIN1 or APC mutations. The IND was accepted by the FDA and we expect to initiate this Phase 2 study in Q4 2023.
- ***Clostridioides difficile* Infection (REC-3964):** Our Phase 1 clinical trial is a first-in-human protocol evaluating single and multiple doses of REC-3964 in healthy volunteers and will assess the safety, tolerability and pharmacokinetic profile of REC-3964. Single ascending dose and multiple ascending dose studies are now complete. REC-3964 has been well tolerated and no safety issues have been identified to date. We expect to share Phase 1 safety and pharmacokinetics data in Q3 2023.
- **RBM39 HR-Proficient Ovarian Cancer:** RBM39 (previously identified as Target Gamma) is a novel CDK12-adjacent target identified by the Recursion OS. We believe we can modulate this target to produce a therapeutic effect in HR-proficient ovarian cancer and potentially in other tumor types. This program is in the preclinical stage and IND-enabling studies are progressing.

Partnerships

- **NVIDIA:** In July 2023, we announced a $50 million investment and collaboration with NVIDIA. We will continue to build our own foundation models for biology and chemistry and NVIDIA will assist in optimizing these models, provide priority access to computational resources on NVIDIA's cloud service DGX Cloud, and potentially host commercially-licensable machine learning and foundation models developed by Recursion on BioNeMo, NVIDIA's marketplace for generative AI in drug discovery. In this partnership, we will maintain control of our proprietary data and models as well as how and where we could host our technology tools as we expand our business strategy of data as a value driver. Since the announcement in July, we have already deployed our digital chemistry technology together with NVIDIA's computational resources to predict the ligand-protein interactions for approximately 36 billion compounds in the Enamine REAL Space, reported to be the world's largest searchable chemical library, where we evaluated 2.8 quadrillion target-compound pairs.
- **Roche-Genentech and Bayer:** We continue to advance our collaborations to discover potential new therapeutics with our strategic partners Roche-Genentech and Bayer. In the near-term, there is the potential for option exercises associated with partnership programs or option exercises associated with map building initiatives or data sharing.

Platform

- **Digital Chemistry and Generative AI Capabilities:** In May 2023, we acquired Cyclica and Valence Discovery to bolster our digital chemistry and generative AI capabilities and drive value across our pipeline, partnerships and platform. Shortly after closing these acquisitions, we used Cyclica's digital chemistry tools to predict the protein-ligand interactions for the over 1 million compounds in our internal, non-partnered chemical library. Now, less than one quarter after the closing of these acquisitions, we worked with our partners at NVIDIA to predict the protein-ligand interactions of approximately 36 billion compounds in the Enamine REAL Space, reported to be the world's largest searchable chemical library. As part of the Cyclica acquisition, Recursion acquired four platform patent families, which includes four pending U.S. patent applications directed to our platform with expiration, upon issuance, expected to be no earlier than 2035.

This brings the total number of patent families related to the Recursion Platform to at least 25, and includes patents that, upon issuance, are expected to expire as late as 2042.

- **Accelerating Pipeline and Partnership Value:** For our internal pipeline, we have used our digital chemistry tools to deconvolve proteome-wide biological targets to confirm that certain compounds operate through a novel mechanism of action which was previously predicted by our functional phenomics maps. Such proteomic mapping capabilities provide an additional data layer to efficiently identify the most promising novel chemical series.
- **Foundation Model Construction:** We continue to use our supercomputer, BioHive-1, to train a proprietary phenomics foundation model. As we have trained on larger quantities of our proprietary data, emergent properties have arisen out of the models and we have seen significant improvements over previous deep learning production models. We are also in the early stages of exploring more powerful and broadly useful foundation models based on our large-scale proprietary multi-omics data, which includes phenomics across 50 human cell types and approximately 1.7 million compounds, multi-timepoint live-cell microscopy, transcriptomics, proteomics, inVivomics, multi-target compound interactions, physicochemical properties, as well as predicted protein-ligand relationships. We may explore commercial licensing of some of our models in collaboration with NVIDIA and their BioNeMo platform in the coming year, though our state-of-the-art models will only be available to our team and close partners.
- **Large Language Models:** One year ago, more than 40 employees were dedicated to exploring our maps of biology and chemistry to initiate programs at Recursion. Today, those same employees have been redeployed and our newest internal programs are being initiated autonomously. This efficiency and scale is through the deployment of large language models to map scientific literature in conjunction with our internally derived proprietary maps to identify opportunities for scientific arbitrage in areas of unmet need. These opportunities are then automatically prioritized for confirmation and validation in our highly-automated wetlabs. This is a significant step towards our vision of autonomous drug discovery and biological exploration.
- **Valence Labs - Powered by Recursion:** In July 2023 at the International Conference for Machine Learning, we launched Valence Labs, Recursion's cutting-edge machine learning research center for biology and chemistry in Montréal that aims to promote open-science and academic research. Recursion's commitment to open-science helps us recruit and retain the best talent in the field of generative AI, allows us to design and set the standards by which ML and AI are deployed in drug discovery, and may drive additional biopharma companies to consider partnering with Recursion to get access to our proprietary state-of-the-art tools, technology, datasets and programs.

Additional Corporate Updates

- **Chief Medical Officer:** In May 2023, David Mauro, M.D., Ph.D. joined Recursion as its Chief Medical Officer. Dr. Mauro has over 20 years experience in oncology drug development and has guided more than 25 Investigational New Drug candidates through the translational, preliminary and later stages of development at various companies.
- **Chief Legal Officer:** In July 2023, Recursion named Nathan Hatfield, J.D., M.B.A. as Chief Legal Officer. Mr. Hatfield has worked at Recursion for over 6 years, previously serving as SVP and Head of Legal. Prior to Recursion, Mr. Hatfield was a securities attorney at the law firm Wilson Sonsini Goodrich & Rosati.
- **Toronto Office:** In June 2023, we celebrated the opening of our Canadian Headquarters in Toronto with government officials as well as members of the technology and biotechnology communities.
- **ESG Reporting:** In June 2023, Recursion received a favorable ESG Risk Rating from Morningstar Sustainalytics which ranked Recursion as the #1 biotechnology company out of approximately 400 companies and the #14 pharmaceuticals company out of approximately 900 companies.

Financing and Operations

We were incorporated in November 2013. On April 20, 2021, we closed our Initial Public Offering (IPO) and issued 27,878,787 shares of Class A common stock at a price of $18.00 per share, raising net proceeds of $462.4 million. Prior to our IPO, we had raised approximately $448.9 million in equity financing from investors in addition to $30.0 million in an upfront payment from our collaboration with Bayer AG (Bayer). In January 2022, we received an upfront payment of $150.0 million from our collaboration with Roche. See Note 9, "Collaborative Development Contracts" to the Condensed Consolidated Financial Statements for additional information on the collaborations. In October 2022, we issued 15,336,734 shares of our Class A common stock at a purchase price of $9.80 per share in the 2022 Private Placement to qualified institutional buyers and institutional accredited investors (the Purchasers) for net

proceeds of $143.7 million, after deducting fees and offering costs of $6.6 million. On July 11, 2023, we issued an aggregate of 7,706,363 shares of the Company's Class A common stock at a purchase price of $6.49 per share for gross proceeds of approximately $50.0 million, before deducting expenses in the 2023 Private Placement with NVIDIA Corporation. See Note 14, "Subsequent Events" to the Condensed Consolidated Financial Statements for additional information on the 2023 Private Placement.

We use the capital we have raised to fund operations and investing activities across platform research operations, drug discovery, clinical development, digital and other infrastructure, creation of our portfolio of intellectual property and administrative support. We do not have any products approved for commercial sale and have not generated any revenues from product sales. We had cash and cash equivalents of $405.9 million as of June 30, 2023. Based on our current operating plan, we believe that our cash and cash equivalents will be sufficient to fund our operations for at least the next twelve months.

Since inception, we have incurred significant operating losses. Our net losses were $76.7 million and $142.1 million during the three and six months ended June 30, 2023, respectively. Our net losses were $65.6 million and $121.5 million during the three and six months ended June 30, 2022, respectively. As of June 30, 2023, our accumulated deficit was $781.6 million.

We anticipate that we will need to raise additional financing in the future to fund our operations, including the potential commercialization of any approved product candidates. Until such time, if ever, as we can generate significant product revenue, we expect to finance our operations with our existing cash and cash equivalents, any future equity or debt financings and upfront, milestone and royalty payments, if any, received under current or future license or collaboration agreements. We may not be able to raise additional capital on terms acceptable to us or at all. If we are unable to raise additional capital when desired, our business, results of operations and financial condition may be adversely affected.

Components of Operating Results

Revenue

Operating revenue is generated through research and development agreements derived from strategic alliances. We are entitled to receive variable consideration as certain milestones are achieved. The timing of revenue recognition is not directly correlated to the timing of cash receipts.

Cost of Revenue

Cost of revenue consists of the Company's costs to provide services for drug discovery required under performance obligations with partnership customers. These primarily include materials costs, service hours performed by our employees and depreciation of property and equipment.

Research and Development

Research and development expenses account for a significant portion of our operating expenses. We recognize research and development expenses as they are incurred. Research and development expenses consist of costs incurred in performing activities including:

- costs to develop and operate our platform;
- costs of discovery efforts which may lead to development candidates, including research materials and external research;
- costs for clinical development of our investigational products;
- costs for materials and supplies associated with the manufacture of active pharmaceutical ingredients, investigational products for preclinical testing and clinical trials;
- personnel-related expenses, including salaries, benefits, bonuses and stock-based compensation for employees engaged in research and development functions;
- costs associated with operating our digital infrastructure; and
- other direct and allocated expenses incurred as a result of research and development activities, including those for facilities, depreciation, amortization and insurance.

We recognize expenses associated with third-party contracted services as they are incurred. Upon termination of contracts with third parties, our financial obligations are generally limited to costs incurred or committed to date. Any advance payments for goods or services to be used or rendered in future research and product development activities pursuant to a contractual arrangement are classified as prepaid expenses until such goods or services are rendered.

General and Administrative

We expense general and administrative costs as incurred. General and administrative expenses consist primarily of salaries; including employee benefits and stock-based compensation. General and administrative expenses also include facilities, depreciation, information technology, professional fees for auditing and tax, legal fees for corporate and patent matters and insurance costs.

Other Income, Net

Other income, net consists primarily of interest earned on cash and cash equivalents.

Results of Operations

The following table summarizes our results of operations:

	Three months ended June 30,		Change		Six months ended June 30,		Change	
(in thousands, except percentages)	**2023**	**2022**	**$**	**%**	**2023**	**2022**	**$**	**%**
Revenue								
Operating revenue	$ 11,016	$ 7,653	$ 3,364	44 %	$ 23,150	$ 12,952	$ 10,198	79 %
Grant revenue	1	21	(20)	(96)%	1	55	(55)	(98)%
Total revenue	11,017	7,674	3,344	44 %	23,151	13,007	10,143	78 %
Operating costs and expenses								
Cost of revenue	9,382	14,227	(4,845)	(34)%	21,829	22,026	(196)	(1)%
Research and development	55,060	38,439	16,621	43 %	101,737	70,880	30,858	44 %
General and administrative	28,290	21,199	7,091	33 %	51,165	42,273	8,892	21 %
Total operating costs and expenses	92,732	73,865	18,867	26 %	174,731	135,179	39,554	29 %
Loss from operations	(81,715)	(66,191)	(15,523)	(23)%	(151,580)	(122,172)	(29,411)	(24)%
Other income, net	4,989	631	4,358	>100%	9,527	633	8,893	>100%
Net loss	$ (76,726)	$ (65,560)	$ (11,165)	(17)%	$ (142,053)	$ (121,539)	$ (20,518)	(17)%

Summary

Our financial performance during the three and six months ended June 30, 2023 compared to the prior periods included; (i) an increase in research and development costs due to increased platform costs as we have expanded and upgraded our capabilities, additionally for the three and six months ended June 30, 2022 platform costs decreased due to a reallocation of spending to cost of revenue for our strategic partnerships and (ii) an increase in revenue recognized due to progression on our strategic partnership with Roche.

Revenue

The following table summarizes our components of revenue:

(in thousands, except percentages)	Three months ended June 30, 2023	2022	Change $	Change %	Six months ended June 30, 2023	2022	Change $	Change %
Revenue								
Operating revenue	$ 11,016	$ 7,653	$ 3,364	44 %	$ 23,150	$ 12,952	$ 10,198	79 %
Grant revenue	1	21	(20)	(96)%	1	55	(55)	(98)%
Total revenue	$ 11,017	$ 7,674	$ 3,344	44 %	$ 23,151	$ 13,007	$ 10,143	78 %

For the three and six months ended June 30, 2023, the increase in revenue compared to prior period was due to revenue recognized from our strategic partnership with Roche, which has progressed from primarily cell type evaluation work to inference based Phenomap building and additional cell type evaluation work.

Cost of Revenue

The following table summarizes our cost of revenue:

(in thousands, except percentages)	Three months ended June 30, 2023	2022	Change $	Change %	Six months ended June 30, 2023	2022	Change $	Change %
Total cost of revenue	$ 9,382	$ 14,227	$ (4,845)	(34)%	$ 21,829	$ 22,026	$ (197)	(1)%

For the three months ended June 30, 2023, the decrease in cost of revenue compared to prior period was due to our strategic partnership with Bayer, for which less brute-force work was required.

Research and Development

The following table summarizes our components of research and development expense:

(in thousands, except percentages)	Three months ended June 30, 2023	2022	Change $	Change %	Six months ended June 30, 2023	2022	Change $	Change %
Research and development expense								
Platform	$ 21,514	$ 10,686	$ 10,828	>100%	$ 40,006	$ 16,000	$ 24,006	>100%
Discovery	16,449	12,398	4,051	33 %	29,954	24,759	5,195	21 %
Clinical	12,479	12,551	(72)	(1)%	24,001	23,663	338	1 %
Stock based compensation	4,483	2,165	2,318	>100%	7,315	3,929	3,386	86 %
Other	135	639	(504)	(79)%	461	2,529	(2,068)	(82)%
Total research and development expense	$ 55,060	$ 38,439	$ 16,621	43 %	$ 101,737	$ 70,880	$ 30,857	44 %

Significant components of research and development expense include the following allocated by development phase: Platform, which refers primarily to expenses related to screening of product candidates through hit identification; Discovery, which refers primarily to expenses related to hit identification through development of candidates; and Clinical, which refers primarily to expenses related to development of candidates and beyond.

For the three and six months ended June 30, 2023, the increase in research and development expenses compared to the prior period was due to increased platform costs as we have expanded and upgraded our capabilities in platform including our chemical technology, machine learning and transcriptomics platform. Additionally, for the three and six months ended June 30, 2022 platform costs decreased due to a reallocation of spending to cost of revenue for our strategic partnerships.

General and Administrative Expense

The following table summarizes our general and administrative expense:

	Three months ended June 30,		Change		Six months ended June 30,		Change	
(in thousands, except percentages)	**2023**	**2022**	**$**	**%**	**2023**	**2022**	**$**	**%**
Total general and administrative expense	$ 28,290	$ 21,199	$ 7,091	33 %	$ 51,165	$ 42,273	$ 8,892	21 %

For the three and six months ended June 30, 2023, the increase in general and administrative expense compared to prior period was primarily driven by an increase in salaries and wages of $3.0 million and $4.3 million, respectively, and increases in software and depreciation expense.

Other Income, Net

The following table summarizes our components of other income, net:

	Three months ended June 30,		Change		Six months ended June 30,		Change	
(in thousands, except percentages)	**2023**	**2022**	**$**	**%**	**2023**	**2022**	**$**	**%**
Interest income	4,957	652	4,306	>100%	9,617	739	8,879	>100%
Interest expense	(26)	(14)	(12)	91.1 %	(45)	(28)	(17)	60.8 %
Other	57	(7)	64	>100%	(45)	(78)	33	(41.8)%
Other income, net	$ 4,988	$ 631	$ 4,358	>100%	$ 9,527	$ 633	$ 8,895	>100%

For the three and six months ended June 30, 2023, the increase in interest income related to earnings on cash and cash equivalents in money market funds.

Liquidity and Capital Resources

Sources of Liquidity

We have not yet commercialized any products and do not expect to generate revenue from the sales of any product candidates for at least several years. Cash and cash equivalents totaled $405.9 million and $549.9 million as of June 30, 2023 and December 31, 2022, respectively.

We have incurred operating losses and experienced negative operating cash flows and we anticipate that the Company will continue to incur losses for at least the foreseeable future. Our net loss was $76.7 million and $142.1 million during the three and six months ended June 30, 2023, respectively. Our net loss was $65.6 million and $121.5 million during the three and six months ended June 30, 2022, respectively. As of June 30, 2023 and December 31, 2022, we had an accumulated deficit of $781.6 million and $639.6 million, respectively.

We have financed our operations through the private placements of preferred stock and Class A common stock issuances. As of June 30, 2023, we have received net proceeds of $448.9 million from the sale of preferred stock and $606.1 million from Class A common stock issuances. See Note 8, “Common Stock” to the Condensed Consolidated Financial Statements for additional details on Class A common stock issuances. Additionally, as of June 30, 2023, we have received proceeds of $180.0 million from our strategic partnerships. See Note 9, “Collaborative Development Contracts” to the Condensed Consolidated Financial Statements for additional details on the collaborations. Subsequent to June 30, 2023, Recursion entered into the 2023 Private Placement with NVIDIA Corporation, see Note 14, “Subsequent Events” to the Condensed Consolidated Financial Statements for additional details.

Cash Flows

The following table is a summary of the Condensed Consolidated Statements of Cash Flows for each of the periods presented below:

	Six months ended June 30,	
(in thousands)	**2023**	**2022**
Cash provided by (used in) operating activities	$ (140,783)	$ 15,765
Cash provided by (used in) investing activities	(7,393)	148,244
Cash provided by financing activities	5,709	4,752

Operating Activities
Cash used by operating activities increased during the six months ended June 30, 2023 as a result of an upfront payment of $150.0 million from our strategic partnership with Roche received during the six months ended June 30, 2022.

Cash provided by operating activities during the six months ended June 30, 2022 included an upfront payment of $150.0 million from our strategic partnership with Roche.

Investing Activities
Cash used by investing activities during the six months ended June 30, 2023 consisted primarily of purchases of property and equipment of $9.1 million, which included $1.7 million for a project to upgrade the BioHive supercomputer and lab equipment purchases. The cash used was partially offset by $1.9 million of net cash acquired in the acquisition of a business.

Cash provided by investing activities during the six months ended June 30, 2022 was driven by sales and maturities of investments of $169.1 million, partially offset by purchases of property and equipment of $20.8 million.

Financing Activities
Cash provided by financing activities during the six months ended June 30, 2023 and 2022 primarily included proceeds from equity incentive plans of $5.8 million and $4.8 million, respectively.

Critical Accounting Estimates and Policies

A summary of the Company's significant accounting estimates and policies is included in Note 2, "Summary of Significant Accounting Policies" in our 2022 Annual Report. Except as noted below, there were no significant changes in the Company's application of its critical accounting policies during the six months ended June 30, 2023.

Business Combinations

Results of operations of acquired companies are included in the Recursion results of operations as of the respective acquisition dates. The purchase price of each acquisition is allocated to the net assets acquired based on estimates of their fair values at the date of acquisition. Any purchase price in excess of these net assets is recorded as goodwill. The allocation of purchase price in certain cases may be subject to revision based on the final determination of fair values during the measurement period, which may be up to one year from the acquisition date. Legal costs, due diligence costs, business valuation costs and all other business acquisition costs are expensed when incurred.

Amounts allocated to assets and liabilities are based upon fair value estimates. These fair value estimates could require us to make significant estimates and assumptions, especially with respect to intangible assets. We make estimates of fair value based upon assumptions believed to be reasonable and that of a market participant. These estimates are based on available historical information as well as future expectations and the estimates are inherently uncertain. The use of alternative estimates and assumptions could increase or decrease the estimated fair values, the amounts allocated to identifiable intangible assets acquired, future amortization expense and the value of goodwill.

Recently Issued and Adopted Accounting Pronouncements

See Note 2, “Basis of Presentation” in Item 1 of this Quarterly Report on Form 10-Q for information regarding recently issued and adopted accounting pronouncements.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

Interest Rate Risk

We are exposed to market risk related to changes in interest rates of our cash and cash equivalents. As of June 30, 2023, our cash and cash equivalents primarily consisted of money market funds. Our primary exposure to market risk is interest income sensitivity, which is affected by changes in U.S. interest rates. A hypothetical 100 basis point decrease in interest rates as of as of June 30, 2023, would have an insignificant effect on net loss in the ensuring year.

Foreign Currency Exchange Risk

Our employees and our operations are primarily located in the United States and Canada and our expenses are generally denominated in U.S. and Canadian dollars. We also have entered into a limited number of contracts with vendors for research and development services that have underlying payment obligations denominated in foreign currencies. We are subject to foreign currency transaction gains or losses on our contracts denominated in foreign currencies. To date, foreign currency transaction gains and losses have not been material to our financial statements, and we do not have a formal hedging program with respect to foreign currency. A 10% increase or decrease in current exchange rates would not have had a material effect on our financial results during the three and six months ended June 30, 2023 and 2022.

Inflation Risk and Market Volatility

In recent months, inflation has continued to increase significantly in the U.S. and overseas resulting in rising costs for transportation, wages, construction and other goods and services. Inflation and supply chain disruptions have increased our overall operating expenses. In addition, the capital and credit markets have been experiencing volatility and disruption, which has exerted downward pressure on stock prices and credit capacity. There is no assurance that such markets will be a source of future financing for Recursion, nor that other funding sources would be available or sufficient, particularly if current levels of market disruption and volatility continue or worsen. Although we do not believe that the above conditions have materially changed our overall financial position, if our costs continue to increase, we may not be able to fully offset those increased costs through reduced spending or additional financing efforts and failure to do so could harm our business, financial condition and results of operations.

Item 4. Controls and Procedures.

The Company has established disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the Exchange Act) designed to ensure that information required to be disclosed in the reports that the Company files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC’s rules and forms and is accumulated and communicated to management, including the principal executive officer (our Chief Executive Officer) and principal financial officer (our Chief Financial Officer), to allow timely decisions regarding required disclosure. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints and that management is required to apply judgment in evaluating the benefits of possible controls and procedures relative to their costs.

Evaluation of Disclosure Controls and Procedures

Our management has evaluated, with the participation of our Chief Executive Officer and Chief Financial Officer, the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) as of the end of the period covered by this report. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives as management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Our disclosure controls and procedures have been designed to

provide reasonable assurance of achieving their objectives. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that, as of June 30, 2023, our disclosure controls and procedures were effective.

Changes in Internal Control Over Financial Reporting

As of June 30, 2023, management is in the process of integrating the internal controls of the acquired businesses into Recursion's existing operations as part of planned integration activities. There were no other changes in financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the quarter ended June 30, 2023 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II - OTHER INFORMATION

Item 1. Legal Proceedings.

The Company may, from time to time, be involved in various legal proceedings arising in the normal course of business. An unfavorable resolution of any such matter could materially affect the Company's future financial position, results of operations or cash flows. For more information pertaining to legal proceedings, see Part I, Item 1, Note 7, "Commitments and Contingencies," which is incorporated herein by reference.

Item 1A. Risk Factors.

Investing in our common stock involves a high degree of risk. For a detailed discussion of the risks that affect our business. Please refer to the sections titled "Risk Factor Summary" and "Item 1A. Risk Factors" of our 2022 Annual Report.

The risk factors set forth below represent new risk factors or those containing changes to the similarly titled risk factor included in "Item 1A. Risk Factors" of our 2022 Annual Report.

RISKS RELATED TO OUR LIMITED OPERATING HISTORY, FINANCIAL POSITION, AND NEED FOR ADDITIONAL CAPITAL

Raising additional capital may cause dilution to our stockholders, restrict our operations, require us to relinquish rights to our technologies or drug candidates, and divert management's attention from our core business.

The terms of any financing we obtain may adversely affect the holdings or rights of our stockholders, and the issuance of additional securities, whether equity or debt, or the possibility of such issuance, may cause the market price of our shares to decline. To the extent that we raise additional capital through the sale of Class A common stock or securities convertible or exchangeable into Class A common stock, our stockholders' ownership interests will be diluted.

For example, in October 2022, we issued 15,336,734 shares of our Class A common stock for gross proceeds of approximately $150 million and in July 2023, we issued 7,706,363 shares of our Class A common stock for gross proceeds of approximately $50 million. Additionally, in August 2023, we entered into an Open Market Sales Agreement (the "Sales Agreement") with Jefferies LLC (the "Sales Agent"), to provide for the offering, issuance and sale of up to an aggregate amount of $300.0 million of our Class A common stock from time to time in "at-the-market" offerings. We will pay to the Sales Agent cash commissions of 3.0% of the gross proceeds of sales of our Class A common stock under the Sales Agreement. Sales of a substantial number of shares of our outstanding Class A common stock in the public market could occur at any time. These sales, or the perception in the market that the holders of a large number of shares of our Class A common stock intend to sell shares, could reduce the market price of our common stock.

Moreover, as a condition to providing additional funds to us, future investors may demand, and may be granted, favorable terms that may include liquidation, preferences, dividend payments, voting rights or other preferences that materially and adversely affect the rights of common stockholders. Debt financing, if available, would result in increased fixed payment obligations. In addition, we may be required to agree to certain restrictive covenants, which could adversely impact our ability to make capital expenditures, declare dividends, or otherwise conduct our business. We also may need to raise funds through additional strategic collaborations, partnerships, or licensing arrangements with third parties at an earlier stage than would be desirable. Such arrangements could require us to relinquish rights to some of our technologies or drug candidates, future revenue streams, or research programs, or otherwise agree to terms unfavorable to us. Fundraising efforts have the potential to divert our management's attention from our core business or create competing priorities, which may adversely affect our ability to develop and commercialize our drug candidates and technologies.

RISKS RELATED TO ACQUISITIONS

We may not realize all of the anticipated outcomes and benefits of our Acquisitions.

The benefits we expect to achieve as a result of our recent acquisitions of Cyclica Inc. (“Cyclica”) and Valence Discovery Inc. (“Valence”) in May 2023 and any future acquisitions will depend, in part, on our ability to realize anticipated growth opportunities and cost synergies. Our success in realizing these growth opportunities and cost synergies, and the timing of this realization, depends on the successful integration of Cyclica and Valence’s, and any future acquisition targets’, business and operations with our business and operations. Even if we are able to integrate our business with Cyclica’s and Valence’s business successfully, this integration may not result in the realization of the outcomes and benefits, growth opportunities and cost synergies we currently expect within the anticipated time frame or at all. Moreover, we anticipate that we will incur substantial expenses in connection with the integration of Cyclica’s and Valence’s business with our business. While we anticipate that certain expenses will be incurred, such expenses are difficult to estimate accurately, and may exceed current estimates.

Accordingly, the outcomes and benefits from our acquisition of Cyclica and Valence may be offset by costs incurred or delays in integrating the companies, which could cause the outcomes and benefits we anticipate to be inaccurate or not realized.

Exchange rate fluctuations could result in significant foreign currency gains and losses and affect our business results.

Because the results of both Cyclica and Valence are reported in Canadian dollars, which we will then translate to U.S. dollars for inclusion in our consolidated financial statements, we will be exposed to more significant currency translation risk as a result of the acquisitions. As a result, changes between the foreign exchange rates, in particular the Canadian dollar and the U.S. dollar, affect the amounts we record for our foreign assets, liabilities, revenues and expenses, and could have a negative effect on our financial results. We currently do not enter into hedging arrangements to minimize the impact of foreign currency fluctuations.

RISKS RELATED TO THE SECURITIES MARKETS AND OWNERSHIP OF OUR CLASS A COMMON STOCK

Our amended and restated certificate of incorporation and amended and restated bylaws designate the Court of Chancery of the State of Delaware as the sole and exclusive forum for certain types of actions and proceedings that may be initiated by our stockholders, which could limit our stockholders’ ability to obtain a favorable judicial forum for disputes with us or our directors, officers, employees or agents.

Our amended and restated bylaws provide that the Court of Chancery of the State of Delaware and the federal district courts of the United States of America is the exclusive forums for substantially all disputes between us and our stockholders, which could limit our stockholders’ ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our amended and restated bylaws provide that the Court of Chancery of the State of Delaware or, if the Court of Chancery does not have jurisdiction, another State court in Delaware or the federal district court for the District of Delaware, is the exclusive forum for the following, except for any claim as to which such court determines that there is an indispensable party not subject to the jurisdiction of such court, and the indispensable party does not consent to the personal jurisdiction of such court within 10 days following such determination, which is vested in the exclusive jurisdiction of a court or forum other than such court or for which such court does not have subject matter jurisdiction:

- any derivative action or proceeding brought on our behalf;
- any action asserting a claim of breach of fiduciary duty;
- any action asserting a claim against us arising under the Delaware General Corporation Law, our amended- and restated certificate of incorporation or our amended and restated bylaws; and
- any action asserting a claim against us that is governed by the internal-affairs doctrine.

This provision would not apply to suits brought to enforce a duty or liability created by the Securities Exchange Act of 1934, as amended (the "Exchange Act") or any other claim for which the U.S. federal courts have exclusive jurisdiction. Our amended and restated bylaws further provide that the federal district courts of the United States of America will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act.

These exclusive-forum provisions may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, and may result in increased costs to stockholders of bringing a claim, each of which may discourage lawsuits against us and our directors, officers and other employees. Any person or entity purchasing or otherwise acquiring any interest in any of our securities shall be deemed to have notice of and consented to these provisions. There is uncertainty as to whether a court would enforce such provisions, and the enforceability of similar choice of forum provisions in other companies' charter documents has been challenged in legal proceedings. It is possible that a court could find these types of provisions to be inapplicable or unenforceable, and if a court were to find either exclusive-forum provision in our amended and restated bylaws to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving the dispute in other jurisdictions, which could seriously harm our business.

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

(a) Sales of Unregistered Securities

Acquisitions

In May 2023, the Company entered into an agreement to acquire Cyclica. The aggregate upfront consideration for the acquisition of Cyclica consisted of 5,706,089 shares of Recursion Class A common stock, cash payments, 1,000,873 shares issuable upon exercise of stock options held by Cyclica equity award holders and deferred liabilities. Approximately 753 thousand of the aforementioned Class A common stock consideration had not yet been issued as of June 30, 2023. A prospectus supplement to a registration statement (File No. 333-264845) was subsequently filed pursuant to Rule 424(b) on June 9, 2023, to register the resale of certain of such shares and the issuance of shares issuable upon exercise of certain such stock options. In addition, a registration statement on Form S-8 (File No. 333-272282) was filed on May 30, 2023 to register the issuance of shares issuable upon exercise of certain of such stock options.

Also in May 2023, the Company entered into an agreement to acquire Valence. The aggregate upfront consideration for the acquisition of Valence consisted of 2,168,020 shares of Recursion Class A common stock, 5,904,827 shares of a subsidiary of Recursion, exchangeable for shares of Recursion's Class A common stock, 792,011 shares issuable upon the exercise of stock options held by Valence equity award holders and deferred liabilities. A registration statement on Form S-3ASR (File No. 333-272281) was subsequently filed on May 30, 2023, to register the resale of certain of such shares and to register the issuance of shares issuable upon exercise of certain of such stock options and of shares issuable upon exchange of exchangeable shares. In addition, a registration statement on Form S-8 (File No. 333-272027) was filed on May 18, 2023 to register the issuance of shares issuable upon exercise of certain of such stock options.

Stock Option Exercises

For the six months ended June 30, 2023, we issued 70,000 shares of our Class A common stock to our employees, directors, advisors and consultants upon the exercise of stock options under our Key Personnel Incentive Stock Plan for aggregate consideration of approximately $20 thousand. The shares of Class A common stock issued upon the exercise of stock options were issued pursuant to written compensatory plans or arrangements with our employees, directors, advisors and consultants, in reliance on the exemption provided by Rule 701 promulgated under the Securities Act of 1933, as amended, or pursuant to Section 4(a)(2) of the Securities Act of 1933, as amended, relative to transactions by an issuer not involving any public offering, to the extent an exemption from such registration was required. All recipients either received adequate information about our company or had access, through employment or other relationships, to such information.

Item 5. Other Information.

Effective August 8, 2023, we entered into an Open Market Sales Agreement (the "Sales Agreement") with Jefferies LLC (the "Sales Agent"), pursuant to which we may, from time to time, sell up to an aggregate amount of $300.0 million of our Class A common stock through our Sales Agent in an "at-the-market" offering (the "ATM Offering"). We are not required to sell shares under the Sales Agreement. We will pay the Sales Agent a commission of up to 3% of the aggregate gross proceeds we receive from all sales of our Class A common stock under the Sales Agreement. The Sales Agreement continues until the earlier of selling all shares available under the Sales Agreement or terminated by written notice from either of the parties. No sales have been made under the Sales Agreement.

The ATM Offering is being made under a prospectus supplement dated August 8, 2023, and related prospectus to be filed with the Securities and Exchange Commission pursuant to our automatically effective shelf registration statement on Form S-3ASR (Registration No. 333-264845).

A copy of the Sales Agreement is attached as Exhibit 10.6 to this Quarterly Report. The foregoing description of the Sales Agreement does not purport to be complete and is qualified in its entirety by reference to Exhibit 10.6. A copy of the opinion of Wilson Sonsini Goodrich & Rosati, P.C. relating to the validity of the securities issued in the ATM Offering is filed as Exhibit 5.1 to this Quarterly Report.

We are also filing a prospectus supplement dated August 8, 2023, and related prospectus with the Securities and Exchange Commission pursuant to our automatically effective shelf registration statement on Form S-3ASR (Registration No. 333-264845) to register for resale the shares of Class A common stock issued to NVIDIA Corporation in July 2023. See Note 14, “Subsequent Events” to the Condensed Consolidated Financial Statements for additional details. A copy of the opinion of Wilson Sonsini Goodrich & Rosati, P.C. relating to the validity of such shares is filed as Exhibit 5.2 to this Quarterly Report.

On June 21, 2023, Zavain Dar, a member of our Board of Directors, adopted a Rule 10b5-1 trading arrangement that is intended to satisfy the affirmative defense of Rule 10b5-1(c) for the sale of up to 20,141 shares of the Company’s Class A common stock until June 21, 2024.

The following information regarding executive compensation is provided supplementally:

Outstanding Equity Awards at 2022 Fiscal Year-End Table

The following table sets forth information concerning outstanding equity awards held by our named executive officers (NEOs) as of December 31, 2022.

			Option Awards				Stock Awards	
Name	Grant Date	Vesting Commencement Date	Number of Securities Underlying Unexercised Options Exercisable (#)	Number of Securities Underlying Unexercised Options Unexercisable (#)	Option Exercise Price ($/share)	Option Expiration Date	Number of Shares or Units of Stock that Have Not Vested (#)	Market Value of Shares or Units of Stock that Have Not Vested ($)[1]
Christopher Gibson	12/31/2020[2]	12/31/2020	31,250	750,000	2.48	12/31/2030	—	—
	2/4/2022[3]	2/4/2022	86,737	329,613	11.40	2/4/2032	—	—
	2/4/2022[4]	2/4/2022	5,436	—	11.40	2/4/2032	—	—
	2/4/2022[5]	2/4/2022	—	—	—	—	169,143	1,304,093
Tina Marriott Larson	7/23/2018[6]	7/23/2018	562,000	—	1.06	7/23/2028	—	—
	12/31/2020[3]	12/31/2020	75,000	75,000	2.48	12/31/2030	—	—
	2/4/2022[3]	2/4/2022	33,170	126,056	11.40	2/4/2032	—	—
	2/4/2022[4]	2/4/2022	4,784	—	11.40	2/4/2032	—	—
	2/4/2022[5]	5/15/2022	—	—	—	—	64,688	498,744

Michael Secora	3/4/2020[7]	3/4/2020	468,750	351,562	2.22	3/4/2030	—	—
	3/4/2020[8]	3/4/2020	900,000	600,000	2.22	3/4/2030	—	—
	2/4/2022[3]	2/4/2022	24,306	92,378	11.40	2/4/2032	—	—
	2/4/2022[4]	2/4/2022	3,914	—	11.40	2/4/2032	—	—
	2/4/2022[5]	5/15/2022	—	—	—	—	47,404	365,485
Shafique Virani	3/4/2020[7]	—	407,580	234,375	2.22	3/04/2020[7]	—	—
	2/4/2022[3]	2/4/2022	16,760	63,690	11.40	2/4/2032	—	—
	2/4/2022[4]	2/4/2022	5,436	—	11.40	2/4/2032	—	—
	2/4/2022[5]	5/15/2022	—	—	—	—	32,683	251,986
Ramona Doyle	—	—	—	—	—	—	—	—

1. The amount in this column is calculated by multiplying the number of RSUs by the closing price of our common stock on the Nasdaq Global Select Market on December 30, 2022 (the last business day of fiscal 2022), which was $7.71.
2. Represents an option to purchase shares of our Class A common stock which vests as to one forty-eighth (1/48th) of the shares subject to the award shall vest one month after the vesting commencement date, and one forty-eighth (1/48th) of the shares subject to the award shall vest each month thereafter. Under the Equity Exchange Agreement, Dr. Gibson has the right to exchange the shares of Class A common stock received upon exercise of this option for shares of Class B common stock in accordance with the terms of the Equity Exchange Agreement.
3. Represents an option to purchase shares of our Class A common stock which vests as to one forty-eighth (1/48th) of the shares subject to the award shall vest one month after the vesting commencement date, and one forty-eighth (1/48th) of the shares subject to the award shall vest each month thereafter.
4. Represents an option to purchase shares of our Class A common stock that is fully vested and exercisable on the vesting commencement date pursuant to our 2021 Short-Term Incentive plan.
5. Represents RSUs that vest as to one one-sixteenth (1/16th) of the units subject the RSU beginning May 15, 2022 and every three months thereafter.
6. Represents an option to purchase shares of our Class A common stock. Twenty-Five percent (25%) of the shares subject to the award vested on July 16, 2019, and one-forty-eighth (1/48th) of the shares subject to the award vest each month thereafter.
7. Represents an option to purchase shares of our Class A common stock. One forty-eighth (1/48th) of the shares subject to the award vested on April 1, 2020, and one forty-eighth (1/48th) of the shares subject to the award vest each month thereafter.
8. Represents an option to purchase 1,500,000 shares of our Class A common stock that vest becomes cumulatively vested as to the following number of shares subject to the option upon each occurrence of certain liquidity events, subject to Mr. Secora's continued service through the date of such Liquidity Event:

Liquidity Event Value	Cumulative Vested Shares
Greater than $7.11	150,000
Greater than $9.24	300,000
Greater than $12.02	450,000
Greater than $15.63	600,000
Greater than $20.32	750,000
Greater than $29.46	900,000
Greater than $42.72	1,050,000
Greater than $61.95	1,200,000
Greater than $89.83	1,350,000
Greater than $103.26	1,500,000

Once a number of shares subject to the option have vested upon the occurrence of a liquidity event, the number of vested shares subject to the option will not be reduced if the Liquidity Event Value in a subsequent liquidity event is lower than the Liquidity Event Value in the prior liquidity event.

Option Exercises and Stock Vested

	Option Awards		Stock Awards	
Name	Number of Shares Acquired on Exercise (#)	Value Realized on Exercise ($)[1]	Number of Shares Acquired on Vesting (#)	Value Realized on Vesting ($)[2]
Christopher Gibson	690,104	3,520,561	41,750	427,685
Tina Marriott Larson	150,500	1,280,277	17,317	178,957
Michael Secora	—	—	12,895	133,476
Shafique Virani	45,000	445,758	10,260	107,637
Ramona Doyle	265,625	2,146,210	4,798	40,911

1. The value realized when the stock options were exercised represents (i) the excess of the closing price of a share of our common stock as reported on the Nasdaq Global Market on the date of exercise over the per share exercise price of the stock option, multiplied by (ii) the number of option shares exercised.
2. The value realized upon vesting of RSUs is calculated by multiplying the number of restricted stock awards or RSUs vested by the closing price market price of a share of our common stock as reported on the Nasdaq Global Market on the vest date.

Estimated Payments Upon Termination or Change In Control

The following table provides an estimate of the payments and benefits that would be provided in the circumstances described in the Company's 2023 Proxy Statement under the heading "Potential Payments Upon Termination or Change In Control—Executive Change In Control And Severance Plan" for each of the NEOs (other than Dr. Doyle), assuming the triggering event took place on December 30, 2022 (the last business day of fiscal 2022) and based on the closing of our common stock on the Nasdaq Global Select Market on that date, which was $7.71. With respect to our former NEO, Ramona Doyle, who ceased employment with us during 2022, the table below reflects the following severance benefits that Dr. Doyle received as a result of such separation: (i) a lump sum payment of $336,600, representing 9 months of her annual base salary, and (ii) a taxable lump sum payment of $10,858, which is an amount equal to the premium cost of continued health coverage under COBRA for a period of 9 months.

Name	Potential Payable Upon Termination Without Cause, Resignation for Good Reason, or Death or Disability	
	Without a Change in Control ($)	With a Change in Control ($)
Christopher Gibson		
Salary	520,000	520,000
Annual Incentive	—	520,000
Value of Accelerated Vesting	—	5,390,030
Healthcare Benefits	21,145	21,145
Tina Marriott Larson		
Salary	343,200	457,600
Annual Incentive	—	457,600
Value of Accelerated Vesting	—	907,338
Healthcare Benefits	13,942	18,589
Michael Secora		
Salary	273,000	364,000
Annual Incentive	—	364,000
Value of Accelerated Vesting	—	5,589,560
Healthcare Benefits	15,859	21,145
Shafique Virani		
Salary	382,500	510,000
Annual Incentive	—	510,000
Value of Accelerated Vesting	—	1,538,705
Healthcare Benefits	13,942	18,589
Ramona Doyle		
Salary	336,600	—
Annual Incentive	—	—
Value of Accelerated Vesting	—	—
Healthcare Benefits	10,858	—

Item 6. Exhibits.

Exhibit Index:

		Incorporated by Reference				
Exhibit number	**Description**	**Form**	**File No.**	**Exhibit No.**	**Filing Date**	**Filed / Furnished Herewith**
3.1	Amended and Restated Certificate of Incorporation of Recursion Pharmaceuticals, Inc.	8-K	001-40323	3.1	April 21, 2021	
3.2	Amended and Restated Bylaws of Recursion Pharmaceuticals, Inc.	8-K	001-40323	3.2	April 21, 2021	

4.1	Amended and Restated Investors' Rights Agreement by and among the Registrant and certain of its stockholders, dated September 1, 2020.	S-1/A	333-254576	4.1	April 15, 2021	
4.2	Specimen Class A common stock certificate of the Registrant.	S-1/A	333-254576	4.2	April 15, 2021	
4.3	Exchangeable Share Support Agreement, dated May 8, 2023.	S-3ASR	333-272281	4.2	May 30, 2023	
4.4	Registration Agreement, dated May 16, 2023, by and among the Registrant, Valence Discovery, Inc., and certain shareholders of Valence Discovery, Inc.	S-3ASR	333-272281	4.3	May 30, 2023	
4.5	Registration Agreement, dated May 25, 2023, by and among the Registrant, Recursion Canada Inc., and certain shareholders of Cyclica Inc.	8-K	001-40323	4.1	June 9, 2023	
5.1	Opinion of Wilson Sonsini Goodrich & Rosati, Professional Corporation					X
5.2	Opinion of Wilson Sonsini Goodrich & Rosati, Professional Corporation					X
10.1	Employment Offer Letter, dated May 19, 2023, between the Registrant and Dr. David Mauro, M.D., Ph.D.					X
10.2	Stock Purchase Agreement, dated July 11, 2023, by and among the Registrant and NVIDIA.	8-K	001-40323	10.1	July 12, 2023	
10.3	Registration Rights Agreement, dated July 11, 2023, by and among the Registrant and NVIDIA.	8-K	001-40323	10.2	July 12, 2023	
10.4	Cyclica Inc. Second Amended and Restated Stock Option Plan	S-8	333-272282	4.4	May 30, 2023	
10.5	Valence Discovery Inc. Stock Option Plan dated April 17, 2018 as amended and restated on November 16, 2021	S-8	333-272027	4.4	May 18, 2023	
10.6	Open Market Sales Agreement dated August 8, 2023 by and between the Registrant and Jefferies LLC					X
23.1	Consent of Wilson Sonsini Goodrich & Rosati, P.C. (included in the opinion filed as Exhibit 5.1)					X
23.2	Consent of Wilson Sonsini Goodrich & Rosati, P.C. (included in the opinion filed as Exhibit 5.2)					X
31.1	Certification of Principal Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.					X
31.2	Certification of Principal Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.					X
32.1*	Certification 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
101.INS	XBRL Instance Document					X
101.SCH	XBRL Taxonomy Extension Schema Document					X
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document					X
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document					X
101.LAB	XBRL Taxonomy Extension Label Linkbase Document					X
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document					X
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)					X

* The certifications furnished in Exhibit 32.1 hereto are deemed to accompany this Quarterly Report on Form 10-Q and will not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended. Such certifications will not be deemed to be incorporated by reference into any filings under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, except to the extent that the Registrant specifically incorporates it by reference.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized on August 8, 2023.

RECURSION PHARMACEUTICALS, INC.

By: /s/ Christopher Gibson
Christopher Gibson
Chief Executive Officer
(Principal Executive Officer)

By: /s/ Michael Secora
Michael Secora
Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 5.1

WILSON SONSINI

Wilson Sonsini Goodrich & Rosati
Professional Corporation
701 Fifth Avenue
Suite 5100
Seattle, Washington 98104-7036
o: 206.883.2500
f: 206.883.2699

August 8, 2023

Recursion Pharmaceuticals, Inc
41 S. Rio Grand St.
Salt Lake City, Utah 84101

Re: Registration Statement on Form S-3

Ladies and Gentlemen:

We have acted as counsel to Recursion Pharmaceuticals, Inc., a Delaware corporation (the "Company"), in connection with the registration of the proposed offer and sale of up to $300,000,000 of shares (the "Shares") of the Company's Class A common stock, $0.00001 par value per share, pursuant to the Company's Registration Statement on Form S-3ASR (File No. 333-264845) (the "Registration Statement") including the prospectus dated May 10, 2022 included therein (the "Base Prospectus"), filed by the Company with the Securities and Exchange Commission (the "Commission") in connection with the registration pursuant to the Securities Act of 1933, as amended (the "Act"), of the Shares.

The offering and sale of the Shares are being made pursuant to the Open Market Sales Agreement, dated as of August 8, 2023 (the "Sales Agreement"), by and between the Company and Jefferies LLC.

We have examined copies of the Sales Agreement, the Registration Statement, the Base Prospectus, and the prospectus supplement thereto related to the offering of the Shares, which prospectus supplement is dated as of August 8, 2023 and will be filed by the Company in accordance with Rule 424(b) promulgated under the Act (the "Prospectus Supplement" and together with the Base Prospectus, the "Prospectus"). We have also examined instruments, documents and records which we deemed relevant and necessary for the basis of our opinion hereinafter expressed.

In such examination, we have assumed (a) the authenticity of original documents and the genuineness of all signatures; (b) the conformity to the originals of all documents submitted to us as copies; (c) the truth, accuracy and completeness of the information, representations and warranties contained in the instruments, documents, certificates and records we have reviewed; (d) that the Registration Statement, and any amendments thereto (including post-effective amendments), will have become effective under the Act; (e) that the Prospectus Supplement will have been filed with the Commission describing the Shares offered thereby; (f) that the Shares will be sold in compliance with applicable U.S. federal and state securities laws and in the manner stated in the Registration Statement and the Prospectus; and (g) the legal capacity of all natural persons. As to any facts material to the opinions expressed herein that were not

independently established or verified, we have relied upon oral or written statements and representations of officers and other representatives of the Company.

Based on and subject to the foregoing, we are of the opinion that the Shares have been duly authorized by the Company and, when issued and delivered by the Company against payment therefor in accordance with the terms of the Sales Agreement, will be validly issued, fully paid and nonassessable.

We express no opinion as to the laws of any other jurisdiction other than the federal laws of the United States of America and the General Corporation Law of the State of Delaware.

* * *

We hereby consent to the use of this opinion as an exhibit to the Company's Quarterly Report on Form 10-Q, filed on or about August 8, 2023, for incorporation by reference into the Registration Statement and the Prospectus. In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Commission thereunder.

Sincerely,

/s/ Wilson Sonsini Goodrich & Rosati, P.C.

WILSON SONSINI GOODRICH & ROSATI
Professional Corporation

Exhibit 5.2

WILSON SONSINI

Wilson Sonsini Goodrich & Rosati
Professional Corporation
701 Fifth Avenue
Suite 5100
Seattle, Washington 98104-7036
o: 206.883.2500
f: 206.883.2699

August 8, 2023

Recursion Pharmaceuticals, Inc.
41 S. Rio Grand St.
Salt Lake City, Utah 84101

Re: Registration Statement on Form S-3

Ladies and Gentlemen:

At your request, we have examined the Registration Statement on Form S-3ASR (File No. 333-264845) (the "Registration Statement"), including the prospectus dated May 10, 2022 included therein (the "Base Prospectus"), filed by Recursion Pharmaceuticals, Inc., a Delaware corporation (the "Company"), with the Securities and Exchange Commission (the "Commission") in connection with the registration pursuant to the Securities Act of 1933, as amended (the "Act"), of the Securities (as defined below).

The Registration Statement relates to the proposed offer and sale by the selling stockholder (the "Selling Stockholder"), from time to time, pursuant to Rule 415 under the Act, as set forth in the Registration Statement, the Base Prospectus and a prospectus supplement dated as of August 8, 2022 (the "Prospectus Supplement" and together with the Base Prospectus, the "Prospectus"), of up to an aggregate of 7,706,363 shares of the Company's Class A common stock, $0.00001 par value per share (the "Securities").

The Securities are to be sold from time to time as set forth in the Registration Statement and the Prospectus.

We have examined instruments, documents, certificates and records that we have deemed relevant and necessary for the basis of our opinions hereinafter expressed. In such examination, we have assumed: (a) the authenticity of original documents and the genuineness of all signatures; (b) the conformity to the originals of all documents submitted to us as copies; (c) the truth, accuracy and completeness of the information, representations and warranties contained in the instruments, documents, certificates and records we have reviewed; (d) that the Registration Statement, and any amendments thereto (including post-effective amendments), will have become effective under the Act; (e) that the Prospectus Supplement will have been filed with the Commission describing the Securities offered thereby; (f) that the Securities will be sold in compliance with applicable U.S. federal and state securities laws and in the manner stated in the Registration Statement and the Prospectus; and (g) the legal capacity of all natural persons. As to any facts material to the opinions expressed herein that were not independently established or verified, we have relied upon oral or written statements and representations of officers and other representatives of the Company.

Based on such examination, we are of the opinion that when issued the Securities will be duly authorized, validly issued, fully paid and nonassessable. It is understood that this opinion is to be used only in connection with the offer and resale of the Securities while the Registration Statement is in effect. We assume no obligation to supplement this opinion if any applicable law changes after the date hereof or if we become aware of any fact that might change the opinion expressed herein after the date hereof. We express no opinion as to the laws of any other jurisdiction, other than the federal laws of the United States of America and the General Corporation Law of the State of Delaware.

* * *

We hereby consent to the use of this opinion as an exhibit to the Company's Quarterly Report on Form 10-Q, filed on or about August 8, 2023, for incorporation by reference into the Registration Statement and the Prospectus. In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Commission thereunder.

Sincerely,

/s/ Wilson Sonsini Goodrich & Rosati, P.C.

WILSON SONSINI GOODRICH & ROSATI
Professional Corporation

41 S. Rio Grande Street
Salt Lake City, Utah 84101
(385) 269-0203
recursionpharma.com

RECURSION

May 19, 2023

David Mauro

Re: Employment Offer Letter

Dear David:

Recursion Pharmaceuticals, Inc. (the "Company," "we," "us," or "our") is truly excited to extend you an offer on the terms and conditions in this letter agreement (the "Agreement") and hope that you will be joining us in our mission of decoding biology to radically improve lives.

1. Position. You will be the Company's Chief Medical Officer, and will report to the Company's Chief Executive Officer. This is a full-time position. You will perform the duties and have the responsibilities and authority customarily performed and held by an employee in your position or as otherwise may be assigned or delegated to you by the Company.

2. Location. You are required to spend a minimum of 40-50% of standard working days onsite at the Company's headquarters in Salt Lake City. For executives who choose to live in other cities, because we believe in the value of onsite interaction for our teams, we will cover up to an average of four round- trip flights per month to/from Company Headquarters and we may make use of Company-leased apartments within walking distance of the office to offset hotel costs for the Company.

3. **Base Salary.** Your annual base salary will be $520,000, which will be payable, less applicable withholdings and deductions, in accordance with the Company's normal payroll practices. Your annual base salary may be modified from time to time at the discretion of the Company.

4. **Annual Bonus**. You are eligible to earn an annual cash bonus with a target value of 25% of your annual base salary and an annual equity bonus with a target value of 25% of your annual base salary paid in fully vested equity awards, in each case based on achieving performance objectives established by the Company's Board of Directors (the "Board") or an authorized committee thereof (the "Committee") in its sole discretion and payable upon achievement of those objectives as determined by the Committee. If any portion of any such bonus is earned, it will be paid when practicable after the Committee determines it has been earned, subject to you remaining employed with the Company through the payment date. Your annual bonus opportunity will be subject to review and adjustment based upon the Company's normal performance review practices.

5. **Equity Awards**. Subject to the approval of the Committee, the Company will grant you an award of restricted stock units ("RSUs") with a target value of $1,000,000. If the RSU award is approved by the Committee, on the grant date, the target value will be converted into a number of RSUs determined in accordance with the Company's equity practices. Each RSU subject to the award will represent a right to receive one share of our Class A Common Stock upon vesting. The RSU award will vest as follows: 25% of the RSUs subject to the award shall vest on the first Company Vesting Date (each of February 15, May 15, August 15, and November 15 is a "Company Vesting Date") occurring after the first anniversary of your Start Date (as defined below) and 1/16th of the RSUs subject to the award will vest every Company Vesting Date thereafter until the RSU award is fully vested, subject to your continued employment with the Company through each such Company Vesting Date. The RSU award will be subject to the terms and conditions of the Company's equity incentive plan as then in effect and the applicable form of RSU agreement thereunder.

Subject to the approval of the Committee, the Company will grant you an option to purchase shares of our Class A Common Stock at a price per share equal to the fair market value of a share of our Class A Common Stock on the date of grant (as determined by the Committee), with such option having a target value of $1,000,000. If the option is approved by the Committee, on the grant date, the target value will be converted into a number of shares determined in accordance with the Company's equity practices. The option will vest as follows: 25% of the shares subject to the option shall vest on the first anniversary of your Start Date and 1/48th of the shares subject to the option award will vest each month thereafter until the option award is fully vested, subject to your continued employment with the Company through each such vesting date. Your option grant shall be subject to the terms and conditions of the of the Company's equity incentive plan as then in effect and the applicable form of option agreement thereunder.

In addition, you will be eligible to receive other awards of stock options, restricted stock units or other equity awards pursuant to any plans or arrangements the Company may have in effect from time to time. The Committee will determine in its discretion whether you will be granted any such equity awards and the terms of any such award in accordance with the terms of any applicable plan or arrangement that may be in effect from time to time.

6. **Employee Benefits**. As a regular full time, employee of the Company, you will be eligible to participate in Company-sponsored benefits in accordance with the terms of the Company's policies and benefits plan. In addition, you will be entitled to paid vacation in accordance with the Company's vacation policy, as in effect from time to time. Information regarding coverage, eligibility, and other information regarding these benefits is set forth in more detailed documents that are available from the Company. With the exception of the Company's at-will employment policy, discussed below, the Company may, from time to time, in its sole discretion, modify or eliminate its policies and/or benefits offered to employees.

7. **Severance**. You will be eligible for the Company's Executive Change in Control and Severance Plan (the "Severance Plan") by entering into a Participation Agreement under the Severance Plan, which is being provided to you concurrently with this Agreement. Your Participation Agreement under the Severance Plan will specify the severance payments and benefits you could be eligible to receive in connection with certain terminations of your employment with the Company.

8. **Employment Relationship**. Employment with the Company will be for no specific period of time. Your employment with the Company will be "at will," meaning that either you or the Company may terminate your employment at any time and for any reason, with or without cause. Any contrary representations that may have been made to you are superseded by this Agreement. This is the full and complete agreement between you and the Company on this term. Although your job duties, title, compensation and benefits, as well as the Company's personnel policies and procedures and your other terms and conditions of employment, may change from time to time, the "at will" nature of your employment may only be changed in an express written agreement signed by you and the CEO of the Company.

9. **Background Check**. The Company reserves the right to conduct background investigations and/or reference checks on all of its potential employees. Your job offer, therefore, is contingent upon a clearance of such a background investigation and/or reference check.

10. **Immigration Laws**. For purposes of federal immigration law, you will be required to provide to the Company documentary evidence of your identity and eligibility for employment in the United States. Such documentation must be provided within three (3) business days of the effective date of your employment, or your employment relationship with the Company may be terminated.

11. **Prior Employment/Third Party Information/Conflicting Obligations**. We ask that, if you have not already done so, you disclose to the Company any and all agreements relating to your prior employment that may affect your eligibility to be employed by the Company or limit the manner in which you may be employed. It is the Company's understanding that any such agreements will not prevent you from performing the duties of your position and you represent that such is the case. Similarly, you agree not to bring any third-party confidential information to the Company, including that of any former employer, and that you will not in any way utilize any such information in performing your duties for the Company. Moreover, you agree that, during the term of your employment with the Company, you will not engage in any other employment, occupation, consulting, or other business activity directly related to the business in which the Company is now involved or becomes involved during the term of your employment, nor will you engage in any other activities that conflict with your obligations to the Company.

12. **Employee Confidentiality and Invention Assignment**. As a condition of your employment with the Company, you will be required to sign and comply with an At-Will Employment, Confidential Information, Invention Assignment, and Arbitration Agreement (the "**Confidentiality Agreement**"), which requires, among other provisions, the assignment of patent rights to any invention made during your employment at the Company, non-disclosure of Company proprietary information, and arbitration of any disputes or claims relating to or arising out of our employment relationship, subject to the terms and conditions set forth in the Confidentiality Agreement. Please note that we must receive your signed Confidentiality Agreement before your first day of employment with the Company. Nothing in this Agreement, the Confidentiality Agreement, or any other Company agreement or policy will prohibit you from engaging in protected conduct, as described in the Protected Activity Not Prohibited section of the Confidentiality Agreement.

13. **Company Policies.** As a Company employee, you will be expected to abide by the Company's rules and standards. You will be specifically required to sign an acknowledgment that you have read and understand the Company's Code of Conduct, and the Company's employee handbook, along with other Company policies.

14. **FDA Disbarment**. As a condition of the acceptance of this Agreement, you certify that you are not and have never been debarred by the FDA pursuant to 21 USC 335, are not listed on the FDA's disqualified/restricted list, are not excluded from participating in federal health care programs, and have not committed any actions that could lead to FDA debarment or exclusion from federal health care programs. If you become aware of a proceeding that could lead to debarment or disqualification/restriction by FDA or exclusion from federal health care programs, you will immediately inform the Board.

15. **Governing Law; Venue**. All questions concerning the construction, validity and interpretation of this Agreement and the exhibits hereto shall be governed by and construed in accordance with the domestic laws of the State of Utah, without giving effect to any choice of law or conflict of law provision or rule (whether of the State of Utah or any other jurisdiction) that would cause the application of the laws of any jurisdiction other than the State of Utah. Any lawsuit arising out of or in any way related to this Agreement to the Parties' relationship hereunder shall be brought only in those state or federal courts having jurisdiction over actions arising in Salt Lake County in the State of Utah.

16. **Miscellaneous**. To accept the Company's offer, please sign and date this Agreement in the space provided below. If you accept our offer, your first day of employment is expected to be June 1, 2023 (the actual date your employment begins, the "Start Date"). You understand and agree that your compensation set forth herein will be remuneration for all services rendered to the Company and any subsidiaries or affiliates of Company. This Agreement, the Severance Plan, the Participation Agreement, and the Confidentiality Agreement constitute the entire agreement between you and the Company regarding the subject matters discussed, and they supersede all prior negotiations, representations or agreements between you and the Company (including, but not limited to, any representations made during your recruitment, interviews or pre-employment negotiations, whether written or oral). This Agreement may only be modified by a written agreement signed by you and the Company's Chief Executive Officer. This offer of employment will terminate if it is not accepted, signed and returned by May 26, 2023.

To accept this offer of employment, please sign and date in the spaces indicated and return this Agreement to the Company.

Sincerely,

Recursion Pharmaceuticals, Inc.
By: /s/ Christopher Gibson
Christopher Gibson
Chief Executive Officer

I have read and understood this Agreement and hereby acknowledge, accept and agree to the terms as set forth herein and further acknowledge that no other commitments were made to me as part of my employment offer except as specifically set forth herein.

/s/ David Mauro
David Mauro
Date: May 19, 2023

Exhibit 10.6

OPEN MARKET SALES AGREEMENT[1]

August 8, 2023

JEFFERIES LLC
520 Madison Avenue
New York, New York 10022

Ladies and Gentlemen:

Recursion Pharmaceuticals, Inc., a Delaware corporation (the "**Company**"), proposes, subject to the terms and conditions stated herein, to issue and sell from time to time through Jefferies LLC, as sales agent and/or principal (the "**Agent**"), shares of the Company's Class A common stock, par value $0.00001 per share (the "**Class A Common Shares**"), having an aggregate offering price of up to $300,000,000 on the terms set forth in this sales agreement (this "**Agreement**"). The Class A Common Shares and the shares of the Company's Class B common stock, par value $0.00001 per share, are referred to herein as the "**Common Stock**."

Section 1. DEFINITIONS

(a) Certain Definitions. For purposes of this Agreement, capitalized terms used herein and not otherwise defined shall have the following respective meanings:

"**Affiliate**" of a Person means another Person that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, such first- mentioned Person. The term "control" (including the terms "controlling," "controlled by" and "under common control with") means the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a Person, whether through the ownership of voting securities, by contract or otherwise.

"**Agency Period**" means the period commencing on the date of this Agreement and expiring on the earliest to occur of (x) the date on which the Agent shall have placed the Maximum Program Amount pursuant to this Agreement and (y) the date this Agreement is terminated pursuant to Section 7.

"**Commission**" means the U.S. Securities and Exchange Commission.

"**Exchange Act**" means the Securities Exchange Act of 1934, as amended, and the rules and regulations of the Commission thereunder.

"**Floor Price**" means the minimum price set by the Company in the Issuance Notice, below which the Agent shall not sell Shares during the applicable period set forth in the Issuance Notice, which may be adjusted by the Company at any time during the period set forth in the Issuance Notice by delivering written notice of such change to the Agent and which in no event shall be less than $1.00 without the prior written consent of the Agent, which may be withheld in the Agent's sole discretion.

"**Issuance Amount**" means the aggregate Sales Price of the Shares to be sold by the Agent pursuant to any Issuance Notice.

[SM] "Open Market Sales Agreement" is a service mark of Jefferies LLC

"**Issuance Notice**" means a written notice delivered to the Agent by the Company in accordance with this Agreement in the form attached hereto as Exhibit A that is executed by its Chief Executive Officer or Chief Financial Officer.

"**Issuance Notice Date**" means any Trading Day during the Agency Period that an Issuance Notice is delivered pursuant to Section 3(b)(i).

"**Issuance Price**" means the Sales Price less the Selling Commission.

"**Maximum Program Amount**" means Class A Common Shares with an aggregate Sales Price of the lesser of (a) the number or dollar amount of Class A Common Shares registered under the effective Registration Statement (defined below) pursuant to which the offering is being made, (b) the number of authorized but unissued Class A Common Shares (less Class A Common Shares issuable upon exercise, conversion or exchange of any outstanding securities of the Company or otherwise reserved from the Company's authorized capital stock), (c) the number or dollar amount of Class A Common Shares permitted to be sold under Form S-3 (including General Instruction I.B.6 thereof, if applicable), (d) the number or dollar amount of Class A Common Shares for which the Company has filed a Prospectus (defined below) or (e) $300,000,000.

"**Person**" means an individual or a corporation, partnership, limited liability company, trust, incorporated or unincorporated association, joint venture, joint stock company, governmental authority or other entity of any kind.

"**Principal Market**" means the Nasdaq Global Select Market or such other national securities exchange on which the Class A Common Shares, including any Shares, are then listed.

"**Rule 462(b) Registration Statement**" means any registration statement filed by the Company pursuant to Rule 462(b) under the Securities Act in connection with the offer and sale of Shares.

"**Sales Price**" means the actual sale execution price of each Share placed by the Agent pursuant to this Agreement.

"**Securities Act**" means the Securities Act of 1933, as amended, and the rules and regulations of the Commission thereunder.

"**Selling Commission**" means three percent (3.0%) of the gross proceeds of Shares sold pursuant to this Agreement, or as otherwise agreed between the Company and the Agent with respect to any Shares sold pursuant to this Agreement.

"**Settlement Date**" means the second business day, or such other time period as required by the Exchange Act or by the rules promulgated thereunder, following each Trading Day during the period set forth in the Issuance Notice on which Shares are sold pursuant to this Agreement, when the Company shall deliver to the Agent the amount of Shares sold on such Trading Day and the Agent shall deliver to the Company the Issuance Price received on such sales.

"**Shares**" means the Company's Class A Common Shares issued or issuable pursuant to this Agreement.

"**Trading Day**" means any day on which the Principal Market is open for trading.

Section 2. REPRESENTATIONS AND WARRANTIES OF THE COMPANY

The Company represents and warrants to, and agrees with, the Agent that as of (1) the date of this Agreement, (2) each Issuance Notice Date, (3) each Settlement Date, (4) each Triggering Event Date (as defined below) with respect to which the Company is required to deliver a certificate pursuant to Section 4(o) (and such requirement is not waived) and (5) as of each Time of Sale (as defined below) (each of the times referenced above is referred to herein as a "**Representation Date**"), except as may be disclosed in the Prospectus (including any documents incorporated by reference therein and any supplements thereto) on or before a Representation Date:

(a) Registration Statement. The Company has prepared and filed with the Commission an automatic shelf registration statement, as defined under Rule 405 of the Securities Act, on Form S-3ASR (File No. 333-264845) that contains a base prospectus. Such registration statement registers the issuance and sale by the Company of the Shares under the Securities Act. The Company may file one or more additional registration statements from time to time that will contain a base prospectus and related prospectus or prospectus supplement, if applicable, with respect to the Shares. Except where the context otherwise requires, such registration statement(s), including any information deemed to be a part thereof pursuant to Rule 430B under the Securities Act, including all financial statements, exhibits and schedules thereto and all documents incorporated or deemed to be incorporated therein by reference pursuant to Item 12 of Form S-3 under the Securities Act as from time to time amended or supplemented, is herein referred to as the "**Registration Statement**," and the prospectus constituting a part of such registration statement(s), together with any prospectus supplement filed with the Commission pursuant to Rule 424(b) under the Securities Act relating to a particular issuance of the Shares, including all documents incorporated or deemed to be incorporated therein by reference pursuant to Item 12 of Form S-3 under the Securities Act, in each case, as from time to time amended or supplemented, is referred to herein as the "**Prospectus**," except that if any revised prospectus is provided to the Agent by the Company for use in connection with the offering of the Shares that is not required to be filed by the Company pursuant to Rule 424(b) under the Securities Act, the term "**Prospectus**" shall refer to such revised prospectus from and after the time it is first provided to the Agent for such use. The Registration Statement at the time it originally became effective is herein called the "**Original Registration Statement**." As used in this Agreement, the terms "amendment" or "supplement" when applied to the Registration Statement or the Prospectus shall be deemed to include the filing by the Company with the Commission of any document under the Exchange Act after the date hereof that is or is deemed to be incorporated therein by reference.

All references in this Agreement to financial statements and schedules and other information which is "contained," "included" or "stated" in the Registration Statement or the Prospectus (and all other references of like import) shall be deemed to mean and include all such financial statements and schedules and other information which is or is deemed to be incorporated by reference in or otherwise deemed under the Securities Act to be a part of or included in the Registration Statement or the Prospectus, as the case may be, as of any specified date; and all references in this Agreement to amendments or supplements to the Registration Statement or the Prospectus shall be deemed to mean and include, without limitation, the filing of any document under the Exchange Act which is or is deemed to be incorporated by reference in or otherwise deemed under the Securities Act to be a part of or included in the Registration Statement or the Prospectus, as the case may be, as of any specified date. The Company's obligations under this Agreement to furnish, provide or deliver or make available (and all other references of like import) copies of any report or statement shall be deemed satisfied if the same is filed with the Commission through its Electronic Data Gathering, Analysis and Retrieval system ("**EDGAR**").

The Original Registration Statement is an "automatic shelf registration statement," as defined in Rule 405 under the Securities Act, and became effective upon filing. The Company has not received from the Commission any notice pursuant to Rule 401(g)(2) under the Securities Act objecting to the Company's use of the automatic shelf registration form. At the time the Registration Statement became or will become effective, and at the time the Company's most recent annual report on Form 10-K was filed with the Commission, if later, the Company met the then-applicable requirements for use of Form S-3 under the Securities Act. During the Agency Period, each time the Company files an annual report on Form 10-K the Company will meet the then-applicable requirements for use of Form S-3 under the Securities Act.

(b) Compliance with Registration Requirements. The Original Registration Statement and any Rule 462(b) Registration Statement became or will become effective under the Securities Act. The Company has complied to the Commission's satisfaction with all requests of the Commission for additional or supplemental information, if any. No stop order suspending the effectiveness of the Registration Statement or any Rule 462(b) Registration Statement is in effect and no proceedings for such purpose have been instituted or are pending or, to the Company's knowledge, are contemplated or threatened by the Commission.

The Prospectus when filed complied or will comply in all material respects with the Securities Act and, if filed with the Commission through EDGAR (except as may be permitted by Regulation S-T under the Securities Act), was identical to the copy thereof delivered to the Agent for use in connection with the issuance and sale of the Shares. Each of the Registration Statement, any Rule 462(b) Registration Statement and any post-effective amendment thereto, at the time it became or becomes effective and at each Representation Date, complied and will comply in all material respects with the Securities Act and did not and will not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading. As of the date of this Agreement, the Prospectus and any Free Writing Prospectus (as defined below) considered together (collectively, the "**Time of Sale Information**") did not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading. The Prospectus, as amended or supplemented, as of its date, at each Representation Date and at each Settlement Date, did not and will not contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The representations and warranties set forth in the three immediately preceding sentences do not apply to statements in or omissions from the Registration Statement, any Rule 462(b) Registration Statement, or any post-effective amendment thereto, or the Prospectus, or any amendments or supplements thereto, made in reliance upon and in conformity with information relating to the Agent furnished to the Company in writing by the Agent expressly for use therein, it being understood and agreed that the only such information furnished by the Agent to the Company consists of the information described in Section 6 below. There are no contracts or other documents required to be described in the Prospectus or to be filed as exhibits to the Registration Statement which have not been described or filed as required. The Registration Statement and the offer and sale of the Shares as contemplated hereby meet the requirements of Rule 415 under the Securities Act and comply in all material respects with said rule.

(c) Ineligible Issuer Status. The Company is not an "ineligible issuer" in connection with the offering of the Shares pursuant to Rules 164, 405 and 433 under the Securities Act. Any Free Writing Prospectus that the Company is required to file pursuant to Rule 433(d) under the Securities Act has been, or will be, filed with the Commission in accordance with the requirements of the Securities Act. Each Free Writing Prospectus that the Company has filed, or is required to file, pursuant to Rule 433(d) under the Securities Act or that was prepared by or on behalf of or used or referred to by the Company complies or will comply in all material respects with the requirements of Rule 433 under the Securities Act including timely filing with the

Commission or retention where required and legending, and each such Free Writing Prospectus, as of its issue date, at each Representation Date and at each Settlement Date through the completion of the issuance and sale of the Shares did not, does not and will not include any information that conflicted, conflicts with or will conflict with the information contained in the Registration Statement or the Prospectus, including any document incorporated by reference therein. Except for the Free Writing Prospectuses, if any, and electronic road shows, if any, furnished to you before first use, the Company has not prepared, used or referred to, and will not, without your prior consent, which consent shall not be unreasonably withheld, conditioned or delayed, prepare, use or refer to, any Free Writing Prospectus.

(d) Incorporated Documents. The documents incorporated or deemed to be incorporated by reference in the Registration Statement and the Prospectus, at the time they were filed with the Commission, complied in all material respects with the requirements of the Exchange Act, as applicable, and, when read together with the other information in the Prospectus, do not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading.

(e) Exchange Act Compliance. The documents incorporated or deemed to be incorporated by reference in the Prospectus, at the time they were or hereafter are filed with the Commission, and any Free Writing Prospectus or amendment or supplement thereto, complied and will comply in all material respects with the requirements of the Exchange Act, and, when read together with the other information in the Prospectus, at the time the Registration Statement and any amendments thereto became effective and at each Time of Sale (as defined below), as the case may be, will not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(f) Well-Known Seasoned Issuer. (A) At the time of effectiveness of the Original Registration Statement, (B) at the time of the most recent amendment thereto for the purposes of complying with Section 10(a)(3) of the Securities Act (whether such amendment was by post-effective amendment, incorporated report filed pursuant to Section 13 or 15(d) of the Exchange Act or form of prospectus), (C) at the time the Company or any person acting on its behalf (within the meaning, for this clause only, of Rule 163(c) under the Securities Act) made any offer relating to the Shares in reliance on the exemption of Rule 163 under the Securities Act, and (D) as of the Time of Sale, the Company was and is a "well-known seasoned issuer," as defined in Rule 405 under the Securities Act.

(g) Statistical and Market-Related Data. Nothing has come to the attention of the Company that has caused the Company to believe that the statistical and market-related data included or incorporated by reference in the Registration Statement or the Prospectus are not based on or derived from sources that are reliable and accurate in all material respects.

(h) Disclosure Controls and Procedures; Deficiencies in or Changes to Internal Control Over Financial Reporting. The Company has established and maintains disclosure controls and procedures (as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act). Such disclosure controls and procedures (i) comply with the requirements of the Exchange Act applicable to the Company, (ii) have been designed to ensure that information relating to the Company and its subsidiaries, including information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act, is recorded, processed, summarized and reported within the time periods specified in the Commission's rules and forms, and that such information is accumulated and communicated to the Company's management, including its principal executive and principal financial officers, or persons

performing similar functions, as appropriate to allow timely decisions regarding required disclosure, particularly during the periods in which the Company's periodic reports required under the Exchange Act are being prepared, (iii) have been evaluated by management of the Company for effectiveness as of the end of the Company's most recent fiscal quarter; and (iv) are effective in all material respects to perform the functions for which they were established. Since the end of the Company's most recent audited fiscal year, there have been no significant deficiencies or material weaknesses in the Company's internal control over financial reporting (whether or not remediated) and no change in the Company's internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting. The Company is not aware of any change in its internal control over financial reporting that has occurred during its most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

(i) This Agreement. This Agreement has been duly authorized, executed and delivered by the Company.

(j) Authorization of the Shares. The unissued Shares to be issued and sold pursuant to this Agreement have been duly and validly authorized and, when issued and delivered against payment therefor as provided herein, will be duly and validly issued and fully paid and non assessable and will conform in all material respects to the description of the Class A Common Shares contained in the Registration Statement and the Prospectus; and the issuance of the Shares is not subject to any preemptive or similar rights that have not been duly waived.

(k) No Applicable Registration or Other Similar Rights. There are no persons with registration or other similar rights to have any equity or debt securities included in the offering contemplated by this Agreement, except for such rights as have been duly waived or satisfied and have been disclosed in the Registration Statement and Prospectus.

(l) No Material Adverse Effect. Neither the Company nor any of its subsidiaries has, since the date of the latest audited financial statements included or incorporated by reference in the Registration Statement and the Prospectus, (i) sustained any material loss or interference with its business from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor dispute or court or governmental action, order or decree or (ii) entered into any transaction or agreement (whether or not in the ordinary course of business) that is material to the Company and its subsidiaries taken as a whole or incurred any liability or obligation, direct or contingent, that is material to the Company and its subsidiaries taken as a whole, in each case otherwise than as set forth or contemplated in the Registration Statement and the Prospectus; and, since the respective dates as of which information is given in the Registration Statement and the Prospectus, there has not been (x) any change in the capital stock (other than as a result of (i) the exercise, if any, of stock options or the award, if any, of stock options or restricted stock in the ordinary course of business pursuant to the Company's equity plans that are described in the Registration Statement and the Prospectus or (ii) the issuance, if any, of stock upon conversion or settlement of Company securities as described in the Registration Statement and the Prospectus) or long term debt of the Company or any of its subsidiaries or (y) any Material Adverse Effect (as defined below); as used in this Agreement, "**Material Adverse Effect**" shall mean any material adverse change or effect, or any development that would reasonably be expected to result in a material adverse change or effect, in or affecting (i) the business, properties, general affairs, management, financial position, stockholders' equity, results of operations or prospects of the Company and its subsidiaries, taken as a whole, except as set forth or contemplated in the Registration Statement and the Prospectus, or (ii) the ability of the Company to perform its obligations under this Agreement, including the issuance and sale of the Shares, or to consummate the transactions contemplated in the Registration Statement and the Prospectus.

(m) Independent Accountants. Ernst & Young LLP, which has audited certain financial statements of the Company and its subsidiaries, is (i) an independent public accountant as required by the Securities Act, the Exchange Act and the rules and regulations of the Commission thereunder and (ii) a registered public accounting firm as defined by the Public Company Accounting Oversight Board ("**PCAOB**") whose registration has not been suspended or revoked and who has not requested such registration to be withdrawn.

(n) Financial Statements. The financial statements included or incorporated by reference in the Registration Statement and the Prospectus, together with the related schedules and notes, present fairly, in all material respects, the financial position of the Company and its subsidiaries at the dates indicated and the statement of operations, comprehensive loss, convertible preferred stock and stockholders' equity (deficit) and cash flows of the Company and its subsidiaries for the periods specified; said financial statements have been prepared in conformity with U.S. generally accepted accounting principles ("**GAAP**") applied on a consistent basis throughout the periods involved. The supporting schedules, if any, present fairly in all material respects and in accordance with GAAP the information required to be stated therein. The selected financial data and the summary financial information included or incorporated by reference in the Registration Statement and the Prospectus present fairly, in all material respects the information shown therein and have been compiled on a basis consistent with that of the audited financial statements included therein. To the Company's knowledge, no person who has been suspended or barred from being associated with a registered public accounting firm, or who has failed to comply with any sanction pursuant to Rule 5300 promulgated by the PCAOB, has participated in or otherwise aided the preparation of, or audited, the financial statements, supporting schedules or other financial data filed with the Commission as a part of the Registration Statement and the Prospectus.

(o) Company's Accounting System. The Company and each of its subsidiaries maintain a system of internal control over financial reporting (as such term is defined in Rule 13a-15(f) under the Exchange Act) that (i) complies with the requirements of the Exchange Act applicable to the Company and its subsidiaries, (ii) has been designed by the Company's principal executive officer and principal financial officer, or under their 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 and (iii) is sufficient to provide reasonable assurance that (A) transactions are executed in accordance with management's general or specific authorization, (B) transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles as applied in the United States and to maintain accountability for assets, (C) access to assets is permitted only in accordance with management's general or specific authorization and (D) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences; and the Company is not aware of any material weaknesses in its internal control over financial reporting (it being understood that this subsection shall not require the Company to comply with Section 404 of the Sarbanes Oxley Act of 2002 and the rules and regulations promulgated in connection therewith (the "**Sarbanes-Oxley Act**") as of an earlier date than it would otherwise be required to so comply under applicable law).

(p) Incorporation and Good Standing of the Company. Each of the Company and its subsidiaries has been (i) duly organized and is validly existing and in good standing under the laws of its jurisdiction of organization, with power and authority (corporate and other) to own its properties and conduct its business as described in the Registration Statement and the Prospectus, and (ii) duly qualified as a foreign corporation for the transaction of business and is in good standing (where such concept exists) under the laws of each other jurisdiction in which it owns or leases properties or conducts any business so as to require such qualification, except, in the case of this clause (ii), where the failure to be so qualified, or in good standing would not,

individually or in the aggregate, reasonably be expected to have a Material Adverse Effect, and each subsidiary of the Company that is required to be listed in the Registration Statement, the Prospectus or Exhibit 21 to the Company's Annual Report on Form 10-K for the most recent fiscal year has been so listed.

(q) Capitalization and Other Capital Stock Matters. The Company has an authorized capitalization as set forth in the Registration Statement and the Prospectus and all of the issued shares of capital stock of the Company have been duly and validly authorized and issued and are fully paid and non-assessable and were not issued in violation of any preemptive or similar rights and conform in all material respects to the description of the Common Stock contained in the Registration Statement and the Prospectus; and all of the issued shares of capital stock of each subsidiary of the Company have been duly and validly authorized and issued, are fully paid and non-assessable and (except, in the case of any foreign subsidiary, for directors' qualifying shares) are owned directly or indirectly by the Company, free and clear of all liens, encumbrances, equities or claims, except for such liens, encumbrances, equities or claims as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(r) Stock Exchange Listing. The Class A Common Shares are registered pursuant to Section 12(b) or 12(g) of the Exchange Act and are listed on the Principal Market, and the Company has taken no action designed to, or likely to have the effect of, terminating the registration of the Class A Common Shares under the Exchange Act or delisting the Class A Common Shares from the Principal Market, nor has the Company received any notification that the Commission or the Principal Market is contemplating terminating such registration or listing. To the Company's knowledge, it is in compliance with all applicable listing requirements of the Principal Market.

(s) Non-Contravention of Existing Instruments; No Further Authorizations or Approvals Required. The issue and sale of the Shares and the compliance by the Company with this Agreement and the consummation by the Company of the transactions contemplated in this Agreement, the Registration Statement and the Prospectus will not conflict with or result in a breach or violation of any of the terms or provisions of, or constitute a default under, (A) any indenture, mortgage, deed of trust, loan agreement or other agreement or instrument to which the Company or any of its subsidiaries is a party or by which the Company or any of its subsidiaries is bound or to which any of the property or assets of the Company or any of its subsidiaries is subject, except, in the case of this clause (A) for such defaults, breaches, or violations that would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect, (B) the certificate of incorporation or by-laws (or other applicable organizational document) of the Company or any of its subsidiaries, or (C) any statute or any judgment, order, rule or regulation of any court or governmental agency or body having jurisdiction over the Company or any of its subsidiaries or any of their properties, except, in the case of this clause (C) for such violations that would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect; and no consent, approval, authorization, order, registration or qualification of or with any such court or governmental agency or body is required for the issue and sale of the Shares or the consummation by the Company of the transactions contemplated by this Agreement, except such as have been obtained under the Securities Act, the approval by the Financial Industry Regulatory Authority ("**FINRA**") of the underwriting terms and arrangements, the approval for listing additional shares on the Principal Market and such consents, approvals, authorizations, registrations or qualifications as may be required under state securities or Blue Sky laws in connection with the issue and sale of the Shares and the compliance by the Company with this Agreement.

(t) No Material Actions or Proceedings. Other than as set forth in the Registration Statement and the Prospectus, there are no legal, governmental or regulatory investigations, actions, demands, claims, suits, arbitrations, inquiries or proceedings pending to which the

Company or any of its subsidiaries or, to the Company's knowledge, any officer or director of the Company, is a party or of which any property or assets of the Company or any of its subsidiaries or, to the Company's knowledge, any officer or director of the Company, is the subject which, if determined adversely to the Company or any of its subsidiaries (or such officer or director), would individually or in the aggregate, reasonably be expected to have a Material Adverse Effect; and, to the Company's knowledge, no such proceedings are threatened or contemplated by governmental authorities or others; there are no current or pending actions that are required under the Securities Act to be described in the Registration Statement or the Prospectus that are not so described therein; and there are no statutes, regulations or contracts or other documents that are required under the Securities Act to be filed as exhibits to or described in the Registration Statement, as applicable, that are not so filed or described.

(u) Intellectual Property Rights. Except as described in the Registration Statement and the Prospectus, (i) the Company and its subsidiaries own, possess or license or can obtain on commercially reasonable terms adequate rights to all trademarks, service marks, trade names, domain names, social media accounts and identifiers, and other source identifiers, and all goodwill associated with any of the foregoing, inventions, patents, copyrights and copyrightable works, licenses, approvals, technology, know-how, trade secrets and other unpatented and/or unpatentable proprietary or confidential information, systems or procedures, and all other intellectual property and similar proprietary rights in any jurisdiction throughout the world (including all registrations and applications for registration of any of the foregoing, as applicable) (collectively, "**Intellectual Property Rights**") used or held for use in the conduct of their respective businesses as currently conducted; (ii) to the Company's knowledge, neither the Company nor any of its subsidiaries infringes, misappropriates or otherwise violates, or has infringed, misappropriated or otherwise violated, any Intellectual Property Rights of any third party; (iii) to the Company's knowledge, neither the manufacture of, nor the use or sale of, any of the product candidates described in the Registration Statement and the Prospectus will conflict with, infringe, misappropriate or otherwise violate the Intellectual Property Rights of any third party (it being understood that the representations and warranties in clauses (ii) and (iii) are made without giving effect to any exemption under applicable law to which the Company or any of its subsidiaries may be entitled (e.g., 35 U.S.C. Section 271(e)(1))); (iv) other than as described in the Registration Statement and the Prospectus, there are no rights of third parties (including any liens or encumbrances), except for customary retained and reversionary rights of third-party licensors and the rights of customers and strategic partners to use Company Intellectual Property Rights in the ordinary course, consistent with past practice, to any of the Intellectual Property Rights owned or purported to be owned by, or exclusively licensed to, the Company or any of its subsidiaries; (v) there is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim by any third party (x) challenging the Company's or any subsidiary of the Company's rights in or to, or alleging a violation of any of the terms of, any of their owned or licensed Intellectual Property Rights, (y) alleging that the Company or any of its subsidiaries has infringed, misappropriated or otherwise violated any Intellectual Property Rights of any third party, or (z) challenging the validity, scope or enforceability of any Intellectual Property Rights owned by or exclusively licensed to the Company or any of its subsidiaries, and in the case of each of clauses (x), (y) and (z), the Company and its subsidiaries have not received any notice of and are otherwise unaware of any facts that would form a reasonable basis for any such action, suit, proceeding or claim; (vi) to the Company's knowledge, there is no infringement, misappropriation, breach or default, or other violation by any third parties of any Intellectual Property Rights owned by or exclusively licensed to the Company or any of its subsidiaries; (vii) the Company and its subsidiaries have at all times taken reasonable steps in accordance with normal industry practice to maintain the confidentiality of all Intellectual Property Rights, the value of which to the Company or any of its subsidiaries is contingent upon maintaining the confidentiality thereof, and no such Intellectual Property Rights have been disclosed other than to employees, representatives and agents of the Company or any of its subsidiaries, or to third parties, each of whom is bound by a written confidentiality agreement; (viii) all founders, current

and former employees, and consultants involved in the development of Intellectual Property Rights for or on behalf of the Company or any of its subsidiaries have signed written and enforceable confidentiality and invention assignment agreements with the Company or any of its applicable subsidiaries pursuant to which the Company or the applicable subsidiary either (A) has obtained ownership of and is the exclusive owner of such Intellectual Property Rights, or (B) has obtained a valid and unrestricted right to exploit such Intellectual Property Rights, sufficient for the conduct of the business as currently conducted and as proposed in the Registration Statement and the Prospectus to be conducted; except, in the case of each of (i) through (viii) above, where the outcome of which would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect; and (ix) all Intellectual Property Rights owned by or licensed to the Company or any of its subsidiaries are subsisting and, to the Company's knowledge, solely with respect to issued patents and trademarks, are valid and enforceable.

(v) Open Source Software. (i) The Company and its subsidiaries use and have used any and all software and other materials distributed under a license approved by the Open Source Initiative at https://opensource.org/licenses (including but not limited to the MIT License, Apache License, GNU General Public License, GNU Lesser General Public License and GNU Affero General Public License) ("**Open Source Software**") in compliance with all license terms applicable to such Open Source Software; and (ii) neither the Company nor any of its subsidiaries uses or distributes or has used or distributed any Open Source Software in any manner that requires or has required (A) the Company or any of its subsidiaries to permit reverse engineering of any software code or other technology owned by the Company or any of its subsidiaries or (B) any software code or other technology owned by the Company or any of its subsidiaries to be (1) disclosed or distributed in source code form, (2) licensed for the purpose of making derivative works or (3) redistributed at no charge, except as would not, in the cases of clause (i) or (ii), individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(w) All Necessary Permits, etc. Except as otherwise disclosed in the Registration Statement and Prospectus, the Company possesses all material licenses, sub-licenses, certificates, authorizations and permits required by the appropriate federal, state or foreign regulatory authorities necessary to conduct its business, as described in the Registration Statement and the Prospectus, including, without limitation, from the U.S. Food and Drug Administration ("**FDA**") and equivalent foreign regulatory authorities; and the Company has not received any notice of proceedings relating to the revocation or modification of any such required material license, sub-license, certificate, authorization or permit, except as described in the Registration Statement and the Prospectus.

(x) Title to Properties. The Company and its subsidiaries do not own any real property and have good and marketable title to all personal property (other than with respect to Intellectual Property Rights, which is addressed exclusively in subsection (u) above) owned by them, in each case free and clear of all liens, encumbrances and defects except as described in the Registration Statement and the Prospectus or such as do not materially affect the value of such property and do not interfere with the use made and proposed to be made of such property by the Company and its subsidiaries; and any real property and buildings held under lease by the Company and its subsidiaries are, to the Company's knowledge, held by them under valid, subsisting and enforceable leases (subject to the effects of (i) bankruptcy, insolvency, fraudulent conveyance, fraudulent transfer, reorganization, moratorium or other similar laws relating to or affecting the rights or remedies of creditors generally; (ii) the application of general principles of equity; and (iii) applicable law and public policy with respect to rights to indemnity and contribution) with such exceptions as are not material and do not materially interfere with the use made and proposed to be made of such property and buildings by the Company and its subsidiaries.

(y) Tax Law Compliance. The Company and each of its subsidiaries have filed all federal, state, local and non-U.S. tax returns required to be filed through the date of this Agreement and have paid all taxes required to be paid thereon (except for cases in which the failure to file or pay would not reasonably be expected to have a Material Adverse Effect, or, except as currently being contested in good faith and for which reserves required by GAAP have been created in the financial statements of the Company), and no tax deficiency has been determined adversely to the Company or any of its subsidiaries which has had (nor does the Company nor any of its subsidiaries have any notice or knowledge of any tax deficiency which could reasonably be expected to be determined adversely to the Company or its subsidiaries and which could reasonably be expected to have) a Material Adverse Effect.

(z) Company Not an "Investment Company." The Company is not, and will not be, either after receipt of payment for the Shares or after the application of the proceeds therefrom as described under "Use of Proceeds" in the Registration Statement or the Prospectus, an "investment company," as such term is defined in the Investment Company Act of 1940, as amended (the "**Investment Company Act**").

(aa) Insurance. Except as described in or expressly contemplated by the Registration Statement and the Prospectus, the Company has insurance covering its property, operations, personnel and businesses, including clinical trial insurance as applicable and business interruption insurance, which insurance is in amounts and insures against such losses and risks as are generally maintained by similarly situated companies and which the Company believes are reasonably adequate to protect the Company; and the Company has not (i) received notice from any insurer or agent of such insurer that capital improvements or other expenditures are required or necessary to be made in order to continue such insurance or (ii) any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage at reasonable cost from similar insurers as may be necessary to continue its business.

(ab) No Price Stabilization or Manipulation; Compliance with Regulation M. Neither the Company nor any of its subsidiaries, nor to the Company's knowledge, Affiliates, has taken, directly or indirectly, any action designed to or that could reasonably be expected to cause or result in any stabilization or manipulation of the price of the Class A Common Shares or of any "reference security" (as defined in Rule 100 of Regulation M under the Exchange Act ("**Regulation M**")) with respect to the Class A Common Shares, whether to facilitate the sale or resale of the Shares or otherwise, and has taken no action which would directly or indirectly violate Regulation M.

(ac) Related Party Transactions. There are no business relationships or related-party transactions involving the Company or any of its subsidiaries or any other person required to be described in the Registration Statement or the Prospectus which have not been described as required.

(ad) FINRA Matters. All of the information provided to the Agent or to counsel for the Agent by the Company, its counsel, its officers and directors and the holders of any securities (debt or equity) or options to acquire any securities of the Company in connection with the offering of the Shares is true, complete, correct and compliant with FINRA rules and any letters, filings or other supplemental information provided to FINRA pursuant to FINRA rules or NASD conduct rules is true, complete and correct.

(ae) No Unlawful Contributions or Other Payments; Anti-Corruption and Anti-Bribery Laws. Neither the Company nor any of its subsidiaries, nor any director, officer or employee of the Company or any of its subsidiaries nor, to the Company's knowledge, any agent, Affiliate or other person associated with or acting on behalf of the Company or any of its subsidiaries has (i)

made, offered, promised or authorized any unlawful contribution, gift, entertainment or other unlawful expense (or taken any act in furtherance thereof); (ii) made, offered, promised or authorized any direct or indirect unlawful payment; (iii) made or taken an act in furtherance of an offer, promise or authorization of any direct or indirect unlawful payment or benefit to any foreign or domestic government official or employee, including of any government-owned or controlled entity or of a public international organization, or any person acting in an official capacity for or on behalf of any of the foregoing, or any political party or party official or candidate for political office; (iv) violated or is in violation of any provision of the Foreign Corrupt Practices Act of 1977, as amended, or the rules and regulations thereunder, the Bribery Act 2010 of the United Kingdom or any other applicable anti-corruption, anti-bribery or related law, statute or regulation (collectively, "**Anti-Corruption Laws**"); or (v) made, offered, agreed, requested or taken an act in furtherance of any unlawful bribe or other unlawful benefit, including, without limitation, any rebate, payoff, influence payment, kickback or other unlawful or improper payment or benefit; the Company and its subsidiaries have conducted their businesses in compliance with Anti-Corruption Laws and have instituted and maintained and will continue to maintain policies and procedures designed to promote and achieve compliance with such laws and with the representations and warranties contained herein; neither the Company nor any of its subsidiaries will use, directly or indirectly, the proceeds of the offering in furtherance of an offer, payment, promise to pay, or authorization of the payment or giving of money, or anything else of value, to any person in violation of Anti-Corruption Laws.

(af) Compliance with Environmental Laws. Except in all cases where such violation, claim, request, notice, proceeding, investigation or other matter would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect, the Company and each of its subsidiaries: (x) is in compliance with all, and has not violated any, applicable federal, state or local laws, rules, regulations, requirements, decisions, judgments, decrees and orders relating to pollution, hazardous or toxic substances, wastes, pollutants, contaminants or the protection of human health or safety, the environment or natural resources (collectively, "**Environmental Laws**"); (y) has received and is in compliance with all, and has not violated any, permits, licenses, certificates or other authorizations or approvals required of it under any Environmental Laws to conduct its business; and (z) has not received notice of any actual or potential liability of the Company, or obligation of the Company under or relating to, or any actual or potential violation of, any Environmental Laws by the Company, including for the investigation or remediation of any disposal or release of hazardous or toxic substances or wastes, pollutants or contaminants, and have no knowledge of any event or condition that would reasonably be expected to result in any such notice; ii) there are no costs or liabilities associated with Environmental Laws of or relating to the Company, except in the case of each of (i) and (ii) above, for any such matter as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect; and iii) except as described in the Registration Statement and the Prospectus, (x) there is no proceeding that is pending, or that is known by the Company to be contemplated, against the Company under any Environmental Laws in which a governmental entity is also a party, other than such proceeding regarding which the Company reasonably believes no monetary sanctions of $100,000 or more will be imposed, and (y) the Company is not aware of any facts regarding compliance with Environmental Laws, or liabilities or other obligations under Environmental Laws or concerning hazardous or toxic substances or wastes, pollutants or contaminants, that individually or in the aggregate, would reasonably be expected to have a Material Adverse Effect;

(ag) ERISA Compliance. (i) Each employee benefit plan, within the meaning of Section 3(3) of the Employee Retirement Income Security Act of 1974, as amended ("**ERISA**"), for which the Company or any member of its "**Controlled Group**" (defined as including any entity, whether or not incorporated, that is under common control with the Company within the meaning of Section 4001(a)(14) of ERISA or that would be regarded as a single employer with the Company under Section 414(b),(c),(m) or (o) of the Internal Revenue Code of 1986, as

amended (the "**Code**")) would have any liability (each, a "**Plan**") has been maintained in compliance with its terms and the requirements of any applicable statutes, orders, rules and regulations, including but not limited to ERISA and the Code, except for noncompliance that would not reasonably be expected to result in material liability to the Company; (ii) no prohibited transaction, within the meaning of Section 406 of ERISA or Section 4975 of the Code, has occurred with respect to any Plan, excluding transactions effected pursuant to a statutory or administrative exemption; (iii) no Plan has failed, or is reasonably expected to fail, to satisfy the minimum funding standards (within the meaning of Section 302 of ERISA or Section 412 of the Code) applicable to such Plan (whether or not waived); (iv) no Plan is, or is reasonably expected to be, in "at risk status" (within the meaning of Section 303(i) of ERISA) and no Plan that is a "multiemployer plan" within the meaning of Section 4001(a)(3) of ERISA is in "endangered status" or "critical status" (within the meaning of Sections 304 and 305 of ERISA); (v) no "reportable event" (within the meaning of Section 4043(c) of ERISA and the regulations promulgated thereunder) has occurred or is reasonably expected to occur; (vi) each Plan that is intended to be qualified under Section 401(a) of the Code is so qualified, and to the Company's knowledge, nothing has occurred, whether by action or by failure to act, which would cause the loss of such qualification; (vii) neither the Company nor any member of the Controlled Group has incurred, nor reasonably expects to incur, any liability under Title IV of ERISA (other than contributions to the Plan or premiums to the Pension Benefit Guarantee Corporation, in the ordinary course and without default) in respect of a Plan (including a "multiemployer plan" within the meaning of Section 4001(a)(3) of ERISA); and (viii) none of the following events has occurred or is reasonably likely to occur: (A) a material increase in the aggregate amount of contributions required to be made to all Plans by the Company or its Controlled Group Affiliates in the current fiscal year of the Company and its Controlled Group Affiliates compared to the amount of such contributions made in the Company's and its Controlled Group Affiliates' most recently completed fiscal year; or (B) a material increase in the Company's "accumulated post-retirement benefit obligations" (within the meaning of Accounting Standards Codification Topic 715-60) compared to the amount of such obligations in the Company's most recently completed fiscal year, except in each case with respect to the events or conditions set forth in (i) through (viii) hereof, as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(ah) Brokers. Except as set forth herein or otherwise disclosed in the Prospectus, there is no broker, finder or other party that is entitled to receive from the Company any brokerage or finder's fee or other fee or commission as a result of any transactions contemplated by this Agreement.

(ai) No Outstanding Loans or Other Extensions of Credit. The Company does not have any outstanding extension of credit, in the form of a personal loan, to or for any director or executive officer (or equivalent thereof) of the Company except for such extensions of credit as are expressly permitted by Section 13(k) of the Exchange Act.

(aj) Compliance with Applicable Laws. The Company (i) has operated and currently operates its business in compliance in all material respects with all statutes, rules and regulations applicable to the ownership, testing, development, manufacture, packaging, processing, use, distribution, storage, import, export or disposal of any of the Company's product candidates, including, without limitation, requirements governing investigational drugs and devices under the U.S. Federal Food, Drug and Cosmetic Act and rules and regulations thereunder, regulations relating to Good Clinical Practices and Good Laboratory Practices, the U.S. Animal Welfare Act and rules and regulations thereunder, the Investigational Device Exemption regulations and the Quality System Regulation (collectively, "**Applicable Laws**"), and (ii) have not received any FDA Form 483, written notice of adverse finding, warning letter, untitled letter or other correspondence or written notice from the FDA, any court or arbitrator or governmental or other

regulatory authority alleging or asserting non-compliance with (A) any Applicable Laws or (B) any permits required by any such Applicable Laws.

(ak) Dividend Restrictions. Except as disclosed in the Registration Statement and the Prospectus, no subsidiary of the Company is prohibited or restricted, directly or indirectly, from paying dividends to the Company, or from making any other distribution with respect to such subsidiary's equity securities or from repaying to the Company or any other subsidiary of the Company any amounts that may from time to time become due under any loans or advances to such subsidiary from the Company or from transferring any property or assets to the Company or to any other subsidiary.

(al) Money Laundering Laws. The operations of the Company and its subsidiaries are and have been conducted at all times in compliance with the requirements of applicable anti-money laundering laws, including, but not limited to, the Bank Secrecy Act of 1970, as amended by the USA PATRIOT ACT of 2001, and the rules and regulations promulgated thereunder, and the applicable anti-money laundering laws of the various jurisdictions in which the Company and its subsidiaries conduct business, the rules and regulations thereunder and any related or similar rules, regulation or guidelines issued, administered or enforced by any governmental agency (collectively, the "**Money Laundering Laws**") and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or any of its subsidiaries with respect to the Money Laundering Laws is pending or, to the Company's knowledge, threatened.

(am) Clinical Data and Regulatory Compliance. Any studies, tests and preclinical and clinical trials conducted by the Company and, to the Company's knowledge, any studies, tests and preclinical and clinical trials conducted on behalf of the Company or in which the Company has participated, were, and if still pending are, being conducted in accordance with experimental protocols, procedures and controls pursuant to accepted professional scientific standards and all applicable rules and regulations, including those of the FDA and comparable regulatory agencies outside of the United States, to which the Company is subject and, for studies submitted to regulatory authorities as a basis for regulatory approval and preclinical and clinical trials, current Good Clinical Practices and Good Laboratory Practices except where the failure to be so conducted would not reasonably be expected to have a Material Adverse Effect; the descriptions of the results of such studies, tests and trials contained in the Registration Statement and the Prospectus are, to the Company's knowledge, accurate and complete in all material respects and fairly present the data derived from such studies, tests and trials; the Company is not aware of any studies, tests or trials, the results of which the Company believes reasonably call into question the study, test, or trial results described or referred to in the Registration Statement and the Prospectus when viewed in the context in which such results are described and the clinical state of development; and, except to the extent disclosed in the Registration Statement or the Prospectus, the Company has not received any notices or correspondence from the FDA or any other comparable federal, state, local or foreign governmental or regulatory authority requiring the termination or suspension of any studies, tests or preclinical or clinical trials conducted by or on behalf of the Company.

(an) Manufacturing Compliance. The manufacturing facilities and operations of Company's suppliers and manufacturers are not, to the Company's knowledge, operated in violation of applicable statutes, rules, regulations and policies of the FDA and comparable regulatory agencies outside of the United States to which the Company is subject.

(ao) Sanctions. Neither the Company nor any of its subsidiaries, nor any director officer or employee of the Company or any of its subsidiaries nor, to the Company's knowledge, any agent, Affiliate or other person associated with or acting on behalf of the Company or any of its subsidiaries is (i) currently the subject or the target of any sanctions administered or enforced

by the U.S. Government, including, without limitation, the Office of Foreign Assets Control of the U.S. Department of the Treasury (OFAC), or the U.S. Department of State and including, without limitation, the designation as a "specially designated national" or "blocked person," the European Union, His Majesty's Treasury, the United Nations Security Council, or other relevant sanctions authority (collectively, "**Sanctions**"), (ii) located, organized, or resident in a country or territory that is the subject or target of Sanctions including, without limitation, Crimea, Cuba, Iran, North Korea, Syria, the Crimea Region and the non-government controlled areas of the Zaporizhzhia and Kherson Regions of Ukraine, the so-called Donetsk People's Republic, the so-called Luhansk People's Republic and any other Covered Region of Ukraine identified pursuant to Executive Order 14065 (a "**Sanctioned Jurisdiction**"), and the Company will not directly or indirectly use the proceeds of the offering of the Shares hereunder, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other person or entity (i) to fund or facilitate any activities of or business with any person, or in any country or territory, that, at the time of such funding, is the subject or the target of Sanctions or (ii) in any other manner that will result in a violation by any person (including any person participating in the transaction, whether as underwriter, advisor, investor or otherwise) of Sanctions; neither the Company nor any of its subsidiaries, nor any director, officer or employee of the Company or any of its subsidiaries, is engaged in, or has, at any time in the past five years, engaged in, any dealings or transactions with or involving any individual or entity that was or is, as applicable, at the time of such dealing or transaction, the subject or target of Sanctions or with any Sanctioned Jurisdiction; the Company and its subsidiaries have instituted, and maintain, policies and procedures reasonably designed to promote and achieve continued compliance with Sanctions.

(ap) Sarbanes-Oxley. To the extent applicable to the Company, there is and has been no failure on the part of the Company or, to the Company's knowledge, any of the Company's directors or officers, in their capacities as such, to comply with any provision of the Sarbanes-Oxley Act, including Section 402 related to loans and Sections 302 and 906 related to certifications.

(aq) Duties, Transfer Taxes, Etc. No stamp or other issuance or transfer taxes or duties and no capital gains, income, withholding or other taxes are payable by the Agent in the United States or any political subdivision or taxing authority thereof or therein in connection with the execution, delivery or performance of this Agreement by the Company or the sale and delivery by the Company of the Shares.

(ar) Cybersecurity. Except as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect, (i) the Company and its subsidiaries' respective information technology assets and equipment, computers, systems, networks, hardware, applications, technology, data and databases (including Personal Data (as defined below) and the data and information of their respective customers, employees, suppliers, vendors and any third party data) used in connection with the operation of the Company's and its subsidiaries' respective businesses and in the possession or otherwise in the control of the Company or any of its subsidiaries (collectively, "**IT Systems and Data**") are adequate for, and operate and perform in all material respects as required in connection with, the operation of the business of the Company and its subsidiaries as currently conducted, free and clear, to the Company's knowledge, of all Trojan horses, time bombs, malware and other malicious code; (ii) the Company and each of its subsidiaries have taken reasonable technical and organizational measures to protect the IT Systems and Data and, without limiting the foregoing, the Company and its subsidiaries have used commercially reasonable efforts to establish and maintain, and have established, maintained, implemented and complied with, reasonable information technology, information security, cybersecurity and data protection controls, policies and procedures, including oversight, access controls, encryption, technological and physical safeguards and business continuity/disaster recovery and security plans, which controls, policies and procedures are designed to protect against and prevent security breaches, unauthorized

destruction, loss, distribution, use, access, disablement, misappropriation or modification, or other compromise or misuse of any IT Systems and Data ("**Breach**"); and (iii) to the Company's knowledge, there has been no such Breach and the Company and its subsidiaries have not been notified of, and have no knowledge of any event or condition that would reasonably be expected to result in, any such Breach.

(as) Compliance with Data Privacy Laws. Except as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect, (i) the Company and each of its subsidiaries have complied and are presently in compliance with all of their internal privacy policies, privacy- and data protection-related contractual obligations, and applicable laws, statutes, judgments, orders, rules and regulations of any court or arbitrator or other governmental or regulatory authority, in each case, relating to the collection, use, transfer, import, export, storage, protection, disposal and disclosure by the Company or any of its subsidiaries of personal, personally identifiable, household (in the case of household data, to the extent it is "Personal Information" under the California Consumer Privacy Act, as modified by the California Privacy Rights Act), or sensitive, confidential or regulated data or information (collectively, "**Data Security Obligations**," and such data and information, "**Personal Data**"); (ii) the Company and its subsidiaries have not received any written notification of or written complaint regarding and are unaware of any other facts that, individually or in the aggregate, would reasonably indicate non-compliance with any Data Security Obligation by the Company or any of its subsidiaries; and (iii) there is no action, suit or proceeding by or before any court or governmental agency, authority or body pending or, to the Company's knowledge, threatened in writing, alleging non-compliance with any Data Security Obligation by the Company or any of its subsidiaries.

(at) Other Underwriting Agreements. The Company is not a party to any agreement with an agent or underwriter for any other "at the market" or continuous equity transaction.

(au) Compliance with Health Care Laws. The Company and its subsidiaries are, and at all times have been, in compliance with all Health Care Laws in all material respects and to the extent applicable to the Company's current business. For purposes of this Agreement, "**Health Care Laws**" means: (i) the Federal Food, Drug, and Cosmetic Act (21 U.S.C. Section 301 et seq.), the Public Health Service Act (42 U.S.C. Section 201 et seq.), and the regulations promulgated thereunder; (ii) all applicable federal, state, local and foreign health care fraud and abuse laws, including, without limitation, the Anti-Kickback Statute (42 U.S.C. Section 1320a-7b(b)), the Civil False Claims Act (31 U.S.C. Section 3729 et seq.), the criminal false statements law (42 U.S.C. Section 1320a-7b(a)), 18 U.S.C. Sections 286 and 287, the health care fraud criminal provisions under the U.S. Health Insurance Portability and Accountability Act of 1996 ("**HIPAA**") (42 U.S.C. Section 1320d et seq.), the Stark Law (42 U.S.C. Section 1395nn), the civil monetary penalties law (42 U.S.C. Section 1320a-7a), the exclusion law (42 U.S.C. Section 1320a-7), the Physician Payments Sunshine Act (42 U.S.C. Section 1320-7h), and applicable laws governing government funded or sponsored healthcare programs; (iii) HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act (42 U.S.C. Section 17921 et seq.); (iv) the Patient Protection and Affordable Care Act of 2010, as amended by the Health Care and Education Reconciliation Act of 2010; (v) licensure, quality, safety and accreditation requirements under applicable federal, state, local or foreign laws or regulatory bodies; and (vi) all other local, state, federal, national, supranational and foreign laws, relating to the regulation of the Company or its subsidiaries, and (vii) the directives and regulations promulgated pursuant to such statutes and any state or non-U.S. counterpart thereof. Neither the Company nor any of its subsidiaries has received written notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from any court or arbitrator or governmental or regulatory authority or third party alleging that any product operation or activity is in violation of any Health Care Laws nor, to the Company's knowledge, is any such claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or

other action threatened. The Company and its subsidiaries have filed, maintained or submitted all material reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Health Care Laws, and all such reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments were complete and accurate on the date filed in all material respects (or were corrected or supplemented by a subsequent submission). Neither the Company nor any of its subsidiaries is a party to any corporate integrity agreements, monitoring agreements, consent decrees, settlement orders, or similar agreements with or imposed by any governmental or regulatory authority. Additionally, neither the Company, any of its subsidiaries nor any of their respective employees, officers, directors, or, to the Company's knowledge, agents has been excluded, suspended or debarred from participation in any U.S. federal health care program or human clinical research or is subject to a governmental inquiry, investigation, proceeding, or other similar action that could reasonably be expected to result in debarment, suspension, or exclusion.

(av) Authority to Enter into Sales Agreement. The Company has full right, power and authority to execute and deliver this Agreement and to perform its obligations hereunder; and all action required to be taken for the due and proper authorization, execution and delivery by it of this Agreement and the consummation by it of the transactions contemplated hereby has been duly and validly taken.

(aw) No Violation of Organizational Documents, Laws or Existing Instruments. Neither the Company nor any of its subsidiaries is (i) in violation of its certificate of incorporation or by-laws (or other applicable organizational document), (ii) in violation of any statute or any judgment, order, rule or regulation of any court or governmental agency or body having jurisdiction over the Company or any of its subsidiaries or any of their properties, or (iii) in default in the performance or observance of any obligation, agreement, covenant or condition contained in any indenture, mortgage, deed of trust, loan agreement, lease or other agreement or instrument to which it is a party or by which it or any of its properties may be bound, except, in the case of the foregoing clauses (ii) and (iii), for such violations or defaults as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(ax) Accuracy of Certain Disclosure. The statements set forth in the Registration Statement and the Prospectus under the caption "Description of Capital Stock," insofar as they purport to constitute a summary of the terms of the Common Stock are accurate, complete and fair in all material respects.

(ay) No Material Labor Disturbances. No material labor disturbance by or dispute with employees of the Company or any of its subsidiaries exists or, to the Company's knowledge, is contemplated or threatened, and the Company is not aware of any existing or imminent labor disturbance by, or dispute with, the employees of any of its principal suppliers or contractors, except as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. The Company has not received any notice of cancellation or termination with respect to any collective bargaining agreement material to the Company.

(az) No Ratings. There are no debt securities or preferred stock issued or guaranteed by the Company nor any of its subsidiaries that are rated by a "nationally recognized statistical rating organization," as such term is defined in Section 3(a)(62) under the Exchange Act.

(ba) Forward-Looking Statements. No forward-looking statement (within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act) included in the Registration Statement or the Prospectus has been made or reaffirmed without a reasonable basis or has been disclosed other than in good faith.

Any certificate signed by any officer or representative of the Company or any of its subsidiaries and delivered to the Agent or counsel for the Agent in connection with an issuance of Shares shall be deemed a representation and warranty by the Company to the Agent as to the matters covered thereby on the date of such certificate.

The Company acknowledges that the Agent and, for purposes of the opinions to be delivered pursuant to Section 4(o) and Section 4(q) hereof, counsel to the Company and counsel to the Agent, will rely upon the accuracy and truthfulness of the foregoing representations and hereby consents to such reliance.

Section 3. ISSUANCE AND SALE OF COMMON SHARES

(a) Sale of Securities. On the basis of the representations, warranties and agreements herein contained, but subject to the terms and conditions herein set forth, the Company and the Agent agree that the Company may from time to time seek to sell Shares through the Agent, acting as sales agent, or directly to the Agent, acting as principal, as follows, with an aggregate Sales Price of up to the Maximum Program Amount, based on and in accordance with Issuance Notices as the Company may deliver, during the Agency Period.

(b) Mechanics of Issuances.

(i) Issuance Notice. Upon the terms and subject to the conditions set forth herein, on any Trading Day during the Agency Period on which the conditions set forth in Section 5(a) and Section 5(b) shall have been satisfied, the Company may exercise its right to request an issuance of Shares by delivering to the Agent an Issuance Notice; *provided, however*, that (A) in no event may the Company deliver an Issuance Notice to the extent that (I) the sum of (x) the aggregate Sales Price of the requested Issuance Amount, plus (y) the aggregate Sales Price of all Shares issued under all previous Issuance Notices effected pursuant to this Agreement, would exceed the Maximum Program Amount; and (B) prior to delivery of any Issuance Notice, the period set forth for any previous Issuance Notice shall have expired or been terminated. An Issuance Notice shall be considered delivered on the Trading Day that it is received by e-mail to the persons set forth in Schedule A hereto and confirmed by the Company by telephone (including a voicemail message to the persons so identified), with the understanding that, with adequate prior written notice, the Agent may modify the list of such persons from time to time.

(ii) Agent Efforts. Upon the terms and subject to the conditions set forth in this Agreement, upon the receipt of an Issuance Notice, the Agent will use its commercially reasonable efforts consistent with its normal sales and trading practices to place the Shares with respect to which the Agent has agreed to act as sales agent, subject to, and in accordance with the information specified in, the Issuance Notice, unless the sale of the Shares described therein has been suspended, cancelled or otherwise terminated in accordance with the terms of this Agreement. For the avoidance of doubt, the parties to this Agreement may modify an Issuance Notice at any time provided they both agree in writing to any such modification.

(iii) Method of Offer and Sale. The Shares may be offered and sold (A) in privately negotiated transactions with the consent of the Company; (B) as block transactions; or (C) by any other method permitted by law deemed to be an "at the market offering" as defined in Rule 415(a)(4) under the Securities Act, including sales made directly on the Principal Market or sales made into any other existing trading market of the Class A Common Shares. Nothing in this Agreement shall be deemed to require either party to agree to the method of offer and sale specified in the preceding sentence, and (except as specified in clauses (A) and (B) above) the method of placement of any Shares by the Agent shall be at the Agent's discretion.

(iv) Confirmation to the Company. If acting as sales agent hereunder, the Agent will provide written confirmation to the Company no later than the opening of the Trading Day next following the Trading Day on which it has placed Shares hereunder setting forth the number of Shares sold on such Trading Day, the corresponding Sales Price and the Issuance Price payable to the Company in respect thereof.

(v) Settlement. Each issuance of Shares will be settled on the applicable Settlement Date for such issuance of Shares and, subject to the provisions of Section 5, on or before each Settlement Date, the Company will, or will cause its transfer agent to, electronically transfer the Shares being sold by crediting the Agent or its designee's account at The Depository Trust Company through its Deposit/Withdrawal At Custodian (DWAC) System, or by such other means of delivery as may be mutually agreed upon by the parties hereto and, upon receipt of such Shares, which in all cases shall be freely tradable, transferable, registered shares in good deliverable form, the Agent will deliver, by wire transfer of immediately available funds, the related Issuance Price in same day funds delivered to an account designated by the Company prior to the Settlement Date. The Company may sell Shares to the Agent as principal at a price agreed upon at each relevant time Shares are sold pursuant to this Agreement (each, a "**Time of Sale**").

(vi) Suspension or Termination of Sales. Consistent with standard market settlement practices, the Company or the Agent may, upon notice to the other party hereto in writing or by telephone (confirmed immediately by verifiable email), suspend any sale of Shares, and the period set forth in an Issuance Notice shall immediately terminate; *provided, however*, that (A) such suspension and termination shall not affect or impair either party's obligations with respect to any Shares placed or sold hereunder prior to the receipt of such notice; (B) if the Company suspends or terminates any sale of Shares after the Agent confirms such sale to the Company, the Company shall still be obligated to comply with Section 3(b)(v) with respect to such Shares; and (C) if the Company defaults in its obligation to deliver Shares on a Settlement Date, the Company agrees that it will hold the Agent harmless against any loss, claim, damage or expense (including, without limitation, penalties, interest and reasonable legal fees and expenses), as incurred, arising out of or in connection with such default by the Company. The parties hereto acknowledge and agree that, in performing its obligations under this Agreement, the Agent may borrow Class A Common Shares from stock lenders in the event that the Company has not delivered Shares to settle sales as required by subsection (v) above, and may use the Shares to settle or close out such borrowings. The Company agrees that no such notice shall be effective against the Agent unless it is made to the persons identified in writing by the Agent pursuant to Section 3(b)(i).

(vii) No Guarantee of Placement, Etc. The Company acknowledges and agrees that (A) there can be no assurance that the Agent will be successful in placing Shares; (B) the Agent will incur no liability or obligation to the Company or any other Person if it does not sell Shares; and (C) the Agent shall be under no obligation to purchase Shares on a principal basis pursuant to this Agreement, except as otherwise specifically agreed by the Agent and the Company.

(viii) Material Non-Public Information. Notwithstanding any other provision of this Agreement, the Company and the Agent agree that the Company shall not deliver any Issuance Notice to the Agent, and the Agent shall not be obligated to place any Shares, during any period in which the Company is in possession of material non-public information.

(c) Fees. As compensation for services rendered, the Company shall pay to the Agent, on the applicable Settlement Date, the Selling Commission for the applicable Issuance Amount (including with respect to any suspended or terminated sale pursuant to Section 3(b)(vi)) by the Agent deducting the Selling Commission from the applicable Issuance Amount.

(d) Expenses. The Company agrees to pay all costs, fees and expenses incurred in connection with the performance of its obligations hereunder and in connection with the transactions contemplated hereby, including without limitation (i) all expenses incident to the issuance and delivery of the Shares (including all printing and engraving costs); (ii) all fees and expenses of the registrar and transfer agent of the Shares; (iii) all necessary issue, transfer and other stamp taxes in connection with the issuance and sale of the Shares; (iv) all fees and expenses of the Company's counsel, independent public or certified public accountants and other advisors; (v) all costs and expenses incurred in connection with the preparation, printing, filing, shipping and distribution of the Registration Statement (including financial statements, exhibits, schedules, consents and certificates of experts), the Prospectus, any Free Writing Prospectus (as defined below) prepared by or on behalf of, used by, or referred to by the Company, and all amendments and supplements thereto, and this Agreement; (vi) all filing fees, reasonable attorneys' fees and expenses incurred by the Company or the Agent in connection with qualifying or registering (or obtaining exemptions from the qualification or registration of) all or any part of the Shares for offer and sale under the state securities or blue sky laws or the provincial securities laws of Canada, and, if requested by the Agent, preparing and printing a "**Blue Sky Survey**" or memorandum and a "Canadian wrapper," and any supplements thereto, advising the Agent of such qualifications, registrations, determinations and exemptions; (vii) the reasonable fees and disbursements of the Agent's counsel, including the reasonable fees and expenses of counsel for the Agent in connection with, FINRA review, if any, and approval of the Agent's participation in the offering and distribution of the Shares; (viii) the filing fees incident to FINRA review, if any; and (ix) the fees and expenses associated with listing the Shares on the Principal Market. The fees and disbursements of Agent's counsel pursuant to subsections (vi) and (vii) above shall not exceed (A) $75,000 in connection with the execution of this Agreement, and (B) $25,000 in connection with each Triggering Event Date (as defined below) on which the Company is required to provide a certificate pursuant to Section 4(o); *provided*, however, that the fees and expenses of the Agent's counsel in connection with FINRA review and approval of the Agent's participation in the offering and distribution of the Shares pursuant to subsection (vii) above shall not be subject to the dollar amount limitations on the fees and disbursements of the Agent's counsel that are set forth in this sentence, but shall not exceed an additional $10,000.

Section 4. ADDITIONAL COVENANTS

The Company covenants and agrees with the Agent as follows, in addition to any other covenants and agreements made elsewhere in this Agreement:

(a) Exchange Act Compliance. During the Agency Period, the Company shall (i) file, on a timely basis, with the Commission all reports and documents required to be filed under Section 13, 14 or 15 of the Exchange Act in the manner and within the time periods required by the Exchange Act; and (ii) either, in the Company's sole discretion, (A) include in its quarterly reports on Form 10-Q and its annual reports on Form 10-K, a summary detailing, for the relevant reporting period, (1) the number of Shares, if any, sold through the Agent pursuant to this Agreement and (2) the net proceeds, if any, received by the Company from such sales or, (B) prepare a prospectus supplement containing, or include in such other filing permitted by the Securities Act or Exchange Act (each an "**Interim Prospectus Supplement**"), such summary information and, at least once a quarter and subject to this Section 4, file such Interim Prospectus Supplement pursuant to Rule 424(b) under the Securities Act (and within the time periods required by Rule 424(b) and Rule 430B under the Securities Act).

(b) Securities Act Compliance. After the date of this Agreement, the Company shall promptly advise the Agent in writing (i) of the receipt of any comments of, or requests for additional or supplemental information from, the Commission; (ii) of the time and date of any filing of any post-effective amendment to the Registration Statement, any Rule 462(b) Registration Statement or any amendment or supplement to the Prospectus, or any Free Writing

Prospectus; (iii) of the time and date that any post-effective amendment to the Registration Statement or any Rule 462(b) Registration Statement becomes effective; (iv) of the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement or any post-effective amendment thereto, any Rule 462(b) Registration Statement or any amendment or supplement to the Prospectus or of any order preventing or suspending the use of any Free Writing Prospectus or the Prospectus, or of any proceedings to remove, suspend or terminate from listing or quotation the Class A Common Shares from any securities exchange upon which they are listed for trading or included or designated for quotation, or of the threatening or initiation of any proceedings for any of such purposes; and (v) of the Company losing its status as a "well-known seasoned issuer" as defined in Rule 405 under the Securities Act as of the time the Company files with the Commission an annual report on Form 10-K. If the Commission shall enter any such stop order at any time, the Company will use its commercially reasonable efforts to obtain the lifting of such order as soon as practicable. Additionally, the Company agrees that it shall comply with the provisions of Rule 424(b) and Rule 433, as applicable, under the Securities Act and will use its reasonable efforts to confirm that any filings made by the Company under such Rule 424(b) or Rule 433 were received in a timely manner by the Commission.

(c) Amendments and Supplements to the Prospectus and Other Securities Act Matters. If any event shall occur or condition exist as a result of which it is necessary to amend or supplement the Prospectus so that the Prospectus does not include an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances when the Prospectus is delivered to a purchaser, not misleading, or if in the opinion of the Agent or counsel for the Agent it is otherwise necessary to amend or supplement the Prospectus to comply with applicable law, including the Securities Act, the Company agrees (subject to Section 4(d) and Section 4(f)) to promptly prepare, file with the Commission and furnish at its own expense to the Agent, amendments or supplements to the Prospectus so that the statements in the Prospectus as so amended or supplemented will not include an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances when the Prospectus is delivered to a purchaser, be misleading or so that the Prospectus, as amended or supplemented, will comply with applicable law including the Securities Act. Neither the Agent's consent to, or delivery of, any such amendment or supplement shall constitute a waiver of any of the Company's obligations under Sections 4(d) and Section 4(f). Notwithstanding the foregoing, the Company shall not be required to file such amendment or supplement if there is no pending Issuance Notice and the Company believes that it is in its best interests not to file such amendment or supplement; provided, however, the Company agrees not to provide an Issuance Notice or otherwise sell under this Agreement until such amendment or supplement is filed or it is determined that such amendment or supplement is no longer required; provided further, that the failure of the Company to file such amendment or supplement request shall not relieve the Company of any obligation or liability under Section 3(d) or Section 6 hereof, or affect the Agent's right to rely on the representations and warranties made by the Company in this Agreement.

(d) Agent's Review of Proposed Amendments and Supplements. Prior to amending or supplementing the Registration Statement (including any registration statement filed under Rule 462(b) under the Securities Act) or the Prospectus (excluding any amendment or supplement through incorporation of any report filed under the Exchange Act), the Company shall furnish to the Agent for review, a reasonable amount of time prior to the proposed time of filing or use thereof, a copy of each such proposed amendment or supplement, insofar as such proposed amendment or supplement relates to the transactions contemplated hereby, and the Company shall not file or use any such proposed amendment or supplement without the Agent's prior consent, which consent will not be unreasonably withheld, conditioned or delayed, and the

Company shall file with the Commission within the applicable period specified in Rule 424(b) under the Securities Act any prospectus required to be filed pursuant to such Rule.

(e) Use of Free Writing Prospectus. Neither the Company nor the Agent has prepared, used, referred to or distributed, or will prepare, use, refer to or distribute, without the other party's prior written consent, any "written communication" that constitutes a "free writing prospectus" as such terms are defined in Rule 405 under the Securities Act with respect to the offering contemplated by this Agreement (any such free writing prospectus being referred to herein as a "**Free Writing Prospectus**").

(f) Free Writing Prospectuses. The Company shall furnish to the Agent for review, a reasonable amount of time prior to the proposed time of filing or use thereof, a copy of each proposed free writing prospectus or any amendment or supplement thereto to be prepared by or on behalf of, used by, or referred to by the Company and the Company shall not file, use or refer to any proposed free writing prospectus or any amendment or supplement thereto without the Agent's consent, which consent will not be unreasonably withheld, conditioned or delayed. The Company shall furnish to the Agent, without charge, as many copies of any free writing prospectus prepared by or on behalf of, or used by the Company, as the Agent may reasonably request. If at any time when a prospectus is required by the Securities Act (including, without limitation, pursuant to Rule 173(d)) to be delivered in connection with sales of the Shares (but in any event if at any time through and including the date of this Agreement) there occurred or occurs an event or development as a result of which any free writing prospectus prepared by or on behalf of, used by, or referred to by the Company conflicted or would conflict with the information contained in the Registration Statement or included or would include an untrue statement of a material fact or omitted or would omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances prevailing at that subsequent time, not misleading, the Company shall promptly amend or supplement such free writing prospectus to eliminate or correct such conflict or so that the statements in such free writing prospectus as so amended or supplemented will not include an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances prevailing at such subsequent time, not misleading, as the case may be; *provided, however*, that prior to amending or supplementing any such free writing prospectus, the Company shall furnish to the Agent for review, a reasonable amount of time prior to the proposed time of filing or use thereof, a copy of such proposed amended or supplemented free writing prospectus and the Company shall not file, use or refer to any such amended or supplemented free writing prospectus without the Agent's consent, which consent will not be unreasonably withheld, conditioned or delayed.

(g) Filing of Agent Free Writing Prospectuses. The Company shall not take any action that would result in the Agent or the Company being required to file with the Commission pursuant to Rule 433(d) under the Securities Act a free writing prospectus prepared by or on behalf of the Agent that the Agent otherwise would not have been required to file thereunder.

(h) Copies of Registration Statement and Prospectus. After the date of this Agreement through the last time that a prospectus is required by the Securities Act (including, without limitation, pursuant to Rule 173(d)) to be delivered in connection with sales of the Shares, the Company agrees to furnish the Agent with copies (which may be electronic copies) of the Registration Statement and each amendment thereto, and with copies of the Prospectus and each amendment or supplement thereto in the form in which it is filed with the Commission pursuant to the Securities Act or Rule 424(b) under the Securities Act, both in such quantities as the Agent may reasonably request from time to time; and, if the delivery of a prospectus is required under the Securities Act or under the blue sky or securities laws of any jurisdiction at any time on or prior to the applicable Settlement Date for any period set forth in an Issuance Notice in connection with the offering or sale of the Shares and if at such time any event has occurred as a

result of which the Prospectus as then amended or supplemented would include an untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made when such Prospectus is delivered, not misleading, or, if for any other reason it is necessary during such same period to amend or supplement the Prospectus or to file under the Exchange Act any document incorporated by reference in the Prospectus in order to comply with the Securities Act or the Exchange Act, to notify the Agent and to request that the Agent suspend offers to sell Shares (and, if so notified, the Agent shall cease such offers as soon as practicable); and if the Company decides to amend or supplement the Registration Statement or the Prospectus as then amended or supplemented, to advise the Agent promptly by telephone (with confirmation in writing) and to prepare and cause to be filed promptly with the Commission an amendment or supplement to the Registration Statement or the Prospectus as then amended or supplemented that will correct such statement or omission or effect such compliance; provided, however, that if during such same period the Agent is required to deliver a prospectus in respect of transactions in the Shares, the Company shall promptly prepare and file with the Commission such an amendment or supplement.

(i) Blue Sky Compliance. The Company shall cooperate with the Agent and counsel for the Agent to qualify or register the Shares for sale under (or obtain exemptions from the application of) the state securities or blue sky laws or Canadian provincial securities laws of those jurisdictions designated by the Agent, shall comply with such laws and shall continue such qualifications, registrations and exemptions in effect so long as required for the distribution of the Shares. The Company shall not be required to qualify as a foreign corporation or to take any action that would subject it to general service of process in any such jurisdiction where it is not presently qualified or where it would be subject to taxation as a foreign corporation. The Company will advise the Agent promptly of the suspension of the qualification or registration of (or any such exemption relating to) the Shares for offering, sale or trading in any jurisdiction or any initiation or threat of any proceeding for any such purpose, and in the event of the issuance of any order suspending such qualification, registration or exemption, the Company shall use commercially reasonable efforts to obtain the withdrawal thereof at the earliest possible moment.

(j) Earnings Statement. As soon as practicable, the Company will make generally available to its security holders and to the Agent an earnings statement (which need not be audited) covering a period of at least twelve months beginning with the first fiscal quarter of the Company occurring after the date of this Agreement which shall satisfy the provisions of Section 11(a) of the Securities Act and Rule 158 under the Securities Act.

(k) Listing; Reservation of Shares. (a) The Company will maintain the listing of the Shares on the Principal Market; and (b) the Company will reserve and keep available at all times, free of preemptive rights, Shares for the purpose of enabling the Company to satisfy its obligations under this Agreement.

(l) Transfer Agent. The Company shall engage and maintain, at its expense, a registrar and transfer agent for the Shares.

(m) Due Diligence. During the term of this Agreement, the Company will reasonably cooperate with any reasonable due diligence review conducted by the Agent in connection with the transactions contemplated hereby, including, without limitation, providing information and making available documents and senior corporate officers, during normal business hours and at the Company's principal offices, as the Agent may reasonably request from time to time.

(n) Representations and Warranties. The Company acknowledges that each delivery of an Issuance Notice and each delivery of Shares on a Settlement Date shall be deemed to be (i) an affirmation to the Agent that the representations and warranties of the Company contained in

or made pursuant to this Agreement are true and correct as of the date of such Issuance Notice or of such Settlement Date, as the case may be, as though made at and as of each such date, except as may be disclosed in the Prospectus (including any documents incorporated by reference therein and any supplements thereto); and (ii) an undertaking that the Company will advise the Agent if any of such representations and warranties will not be true and correct as of the Settlement Date for the Shares relating to such Issuance Notice, as though made at and as of each such date (except that such representations and warranties shall be deemed to relate to the Registration Statement and the Prospectus as amended and supplemented relating to such Shares).

(o) Deliverables at Triggering Event Dates; Certificates. The Company agrees that on or prior to the date of the first Issuance Notice and, during the term of this Agreement after the date of the first Issuance Notice, upon:

(A) the filing of the Prospectus or the amendment or supplement of any Registration Statement or Prospectus (other than a prospectus supplement relating solely to an offering of securities other than the Shares or a prospectus filed pursuant to Section 4(a)(ii)(B)), by means of a post-effective amendment, sticker or supplement, but not by means of incorporation of documents by reference into the Registration Statement or Prospectus;

(B) the filing with the Commission of an annual report on Form 10-K or a quarterly report on Form 10-Q (including any Form 10-K/A or Form 10-Q/A containing amended financial information or a material amendment to the previously filed annual report on Form 10-K or quarterly report on Form 10-Q), in each case, of the Company; or

(C) the filing with the Commission of a current report on Form 8-K of the Company containing amended financial information (other than information "furnished" pursuant to Item 2.02 or 7.01 of Form 8-K or to provide disclosure pursuant to Item 8.01 of Form 8-K relating to reclassification of certain properties as discontinued operations in accordance with Statement of Financial Accounting Standards No. 144) that is material to the offering of securities of the Company in the Agent's reasonable discretion;

(any such event, a "**Triggering Event Date**"), the Company shall furnish the Agent (but in the case of clause (C) above only if the Agent reasonably determines that the information contained in such current report on Form 8-K of the Company is material) with a certificate as of the Triggering Event Date, in the form and substance satisfactory to the Agent and its counsel, substantially similar to the form previously provided to the Agent and its counsel, modified, as necessary, to relate to the Registration Statement and the Prospectus as amended or supplemented, (A) confirming that the representations and warranties of the Company contained in this Agreement are true and correct, (B) confirming that the Company has performed all of its obligations hereunder to be performed on or prior to the date of such certificate and as to the matters set forth in Section 5(a)(iii) hereof, and (C) containing any other certification that the Agent shall reasonably request. The requirement to provide a certificate under this Section 4(o) shall be waived for any Triggering Event Date occurring at a time when no Issuance Notice is pending or a suspension is in effect, which waiver shall continue until the earlier to occur of the date the Company delivers instructions for the sale of Shares hereunder (which for such calendar quarter shall be considered a Triggering Event Date) and the next occurring Triggering Event Date. Notwithstanding the foregoing, if the Company subsequently decides to sell Shares following a Triggering Event Date when a suspension was in effect and did not provide the Agent with a certificate under this Section 4(o), then before the Company delivers the instructions for the sale of Shares or the Agent sells any Shares pursuant to such instructions, the Company shall provide the Agent with a certificate in conformity with this Section 4(o) dated as of the date that the instructions for the sale of Shares are issued.

(p) Company Legal Opinions and Negative Assurance Letter. On or prior to the date of the first Issuance Notice and on or prior to each Triggering Event Date with respect to which the Company is obligated to deliver a certificate pursuant to Section 4(o) for which no waiver is applicable and excluding the date of this Agreement, the Company shall cause to be furnished to the Agent (1) a negative assurances letter and the written legal opinion of Wilson Sonsini Goodrich & Rosati, P.C., counsel to the Company ("**Company Counsel**"), and (2) the written legal opinion of Richard Person, Vice President of Intellectual Property of the Company or their successor ("**Company Internal IP Counsel**"), each dated the date of delivery, in form and substance reasonably satisfactory to Agent and its counsel, substantially similar to the form previously provided to the Agent and its counsel, modified, as necessary, to relate to the Registration Statement and the Prospectus as then amended or supplemented; *provided* that the Company shall be required to furnish no more than one written legal opinion of Company Counsel per filing of an annual report on Form 10-K or quarterly report on Form 10-Q. In lieu of such opinions for subsequent periodic filings, in the discretion of the Agent, the Company may furnish a reliance letter from such counsel to the Agent, permitting the Agent to rely on a previously delivered opinion letter, modified as appropriate for any passage of time or Triggering Event Date (except that statements in such prior opinion shall be deemed to relate to the Registration Statement and the Prospectus as amended or supplemented as of such Triggering Event Date).

(q) Comfort Letter. On or prior to the date of the first Issuance Notice and on or prior to each Triggering Event Date with respect to which the Company is obligated to deliver a certificate pursuant to Section 4(o) for which no waiver is applicable and excluding the date of this Agreement, the Company shall cause Ernst & Young LLP, the independent registered public accounting firm who has audited the financial statements included or incorporated by reference in the Registration Statement, to furnish the Agent a comfort letter, dated the date of delivery, in form and substance reasonably satisfactory to the Agent and its counsel, substantially similar to the form previously provided to the Agent and its counsel; provided, however, that any such comfort letter will only be required on the Triggering Event Date specified to the extent that it contains financial statements filed with the Commission under the Exchange Act and incorporated or deemed to be incorporated by reference into a Prospectus. If requested by the Agent, the Company shall also cause a comfort letter to be furnished to the Agent upon the occurrence of any material transaction or event requiring the filing of a current report on Form 8-K containing material amended financial information of the Company, including the restatement of the Company's financial statements, promptly following the filing of such current report on Form 8-K. After the initial comfort letter is furnished on or prior to the date of the first Issuance Notice, the Company shall be required to furnish no more than one comfort letter hereunder per calendar quarter.

(r) Secretary's Certificate. On or prior to the date of the first Issuance Notice and on or prior to each Triggering Event Date, the Company shall furnish the Agent a certificate executed by the Secretary of the Company, signing in such capacity, dated the date of delivery (i) certifying that attached thereto are true and complete copies of the resolutions duly adopted by the board of directors of the Company authorizing the execution and delivery of this Agreement and the consummation of the transactions contemplated hereby (including, without limitation, the issuance of the Shares pursuant to this Agreement), which authorization shall be in full force and effect on and as of the date of such certificate, (ii) certifying and attesting to the office, incumbency, due authority and specimen signatures of each Person who executed this Agreement for or on behalf of the Company, and (iii) containing any other certification that the Agent shall reasonably request.

(s) Agent's Own Account; Clients' Account. The Company consents to the Agent trading, in compliance with applicable law, in the Class A Common Shares for the Agent's own

account and for the account of its clients at the same time as sales of the Shares occur pursuant to this Agreement.

(t) Investment Limitation. The Company shall not invest, or otherwise use the proceeds received by the Company from its sale of the Shares in such a manner as would require the Company or any of its subsidiaries to register as an investment company under the Investment Company Act.

(u) Market Activities. The Company will not take, directly or indirectly, any action designed to or that might be reasonably expected to cause or result in stabilization or manipulation of the price of the Shares or any other reference security, whether to facilitate the sale or resale of the Shares or otherwise, and the Company will, and shall use commercially reasonable efforts to cause each of its Affiliates to, comply with all applicable provisions of Regulation M. If the limitations of Rule 102 of Regulation M ("**Rule 102**") do not apply with respect to the Shares or any other reference security pursuant to any exception set forth in Section (d) of Rule 102, then promptly upon notice from the Agent (or, if later, at the time stated in the notice), the Company will, and shall use commercially reasonable efforts to cause each of its Affiliates to, comply with Rule 102 as though such exception were not available but the other provisions of Rule 102 (as interpreted by the Commission) did apply. The Company shall promptly notify the Agent if it no longer meets the requirements set forth in Section (d) of Rule 102.

(v) Notice of Other Sale. Without the written consent of the Agent, the Company will not, directly or indirectly, offer to sell, sell, contract to sell, grant any option to sell or otherwise dispose of any shares of Common Stock or securities convertible into or exchangeable for Common Stock (other than Shares hereunder), warrants or any rights to purchase or acquire Common Stock, during the period beginning on the third Trading Day immediately prior to the date on which any Issuance Notice is delivered to the Agent hereunder and ending on the third Trading Day immediately following the Settlement Date with respect to Shares sold pursuant to such Issuance Notice; and will not directly or indirectly enter into any agreement with an agent or underwriter for any other "at the market" or continuous equity transaction to offer to sell, sell, contract to sell, grant any option to sell or otherwise dispose of any shares of Common Stock (other than the Shares offered pursuant to this Agreement) or securities convertible into or exchangeable for Common Stock, warrants or any rights to purchase or acquire, shares of Common Stock prior to the termination of this Agreement; provided, however, that such restrictions will not be required in connection with the Company's (i) issuance or sale of Class A Common Shares, options to purchase Class A Common Shares or Class A Common Shares issuable upon the exercise, settlement or vesting of options or other equity awards pursuant to any employee or director share option, incentive or benefit plan, share purchase or ownership plan, long-term incentive plan, dividend reinvestment plan, inducement award under Nasdaq rules or other compensation plan of the Company or its subsidiaries, as in effect on the date of this Agreement, (ii) issuance or sale of Class A Common Shares issuable upon exchange, conversion or redemption of securities or the exercise, settlement or vesting of warrants, options or other equity awards outstanding at the date of this Agreement, (iii) modification of any outstanding options, warrants of any rights to purchase or acquire Class A Common Shares and (iv) any Class A Common Shares or other securities issued in connection with a transaction that includes a commercial relationship (including joint ventures, marketing or distribution arrangements, collaboration agreements, intellectual property license agreements, or lending agreements or arrangements) or any acquisition of assets or acquisition of equity of another entity, provided that the aggregate number of Class A Common Shares issued pursuant to this clause (iv) shall not exceed 7.5% of the total number of outstanding shares of Common Stock, as of the date of such issuance or sale on a fully-diluted basis.

Section 5. CONDITIONS TO DELIVERY OF ISSUANCE NOTICES AND TO SETTLEMENT

(a) Conditions Precedent to the Right of the Company to Deliver an Issuance Notice and the Obligation of the Agent to Sell Shares. The right of the Company to deliver an Issuance Notice hereunder is subject to the satisfaction, on the date of delivery of such Issuance Notice, and the obligation of the Agent to use its commercially reasonable efforts to place Shares during the applicable period set forth in the Issuance Notice is subject to the satisfaction, on each Trading Day during the applicable period set forth in the Issuance Notice, of each of the following conditions:

(i) Accuracy of the Company's Representations and Warranties; Performance by the Company. The Company shall have delivered the certificate required to be delivered pursuant to Section 4(o) on or before the date on which delivery of such certificate is required pursuant to Section 4(o). The Company shall have performed, satisfied and complied with all covenants, agreements and conditions required by this Agreement to be performed, satisfied or complied with by the Company at or prior to such date, including, but not limited to, the covenants contained in Section 4(q), Section 4(r) and Section 4(s).

(ii) No Injunction. No statute, rule, regulation, executive order, decree, ruling or injunction shall have been enacted, entered, promulgated or endorsed by any court or governmental authority of competent jurisdiction or any self-regulatory organization having authority over the matters contemplated hereby that prohibits or directly and materially adversely affects any of the transactions contemplated by this Agreement, and no proceeding shall have been commenced that may have the effect of prohibiting or materially adversely affecting any of the transactions contemplated by this Agreement.

(iii) Material Adverse Effect. Except as disclosed in the Prospectus and the Time of Sale Information, (a) in the judgment of the Agent there shall not have occurred any Material Adverse Effect; and (b) there shall not have occurred any downgrading, nor shall any notice have been given of any intended or potential downgrading or of any review for a possible change that does not indicate the direction of the possible change, in the rating accorded any securities of the Company or any of its subsidiaries by any "nationally recognized statistical rating organization" as such term is defined for purposes of Section 3(a)(62) of the Exchange Act.

(iv) No Suspension of Trading in or Delisting of Class A Common Shares; Other Events. The trading of the Class A Common Shares (including without limitation the Shares) shall not have been suspended by the Commission, the Principal Market or FINRA and the Class A Common Shares (including without limitation the Shares) shall have been approved for listing or quotation on and shall not have been delisted from the Nasdaq Stock Market, the New York Stock Exchange or any of their constituent markets. There shall not have occurred (and be continuing in the case of occurrences under clauses (i) and (ii) below) any of the following: (i) trading or quotation in any of the Company's securities shall have been suspended or limited by the Commission or by the Principal Market or trading in securities generally on the Principal Market shall have been suspended or limited, or minimum or maximum prices shall have been generally established on any of such stock exchanges by the Commission or FINRA; (ii) a general banking moratorium shall have been declared by any federal or New York authorities; or (iii) there shall have occurred any outbreak or escalation of national or

international hostilities or any crisis or calamity, or any change in the United States or international financial markets, or any substantial change or development involving a prospective substantial change in United States' or international political, financial or economic conditions, as in the judgment of the Agent is material and adverse and makes it impracticable to market the Shares in the manner and on the terms described in the Prospectus or to enforce contracts for the sale of securities.

(v) Agent Counsel Opinion and Negative Assurances Letter. On or prior to the date of the first Issuance Notice and on or prior to each Triggering Event Date with respect to which the Company is obligated to deliver a certificate pursuant to Section 4(o) for which no waiver is applicable and excluding the date of this Agreement, Davis Polk & Wardwell LLP, the Agent's counsel, shall have furnished to the Agent a negative assurances letter and written legal opinion, each dated the date of delivery, in form and substance reasonably satisfactory to the Agent, modified, as necessary, to relate to the Registration Statement and the Prospectus as then amended or supplemented. In lieu of such opinion for subsequent periodic filings, Agent Counsel may furnish a reliance letter, permitting the Agent to rely on a previously delivered opinion letter, modified as appropriate for any passage of time or Triggering Event Date (except that statements in such prior opinion shall be deemed to relate to the Registration Statement and the Prospectus as amended or supplemented as of such Triggering Event Date).

(b) Documents Required to be Delivered on each Issuance Notice Date. The Agent's obligation to use its commercially reasonable efforts to place Shares hereunder shall additionally be conditioned upon the delivery to the Agent on or before the Issuance Notice Date of a certificate in form and substance reasonably satisfactory to the Agent, executed by the Chief Executive Officer, President or Chief Financial Officer of the Company, to the effect that all conditions to the delivery of such Issuance Notice shall have been satisfied as at the date of such certificate (which certificate shall not be required if the foregoing representations shall be set forth in the Issuance Notice).

(c) No Misstatement or Material Omission. The Agent shall not have advised the Company that the Registration Statement, the Prospectus or the Times of Sale Information, or any amendment or supplement thereto, contains an untrue statement of fact that in the Agent's reasonable opinion is material, or omits to state a fact that in the Agent's reasonable opinion is material and is required to be stated therein or is necessary to make the statements therein not misleading.

Section 6. INDEMNIFICATION AND CONTRIBUTION

(a) Indemnification of the Agent. The Company agrees to indemnify and hold harmless the Agent, its officers and employees, and each person, if any, who controls the Agent within the meaning of the Securities Act or the Exchange Act against any loss, claim, damage, liability or expense, as incurred, to which the Agent or such officer, employee or controlling person may become subject, under the Securities Act, the Exchange Act, other federal or state statutory law or regulation, or the laws or regulations of foreign jurisdictions where Shares have been offered or sold or at common law or otherwise (including in settlement of any litigation), insofar as such loss, claim, damage, liability or expense (or actions in respect thereof as contemplated below) arises out of or is based upon (i) any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, or any amendment thereto, including any information deemed to be a part thereof pursuant to Rule 430B under the Securities Act, or the omission or alleged omission therefrom of a material fact required to be

stated therein or necessary to make the statements therein not misleading; (ii) any untrue statement or alleged untrue statement of a material fact contained in any Free Writing Prospectus that the Company has used, referred to or filed, or is required to file, pursuant to Rule 433(d) of the Securities Act or the Prospectus (or any amendment or supplement thereto), or the omission or alleged omission therefrom of a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; or (iii) any act or failure to act or any alleged act or failure to act by the Agent in connection with, or relating in any manner to, the Class A Common Shares or the offering contemplated hereby, and which is included as part of or referred to in any loss, claim, damage, liability or action arising out of or based upon any matter covered by clause (i) or (ii) above, provided that the Company shall not be liable under this clause (iii) to the extent that a court of competent jurisdiction shall have determined by a final judgment that such loss, claim, damage, liability or action resulted directly from any such acts or failures to act undertaken or omitted to be taken by the Agent through its bad faith or willful misconduct, and to reimburse the Agent and each such officer, employee and controlling person for any and all documented expenses (including the documented fees and disbursements of counsel chosen by the Agent) as such expenses are reasonably incurred by the Agent or such officer, employee or controlling person in connection with investigating, defending, settling, compromising or paying any such loss, claim, damage, liability, expense or action; provided, however, that the foregoing indemnity agreement shall not apply to any loss, claim, damage, liability or expense to the extent, but only to the extent, arising out of or based upon any untrue statement or alleged untrue statement or omission or alleged omission made in reliance upon and in conformity with written information furnished to the Company by the Agent expressly for use in the Registration Statement, any such Free Writing Prospectus or the Prospectus (or any amendment or supplement thereto), it being understood and agreed that the only such information furnished by the Agent to the Company consists of the information set forth in the first sentence of the ninth paragraph under the caption "Plan of Distribution" in the Prospectus beginning with the words: "Jefferies and its affiliates may in the future provide various investment banking …" (the "**Agent Information**"). The indemnity agreement set forth in this Section 6(a) shall be in addition to any liabilities that the Company may otherwise have.

(b) Indemnification of the Company, its Directors and Officers. The Agent agrees to indemnify and hold harmless the Company, each of its directors, each of its officers who signed the Registration Statement and each person, if any, who controls the Company within the meaning of the Securities Act or the Exchange Act against any loss, claim, damage, liability or expense, as incurred, to which the Company or any such director, officer or controlling person may become subject, under the Securities Act, the Exchange Act, or other federal or state statutory law or regulation, or the laws or regulations of foreign jurisdictions where Shares have been offered or sold or at common law or otherwise (including in settlement of any litigation if such settlement is effected with the written consent of the Agent), insofar as such loss, claim, damage, liability or expense (or actions in respect thereof as contemplated below) arises out of or is based upon (i) any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, or any amendment thereto, including any information deemed to be a part thereof pursuant to Rule 430B under the Securities Act, or the omission or alleged omission therefrom of a material fact required to be stated therein or necessary to make the statements therein not misleading; or (ii) any untrue statement or alleged untrue statement of a material fact contained in any Free Writing Prospectus that the Company has used, referred to or filed, or is required to file, pursuant to Rule 433(d) of the Securities Act or the Prospectus (or any amendment or supplement thereto), or the omission or alleged omission therefrom of a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; and to reimburse the Company and each such director, officer and controlling person for any and all documented expenses (including the documented fees and disbursements of counsel chosen by the Company) as such expenses are reasonably incurred by the Company or such officer, director or controlling person in connection with

investigating, defending, settling, compromising or paying any such loss, claim, damage, liability, expense or action; provided, however, that the foregoing indemnity agreement shall only apply to any loss, claim damage, liability or expense to the extent, but only to the extent, arising out of or based upon any untrue statement or alleged untrue statement or omission or alleged omission made in reliance upon and in conformity with the Agent Information expressly for use in the Registration Statement, any such Free Writing Prospectus or the Prospectus (or any amendment or supplement thereto). The indemnity agreement set forth in this Section 6(b) shall be in addition to any liabilities that the Agent may otherwise have.

(c) Notifications and Other Indemnification Procedures. Promptly after receipt by an indemnified party under this Section 6 of notice of the commencement of any action, such indemnified party will, if a claim in respect thereof is to be made against an indemnifying party under this Section 6, notify the indemnifying party in writing of the commencement thereof, but the omission to so notify the indemnifying party will not relieve the indemnifying party from any liability which it may have to any indemnified party for contribution or otherwise than under the indemnity agreement contained in this Section 6 or to the extent it is not prejudiced as a proximate result of such failure. In case any such action is brought against any indemnified party and such indemnified party seeks or intends to seek indemnity from an indemnifying party, the indemnifying party will be entitled to participate in, and, to the extent that it shall elect, jointly with all other indemnifying parties similarly notified, by written notice delivered to the indemnified party promptly after receiving the aforesaid notice from such indemnified party, to assume the defense thereof with counsel reasonably satisfactory to such indemnified party; provided, however, if the defendants in any such action include both the indemnified party and the indemnifying party and the indemnified party shall have reasonably concluded that a conflict may arise between the positions of the indemnifying party and the indemnified party in conducting the defense of any such action or that there may be legal defenses available to it and/or other indemnified parties which are different from or additional to those available to the indemnifying party, the indemnified party or parties shall have the right to select separate counsel to assume such legal defenses and to otherwise participate in the defense of such action on behalf of such indemnified party or parties. Upon receipt of notice from the indemnifying party to such indemnified party of such indemnifying party's election so to assume the defense of such action and approval by the indemnified party of counsel, the indemnifying party will not be liable to such indemnified party under this Section 6 for any legal or other expenses subsequently incurred by such indemnified party in connection with the defense thereof unless (i) the indemnified party shall have employed separate counsel in accordance with the proviso to the preceding sentence (it being understood, however, that the indemnifying party shall not be liable for the fees and expenses of more than one separate counsel (together with local counsel), representing the indemnified parties who are parties to such action), which counsel (together with any local counsel) for the indemnified parties shall be selected by the indemnified party (in the case of counsel for the indemnified parties referred to in Section 6(a) and Section 6(b) above), (ii) the indemnifying party shall not have employed counsel satisfactory to the indemnified party to represent the indemnified party within a reasonable time after notice of commencement of the action or (iii) the indemnifying party has authorized in writing the employment of counsel for the indemnified party at the expense of the indemnifying party, in each of which cases the fees and expenses of counsel shall be at the expense of the indemnifying party and shall be paid as they are incurred.

(d) Settlements. The indemnifying party under this Section 6 shall not be liable for any settlement of any proceeding effected without its written consent, but if settled with such consent or if there be a final judgment for the plaintiff, the indemnifying party agrees to indemnify the indemnified party against any loss, claim, damage, liability or expense by reason of such settlement or judgment. Notwithstanding the foregoing sentence, if at any time an indemnified party shall have requested an indemnifying party to reimburse the indemnified party for fees and expenses of counsel as contemplated by Section 6(c) hereof, the indemnifying party

agrees that it shall be liable for any settlement of any proceeding effected without its written consent if (i) such settlement is entered into more than 30 days after receipt by such indemnifying party of the aforesaid request; and (ii) such indemnifying party shall not have reimbursed the indemnified party in accordance with such request prior to the date of such settlement. No indemnifying party shall, without the prior written consent of the indemnified party, effect any settlement, compromise or consent to the entry of judgment in any pending or threatened action, suit or proceeding in respect of which any indemnified party is or could have been a party and indemnity was or could have been sought hereunder by such indemnified party, unless such settlement, compromise or consent includes an unconditional release of such indemnified party from all liability on claims that are the subject matter of such action, suit or proceeding.

(e) Contribution. If the indemnification provided for in this Section 6 is for any reason held to be unavailable to or otherwise insufficient to hold harmless an indemnified party in respect of any losses, claims, damages, liabilities or expenses referred to therein, then each indemnifying party shall contribute to the aggregate amount paid or payable by such indemnified party, as incurred, as a result of any losses, claims, damages, liabilities or expenses referred to therein (i) in such proportion as is appropriate to reflect the relative benefits received by the Company, on the one hand, and the Agent, on the other hand, from the offering of the Shares pursuant to this Agreement; or (ii) if the allocation provided by clause (i) above is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) above but also the relative fault of the Company, on the one hand, and the Agent, on the other hand, in connection with the statements or omissions which resulted in such losses, claims, damages, liabilities or expenses, as well as any other relevant equitable considerations. The relative benefits received by the Company, on the one hand, and the Agent, on the other hand, in connection with the offering of the Shares pursuant to this Agreement shall be deemed to be in the same respective proportions as the total gross proceeds from the offering of the Shares (before deducting expenses) received by the Company bear to the total commissions received by the Agent. The relative fault of the Company, on the one hand, and the Agent, on the other hand, shall be determined by reference to, among other things, whether any such untrue or alleged untrue statement of a material fact or omission or alleged omission to state a material fact relates to information supplied by the Company, on the one hand, or the Agent, on the other hand, and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission.

The amount paid or payable by a party as a result of the losses, claims, damages, liabilities and expenses referred to above shall be deemed to include, subject to the limitations set forth in Section 6(c), any documented legal or other fees or expenses reasonably incurred by such party in connection with investigating or defending any action or claim. The provisions set forth in Section 6(c) with respect to notice of commencement of any action shall apply if a claim for contribution is to be made under this Section 6(e); *provided, however,* that no additional notice shall be required with respect to any action for which notice has been given under Section 6(c) for purposes of indemnification.

The Company and the Agent agree that it would not be just and equitable if contribution pursuant to this Section 6(e) were determined by pro rata allocation or by any other method of allocation which does not take account of the equitable considerations referred to in this Section 6(e).

Notwithstanding the provisions of this Section 6(e), the Agent shall not be required to contribute any amount in excess of the agent fees received by the Agent in connection with the offering contemplated hereby. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. For purposes of this Section 6(e), each

officer and employee of the Agent and each person, if any, who controls the Agent within the meaning of the Securities Act or the Exchange Act shall have the same rights to contribution as the Agent, and each director of the Company, each officer of the Company who signed the Registration Statement, and each person, if any, who controls the Company within the meaning of the Securities Act and the Exchange Act shall have the same rights to contribution as the Company.

Section 7. TERMINATION AND SURVIVAL

(a) Term. Subject to the provisions of this Section 7, the term of this Agreement shall continue from the date of this Agreement until the end of the Agency Period, unless earlier terminated by the parties to this Agreement pursuant to this Section 7.

(b) Termination; Survival Following Termination.

(i) Either party may terminate this Agreement prior to the end of the Agency Period, by giving written notice as required by this Agreement, upon ten (10) Trading Days' notice to the other party; provided that, (A) if the Company terminates this Agreement after the Agent confirms to the Company any sale of Shares, the Company shall remain obligated to comply with Section 3(b)(v) with respect to such Shares and (B) Section 2, Section 6, Section 7 and Section 8 shall survive termination of this Agreement. If termination shall occur prior to the Settlement Date for any sale of Shares, such sale shall nevertheless settle in accordance with the terms of this Agreement.

(ii) In addition to the survival provision of Section 7(b)(i), the respective indemnities, agreements, representations, warranties and other statements of the Company, of its officers and of the Agent set forth in or made pursuant to this Agreement will remain in full force and effect, regardless of any investigation made by or on behalf of the Agent or the Company or any of its or their partners, officers or directors or any controlling person, as the case may be, and, anything herein to the contrary notwithstanding, will survive delivery of and payment for the Shares sold hereunder and any termination of this Agreement.

Section 8. MISCELLANEOUS

(a) Press Releases and Disclosure. The Company may issue a press release describing the material terms of the transactions contemplated hereby as soon as practicable following the date of this Agreement, and may file with the Commission a Current Report on Form 8-K, with this Agreement attached as an exhibit thereto, describing the material terms of the transactions contemplated hereby, and the Company shall consult with the Agent prior to making such disclosures, and the parties hereto shall use all commercially reasonable efforts, acting in good faith, to agree upon a text for such disclosures that is reasonably satisfactory to all parties hereto. No party hereto shall issue thereafter any press release or like public statement (including, without limitation, any disclosure required in reports filed with the Commission pursuant to the Exchange Act) related to this Agreement or any of the transactions contemplated hereby without the prior written approval of the other party hereto, except as may be necessary or appropriate in the reasonable opinion of the party seeking to make disclosure to comply with the requirements of applicable law or stock exchange rules and except for the disclosure required pursuant to Section 4(a) of this Agreement, in the Company's quarterly reports on Form 10-Q or annual reports on Form 10-K. If any such press release or like public statement is so required, the party making such disclosure shall consult with the other party prior to making such disclosure, and the parties shall use all commercially reasonable efforts, acting in good faith, to agree upon a text for such disclosure that is reasonably satisfactory to all parties hereto.

(b) No Advisory or Fiduciary Relationship. The Company acknowledges and agrees that (i) the transactions contemplated by this Agreement, including the determination of any fees, are arm's-length commercial transactions between the Company and the Agent, (ii) when acting as a principal under this Agreement, the Agent is and has been acting solely as a principal and is not the agent or fiduciary of the Company, or its stockholders, creditors, employees or any other party, (iii) the Agent has not assumed nor will assume an advisory or fiduciary responsibility in favor of the Company with respect to the transactions contemplated hereby or the process leading thereto (irrespective of whether the Agent has advised or is currently advising the Company on other matters) and the Agent does not have any obligation to the Company with respect to the transactions contemplated hereby except the obligations expressly set forth in this Agreement, (iv) the Agent and its respective Affiliates may be engaged in a broad range of transactions that involve interests that differ from those of the Company, and (v) the Agent has not provided any legal, accounting, regulatory or tax advice with respect to the transactions contemplated hereby and the Company has consulted its own legal, accounting, regulatory and tax advisors to the extent it deemed appropriate.

(c) Research Analyst Independence. The Company acknowledges that the Agent's research analysts and research departments are required to and should be independent from their respective investment banking divisions and are subject to certain regulations and internal policies, and as such the Agent's research analysts may hold views and make statements or investment recommendations and/or publish research reports with respect to the Company or the offering that differ from the views of their respective investment banking divisions. The Company understands that the Agent is a full service securities firm and as such from time to time, subject to applicable securities laws, may effect transactions for its own account or the account of its customers and hold long or short positions in debt or equity securities of the companies that may be the subject of the transactions contemplated by this Agreement.

(d) Notices. All communications hereunder shall be in writing and shall be mailed, hand delivered or telecopied and confirmed to the parties hereto as follows:

If to the Agent:

Jefferies LLC
520 Madison Avenue
New York, NY 10022
Attention: General Counsel

with a copy (which shall not constitute notice) to:

Davis Polk & Wardwell LLP
1600 El Camino Real, Suite 100
Menlo Park, CA 94025
Attention: Alan F. Denenberg; Emily Roberts

If to the Company:

Recursion Pharmaceuticals, Inc.
41 S Rio Grande Street
Salt Lake City, UT 84101
Attention: Michael Secora

with a copy (which shall not constitute notice) to:

Wilson Sonsini Goodrich & Rosati, P.C.

701 Fifth Avenue, Suite 5100
Seattle, Washington 98104-7036
Attention: Patrick J. Schultheis

Any party hereto may change the address for receipt of communications by giving written notice to the others in accordance with this Section 8(d).

(e) Successors. This Agreement will inure to the benefit of and be binding upon the parties hereto, and to the benefit of the employees, officers and directors and controlling persons referred to in Section 6, and in each case their respective successors, and no other person will have any right or obligation hereunder. The term "successors" shall not include any purchaser of the Shares as such from the Agent merely by reason of such purchase.

(f) Partial Unenforceability. The invalidity or unenforceability of any Article, Section, paragraph or provision of this Agreement shall not affect the validity or enforceability of any other Article, Section, paragraph or provision hereof. If any Article, Section, paragraph or provision of this Agreement is for any reason determined to be invalid or unenforceable, there shall be deemed to be made such minor changes (and only such minor changes) as are necessary to make it valid and enforceable.

(g) Governing Law Provisions. This Agreement shall be governed by and construed in accordance with the internal laws of the State of New York applicable to agreements made and to be performed in such state. Any legal suit, action or proceeding arising out of or based upon this Agreement or the transactions contemplated hereby may be instituted in the federal courts of the United States of America located in the Borough of Manhattan in the City of New York or the courts of the State of New York in each case located in the Borough of Manhattan in the City of New York (collectively, the "**Specified Courts**"), and each party irrevocably submits to the exclusive jurisdiction (except for proceedings instituted in regard to the enforcement of a judgment of any such court, as to which such jurisdiction is non-exclusive) of such courts in any such suit, action or proceeding. Service of any process, summons, notice or document by mail to such party's address set forth above shall be effective service of process for any suit, action or other proceeding brought in any such court. The parties irrevocably and unconditionally waive any objection to the laying of venue of any suit, action or other proceeding in the Specified Courts and irrevocably and unconditionally waive and agree not to plead or claim in any such court that any such suit, action or other proceeding brought in any such court has been brought in an inconvenient forum.

(h) General Provisions. This Agreement constitutes the entire agreement of the parties to this Agreement and supersedes all prior written or oral and all contemporaneous oral agreements, understandings and negotiations with respect to the subject matter hereof. This Agreement may be executed in two or more counterparts, each one of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument, and may be delivered by facsimile transmission or by electronic delivery of a portable document format (PDF) file (including any electronic signature covered by the U.S. federal ESIGN Act of 2000, Uniform Electronic Transactions Act, the Electronic Signatures and Records Act or other applicable law, e.g., www.docusign.com). This Agreement may not be amended or modified unless in writing by all of the parties hereto, and no condition herein (express or implied) may be waived unless waived in writing by each party whom the condition is meant to benefit. The Article and Section headings herein are for the convenience of the parties only and shall not affect the construction or interpretation of this Agreement.

[Signature Page Immediately Follows]

If the foregoing is in accordance with your understanding of our agreement, kindly sign and return to the Company the enclosed copies hereof, whereupon this instrument, along with all counterparts hereof, shall become a binding agreement in accordance with its terms

Very truly yours,

RECURSION PHARMACEUTICALS, INC.

By: /s/ Christopher Gibson
Name: Christopher Gibson
Title: Chief Executive Officer

The foregoing Agreement is hereby confirmed and accepted by the Agent in New York, New York as of the date first above written.

JEFFERIES LLC

By: /s/ Michael Magarro
Name: Michael Magarro
Title: Managing Director

EXHIBIT A

ISSUANCE NOTICE

[Date]

Jefferies LLC
520 Madison Avenue
New York, New York 10022

Attn: [_____]

Reference is made to the Open Market Sales Agreement between Recursion Pharmaceuticals, Inc. (the "**Company**") and Jefferies LLC (the "**Agent**") dated as of August 8, 2023. The Company confirms that all conditions to the delivery of this Issuance Notice are satisfied as of the date hereof.

Date of Delivery of Issuance Notice (determined pursuant to Section 3(b)(i)): _____

Issuance Amount (equal to the total Sales Price for such Shares):

$_____

Number of days in selling period: _____

First date of selling period: _____

Last date of selling period: _____

Settlement Date(s) if other than standard [T+2][T+1] settlement:

_____

Floor Price Limitation (in no event less than $1.00 without the prior written consent of the Agent, which consent may be withheld in the Agent's sole discretion): $ ____ per share

Comments: _____

Recursion Pharmaceuticals, Inc.

By: _____
Name:
Title:

Exhibit 31.1

Certification of Principal Executive Officer
Pursuant to Rules 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as amended

I, Christopher Gibson, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Recursion 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 and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

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

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

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

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

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

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

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

/s/ Christopher Gibson
Christopher Gibson, Chief Executive Officer (principal executive officer)

Date: August 8, 2023

Exhibit 31.2

Certification of Principal Financial Officer
Pursuant to Rules 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as amended

I, Michael Secora, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Recursion 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 and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

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

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

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

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

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

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

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

/s/ Michael Secora
Michael Secora, Chief Financial Officer (principal financial officer)

Date: August 8, 2023

Exhibit 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

In connection with the Quarterly Report of Recursion Pharmaceuticals, Inc. (the "Company") on Form 10-Q for the period ended June 30, 2023 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), The undersigned certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Christopher Gibson
Christopher Gibson, Chief Executive Officer (principal executive officer)

/s/ Michael Secora
Michael Secora, Chief Financial Officer (principal financial officer)

Date: August 8, 2023