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, 2020

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 001-38787

CYCLERION THERAPEUTICS, INC.
(Exact Name of Registrant as Specified in its Charter)

Massachusetts	**83-1895370**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
301 Binney Street, Cambridge, Massachusetts	**02142**
(Address of principal executive offices)	(Zip Code)

(857) 327-8778
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
Common Stock, no par value	CYCN	The Nasdaq Stock Market LLC (Nasdaq Global Select Market)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

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

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

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

As of July 29, 2020, the registrant had 33,920,210 shares of common stock, no par value, outstanding.

CYCLERION PHARMACEUTICALS, INC.
QUARTERLY REPORT ON FORM 10-Q
FOR THE QUARTER ENDED JUNE 30, 2020
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CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This report contains forward-looking statements within the meaning of the federal securities laws, which statements involve substantial risks and uncertainties. All statements in this report, other than statements of historical facts, including statements about future events, financing plans, financial position, business strategy, budgets, projected costs, plans and objectives of management for future operations, are forward-looking statements that involve certain risks and uncertainties. Use of the words “may,” “might,” “will,” “would,” “could,” “should,” “believes,” “estimates,” “projects,” “potential,” “expects,” “plans,” “seeks,” “intends,” “evaluates,” “pursues,” “anticipates,” “continues,” “designs,” “impacts,” “affects,” “forecasts,” “target,” “outlook,” “initiative,” “objective,” “designed,” “priorities,” “goal” or the negative of those words or other similar expressions may identify forward-looking statements that represent our current judgment about possible future events, but the absence of these words does not necessarily mean that a statement is not forward-looking.

Forward-looking statements are based on our current expectations and assumptions regarding our business, the economy and other future conditions. Because forward-looking statements relate to the future, by their nature, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict. As a result, our actual results may differ materially from those contemplated by the forward-looking statements. Important factors that could cause actual results to differ materially from those in the forward-looking statements include regional, national or global political, economic, business, competitive, market and regulatory conditions and the following:

- the COVID-19 pandemic affecting our activities in ways that are difficult to precisely judge at this time;
- our relationships with third parties, collaborators and our employees;
- our ability to execute our strategic priorities;
- our ability to finance our operations and business initiatives and obtain funding for such activities;
- the timing, investment and associated activities involved in developing, obtaining regulatory approval for, launching and commercializing our product candidates, including olinciguat and IW-6463;
- our interpretation of the data from the praliciguat Phase 2 clinical trial in patients with diabetic nephropathy, including regarding the clinical site whose results appear to be inconsistent with the overall study population;
- the potential of further evaluation of praliciguat;
- the potential commercial opportunities of praliciguat, including the potential value of such an out-license of praliciguat by us;
- our ability to identify a licensee and to negotiate and execute an out-license or similar agreement with respect to praliciguat;
- the impact on our business of our recent workforce and expense reduction initiatives;
- our plans with respect to the development, manufacture or sale of our product candidates and the associated timing thereof, including the design and results of pre-clinical and clinical studies;
- the safety profile and related adverse events of our product candidates;
- the efficacy and perceived therapeutic benefits of our product candidates, their potential indications and their market potential;
- U.S. and non-U.S. regulatory requirements for our product candidates, including any post-approval development and regulatory requirements, and the ability of our product candidates to meet such requirements;
- our ability to attract and retain employees needed to execute our business plans and strategies and our ability to manage the impact of any loss of key employees;
- our ability to obtain and maintain intellectual property protection for our product candidates and the strength thereof;
- our future financial performance, revenues, expense levels, payments, cash flows, profitability, tax obligations, capital raising and liquidity sources, real estate needs and concentration of voting control, as well as the timing and drivers thereof, and internal control over financial reporting;
- our ability to compete with other companies that are or may be developing or selling products that are competitive with our product candidates;
- the impact of government regulation in the life sciences industry, particularly with respect to healthcare reform;

- potential indemnification liabilities we may owe to Ironwood after the separation;
- the tax treatment of the distribution and the limitations imposed on us under the tax matters agreement that we entered into with Ironwood; and
- trends and challenges in the markets for our potential products.

See the “Risk Factors” section in Item 1A of our annual report on Form 10-K for the fiscal year ended December 31, 2019, and elsewhere in this Quarterly Report on Form 10-Q for a further description of these and other factors. We caution you that the risks, uncertainties and other factors referenced above may not contain all of the risks, uncertainties and other factors that are important to you. In addition, we cannot assure you that we will realize the results, benefits or developments that we expect or anticipate or, even if substantially realized, that they will result in the consequences or affect us or our business in the way expected. There can be no assurance that (i) we have correctly measured or identified all of the factors affecting our business or the extent of these factors’ likely impact, (ii) the available information with respect to these factors on which such analysis is based is complete or accurate, (iii) such analysis is correct or (iv) our strategy, which is based in part on this analysis, will be successful. All forward-looking statements in this report apply only as of the date of this report or as of the date they were made and, except as required by applicable law, we undertake no obligation to publicly update any forward-looking statement, whether as a result of new information, future developments or otherwise.

Cyclerion Therapeutics, Inc.
Condensed Consolidated Balance Sheets
(In thousands except share and per share data)
(Unaudited)

	June 30, 2020	December 31, 2019
ASSETS		
Current assets:		
Cash and cash equivalents	$ 56,462	$ 94,895
Related party accounts receivable	751	1,474
Prepaid expenses	2,260	1,966
Other current assets	89	2,862
Total current assets	59,562	101,197
Restricted cash, net of current portion	4,991	4,991
Property and equipment, net	10,787	11,613
Operating lease right-of-use asset	51,306	68,137
Other assets	1,392	540
Total assets	$ 128,038	$ 186,478
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 2,213	$ 3,230
Related party accounts payable	375	81
Accrued research and development costs	1,648	2,198
Accrued expenses and other current liabilities	5,113	9,320
Short-term note payable	3,509	—
Current portion of operating lease liabilities	2,787	3,420
Total current liabilities	15,645	18,249
Operating lease liabilities, net of current portion	46,292	70,500
Commitments and contingencies	-	-
Stockholders' equity		
Common stock, no par value, 400,000,000 shares authorized and 27,857,710 issued and outstanding at June 30, 2020 and 400,000,000 shares authorized and 27,598,113 issued and outstanding at December 31, 2019	-	-
Accumulated deficit	(125,389)	(85,627)
Paid-in capital	191,520	183,376
Accumulated other comprehensive loss	(30)	(20)
Total stockholders' equity	66,101	97,729
Total liabilities and stockholders' equity	$ 128,038	$ 186,478

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

Cyclerion Therapeutics, Inc.
Condensed Consolidated and Combined Statements of Operations and Comprehensive Loss
(In thousands except per share data)
(Unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	**2019**	**2020**	**2019**
Revenue from related party	$ 749	$ 1,628	$ 1,763	$ 1,628
Cost and expenses:				
Research and development	13,794	25,759	30,619	52,163
General and administrative	6,627	8,923	13,518	19,900
Gain on lease modification	-	-	(2,113)	-
Total cost and expenses	20,421	34,682	42,024	72,063
Loss from operations	(19,672)	(33,054)	(40,261)	(70,435)
Interest and other income, net	138	800	499	800
Net loss	$ (19,534)	$ (32,254)	$ (39,762)	$ (69,635)
Net loss per share:				
Basic and diluted net loss per share	$ (0.70)	$ (1.18)	$ (1.43)	$ (2.54)
Weighted average shares used in calculating:				
Basic and diluted net loss per share	27,791	27,393	27,730	27,380
Other comprehensive loss:				
Net loss	$ (19,534)	$ (32,254)	$ (39,762)	$ (69,635)
Other comprehensive loss:				
Foreign currency translation adjustment	(12)	(4)	(10)	(4)
Total other comprehensive loss	(12)	(4)	(10)	(4)
Comprehensive loss	$ (19,546)	$ (32,258)	$ (39,772)	$ (69,639)

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

Cyclerion Therapeutics, Inc.
Condensed Consolidated and Combined Statements of Stockholders' Equity (Deficit)
(In thousands except share data)
(Unaudited)

	Common Stock		Net Parent Investment	Paid-in capital	Accumulated deficit	Accumulated other comprehensive loss	Total Stockholders' equity (deficit)
	Shares	Amount					
Balance at December 31, 2018	-	$ -	$ (10,445)	$ -	$ -	$ -	$ (10,445)
Net loss	-	-	(37,381)	-	-	-	(37,381)
Net transfers from Ironwood	-	-	36,085	-	-	-	36,085
Ironwood allocation - share-based compensation	-	-	3,989	-	-	-	3,989
Balance at March 31, 2019	-	$ -	(7,752)	$ -	$ -	$ -	$ (7,752)
Net loss	-	-	-	-	(32,254)	-	(32,254)
Net transfers from Ironwood	-	-	2,602	-	-	-	2,602
Ironwood allocation - share-based compensation	-	-	-	-	-	-	-
Separation-related adjustments	-	-	7,752	-	-	-	7,752
Reclassification of net parent company investment	-	-	(2,602)	2,602	-	-	-
Distribution of common stock by Ironwood upon separation	15,562,555	-	-	-	-	-	-
Issuance of common stock - private placement, net of fees	11,817,165	-	-	164,622	-	-	164,622
Issuance of common stock upon exercise of options and employee stock purchase plan	9,527	-	-	-	-	-	-
Issuance of common stock awards	21,942	-	-	-	-	-	-
Share-based compensation expense related to share-based awards to employees	-	-	-	6,224	-	-	6,224
Foreign currency translation adjustment	-	-	-	-	-	(4)	(4)
Balance at June 30, 2019	27,411,189	$ -	$ -	$ 173,448	$ (32,254)	$ (4)	$ 141,190

	Common Stock		Net Parent Investment	Paid-in capital	Accumulated deficit	Accumulated other comprehensive loss	Total Stockholders' equity (deficit)
	Shares	Amount					
Balance at December 31, 2019	27,598,133	$ -	$ -	$ 183,376	$ (85,627)	$ (20)	$ 97,729
Net loss	-	-	-	-	(20,228)	-	(20,228)
Issuance of common stock upon exercise of stock options, RSUs and employee stock purchase plan	156,761	-	-	1	-	-	1
Share-based compensation expense related to issuance of stock options and RSUs to employees and employee stock purchase plan	-	-	-	4,036	-	-	4,036
Foreign currency translation adjustment	-	-	-	-	-	2	2
Balance at March 31, 2020	27,754,894	$ -	$ -	$ 187,413	$ (105,855)	$ (18)	$ 81,540
Net loss	-	-	-	-	(19,534)	-	(19,534)
Issuance of common stock upon exercise of stock options, RSUs and employee stock purchase plan	102,816	-	-	155	-	-	155
Share-based compensation expense related to issuance of stock options and RSUs to employees and employee stock purchase plan	-	-	-	3,952	-	-	3,952
Foreign currency translation adjustment	-	-	-	-	-	(12)	(12)
Balance at June 30, 2020	27,857,710	$ -	$ -	$ 191,520	$ (125,389)	$ (30)	$ 66,101

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

Cyclerion Therapeutics, Inc.
Condensed Consolidated and Combined Statements of Cash Flows
(In thousands)
(Unaudited)

	Six Months Ended June 30,	
	2020	**2019**
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	$ (39,762)	$ (69,635)
Adjustments to reconcile net loss to net cash (used in) operating activities:		
Depreciation and amortization	1,239	1,350
Net loss on disposal of property and equipment	194	-
Gain on lease modification	(2,113)	-
Share-based compensation expense	7,989	10,213
Changes in operating assets and liabilities:		
Related party accounts receivable	723	(1,857)
Prepaid expenses	(294)	(911)
Other current assets	38	(17)
Operating lease assets	(4,555)	1,073
Other assets	(851)	25
Accounts payable	(246)	3,566
Related party accounts payable	294	1,920
Accrued research and development costs	(549)	(11)
Operating lease liabilities	(1,342)	1,860
Accrued expenses and other current liabilities	(4,166)	(3,816)
Net cash (used in) operating activities	(43,401)	(56,240)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchases of property and equipment	(1,480)	(6,061)
Proceeds from sale of property and equipment	59	-
Net cash (used in) investing activities	(1,421)	(6,061)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Gross proceeds from private placement	-	175,000
Costs associated with private placement	-	(10,378)
Proceeds from exercises of stock options and ESPP	155	-
Proceeds from short-term note payable	3,509	-
Transfers from Ironwood	-	46,439
Net cash provided by financing activities	3,664	211,061
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(10)	(4)
Net decrease in cash, cash equivalents and restricted cash	(41,168)	148,756
Cash, cash equivalents and restricted cash, beginning of period	102,621	-
Cash, cash equivalents and restricted cash, end of period	$ 61,453	$ 148,756
Supplemental cash flow disclosure:		
Cash paid for initial direct costs of lease modification	$ 6,507	$ -
Non-cash investing activities		
Fixed asset purchases in accounts payable and accrued expenses	$ 9	$ 516
Reconciliation of cash, cash equivalents and restricted cash to the condensed consolidated and balance sheets		
Cash and cash equivalents	$ 56,462	$ 141,030
Restricted cash	4,991	7,726
Total cash, cash equivalents and restricted cash	$ 61,453	$ 148,756

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

1. Nature of Business

Nature of Operations

Cyclerion Therapeutics, Inc. ("Cyclerion" or the "Company") is a clinical-stage biopharmaceutical company harnessing the power of soluble guanylate cyclase ("sGC") pharmacology to discover, develop and commercialize breakthrough treatments for serious and orphan diseases. Cyclerion's focus is enabling the full therapeutic potential of next-generation sGC stimulators. The Company's strategy rests on a solid scientific foundation that is enabled by our people and capabilities, external collaborations, and a responsive capital allocation approach.

Cyclerion GmbH, a wholly owned subsidiary, was incorporated in Zug, Switzerland on May 3, 2019. Cyclerion GmbH is an operational entity with one employee who is the Company's Chief Innovation Officer. The functional currency is the Swiss franc.

Company Overview

The Company is executing its corporate priorities, including advancing its ongoing olinciguat and IW-6463 clinical programs and seeking the out-licensing of praliciguat:

Olinciguat is a once-daily, orally administered vascular sGC stimulator that is well suited for the potential treatment of sickle cell disease, or SCD that was granted Orphan Drug Designation by the FDA in June 2018. Olinciguat has the potential to address multiple clinical domains important in SCD by improving local blood flow, decreasing vascular inflammation, reducing anemia, and improving chronic symptoms. The ongoing olinciguat STRONG-SCD study is a randomized, placebo-controlled, dose-ranging Phase 2 study designed to evaluate safety, tolerability, and pharmacokinetics, as well as to explore effects on daily symptoms and biomarkers of disease activity when dosed over a 12-week treatment period. In April 2020, the study enrollment closed with a total of 70 participants randomized. All follow up visits are now complete, and we are conducting study closeout activities. The Company expects to obtain topline data from this study in late Q3 2020.

IW-6463 is an orally administered, once-daily central nervous system, or CNS-penetrant sGC stimulator for the treatment of serious CNS diseases. The nitric oxide pathway and sGC stimulation have long been known as central physiological regulators in the CNS, affecting cerebrovascular blood flow, neuroinflammation, neuronal function and cellular bioenergetics. In January 2020, the Company reported positive Phase 1 healthy volunteer study results for IW-6463. An ongoing translational pharmacology clinical study has enrolled 24 elderly subjects and will evaluate safety and biomarker measures of CNS activity. Dosing has been completed in this study and topline data is expected in mid-Q3 2020.

The Company anticipates initiating two parallel exploratory Phase 2 studies of IW-6463 to evaluate safety and a variety of efficacy measures, including engagement of CNS biomarkers using novel trial designs in Mitochondrial Encephalomyopathy, Lactic Acidosis and Stroke-like Episodes (MELAS) and Alzheimer's disease with vascular features (ADv). These studies are designed to de-risk and direct future development in CNS diseases.

Praliciguat is an orally administered, once-daily systemic sGC stimulator that was evaluated in two Phase 2 proof-of-concept studies: a dose-ranging study in 156 adult patients with diabetic nephropathy, and a study in 196 adult patients with heart failure with preserved ejection fraction (HfpEF), CAPACITY-HfpEF. On October 30, 2019, we released topline results from these studies. The Company's efforts to out-license rights to praliciguat have expanded to discussions beyond treatment of cardiometabolic disorders to include additional indications where sGC stimulators have demonstrated efficacy.

The Separation

On April 1, 2019, Ironwood Pharmaceuticals, Inc. (“Ironwood”) completed the previously announced separation of its sGC business, and certain other assets and liabilities, into a separate, independent publicly traded company by way of a pro-rata distribution of all of the outstanding shares of common stock of Cyclerion Therapeutics, Inc. through a dividend distribution of one share of the Company’s common stock, with no par value per share, for every 10 shares of Ironwood common stock held by Ironwood stockholders as of the close of business on March 19, 2019, the record date for the Distribution (the entire transaction being the “Separation”). As a result of the Separation, the Company became an independent public company and commenced trading under the symbol “CYCN” on the Nasdaq Global Select Market on April 2, 2019.

In connection with the Separation, on March 30, 2019, the Company entered into certain agreements with Ironwood to provide a framework for the Company’s relationship with Ironwood following the Separation, including, among others, the Separation Agreement, Tax Matters Agreement, and Employee Matters Agreement (“EMA”).

In addition, in connection with the Separation, on April 1, 2019, the Company entered into a Development Agreement, an Ironwood Transition Services Agreement, a Cyclerion Transition Services Agreement and an Intellectual Property License Agreement with Ironwood.

On April 2, 2019, the Company issued 11,817,165 shares in a private placement (the “Private Placement”) of common stock to accredited investors for gross proceeds of $175 million (net proceeds of approximately $165 million).

Basis of Presentation

The Company did not operate as a separate, stand-alone entity for the prior interim period covered by the interim condensed consolidated and combined financial statements. The Company’s condensed consolidated balance sheets as of June 30, 2020 and December 31, 2019, condensed consolidated and combined statements of operations and comprehensive loss and statements of cash flows for the three and six months ended June 30, 2020 and combined statements of operations and comprehensive loss for the three months ended June 30, 2019 consist of the condensed consolidated balances and activity of Cyclerion as prepared on a stand-alone basis. The Company’s condensed consolidated and combined statements of operations and comprehensive loss and statements of cash flows for the six months ended June 30, 2019 have been prepared on a “carve out” basis.

The unaudited condensed consolidated and combined financial statements reflect the historical results of the operations, financial position and cash flows of Cyclerion, in conformity with United States generally accepted accounting principles (“U.S. GAAP”).

The accompanying unaudited condensed consolidated and combined financial statements reflect the condensed consolidated and combined financial position and condensed consolidated and combined results of operations of the Company as an independent, publicly-traded company for the period after the Separation on April 1, 2019. The unaudited condensed consolidated and combined financial statements also reflect the financial position and results of operations of the Company as a combined reporting entity of Ironwood for periods prior to the Separation.

For periods prior to the Separation, the unaudited condensed consolidated and combined financial statements of Cyclerion reflect the assets, liabilities, and expenses directly attributable to Cyclerion, as well as allocations of certain corporate level expenses, deemed necessary to fairly present the results of operations and cash flows of Cyclerion, as discussed further below. As such, these allocations may not be indicative of the actual amounts that would have been recorded had Cyclerion operated as an independent, publicly traded company for the years presented.

Prior to the Separation, Cyclerion was dependent upon Ironwood for all of its working capital and financing requirements, as Ironwood used a centralized approach to cash management and financing its operations. There were no cash amounts specifically attributable to Cyclerion for the historical periods presented; therefore, there is no cash reflected for historical periods in the condensed consolidated and combined financial statements. Accordingly, cash and cash equivalents, debt or related interest expense have not been allocated to Cyclerion in the historical financial statements. Financing transactions related to Cyclerion are accounted for as a component of net parent investment in the historical combined balance sheets and as a financing activity on the accompanying combined statements of cash flows.

Prior to the Separation, Cyclerion's combined financial statements included an allocation of expenses related to certain Ironwood corporate functions, including senior management, legal, human resources, finance, information technology and quality assurance. These expenses were allocated to Cyclerion based on direct usage or benefit where identifiable, with the remainder allocated pro-rata based on project related costs, headcount or other measures. These allocations may not be indicative of the actual expense that would have been incurred had Cyclerion operated as an independent, publicly traded company for the periods presented.

Prior to the Separation, the combined balance sheets of Cyclerion included assets and liabilities that were allocated principally on a specific identification basis and net parent investment was shown in lieu of stockholders' equity. As a result of the Separation, the Company's net parent investment balance was reclassified to paid-in capital.

Going Concern

At each reporting period, the Company evaluates whether there are conditions or events that raise substantial doubt about the Company's ability to continue as a going concern within one year after the date that the financial statements are issued. The Company's evaluation entails analyzing prospective operating budgets and forecasts for expectations of the Company's cash needs and comparing those needs to the current cash and cash equivalent balances. The Company is required to make certain additional disclosures if it concludes substantial doubt exists and it is not alleviated by the Company's plans or when its plans alleviate substantial doubt about the Company's ability to continue as a going concern.

The Company has experienced negative operating cash flows for all historical periods presented. The Company expects these losses to continue into the foreseeable future as the Company continues the development and clinical testing of the product candidates, olinciguat and IW-6463, and its discovery research programs. On April 2, 2019, the Company received gross proceeds of $175 million (net proceeds of approximately $165 million) from the Private Placement. On July 29, 2020, the Company received proceeds of approximately $24.3 million from an equity private placement (see Note 13, *Subsequent Events*).

After considering the Company's current research and development plans and the timing expectations related to the progress of its programs, and after considering its existing cash and cash equivalents as of June 30, 2020, the Company did not identify conditions or events that would raise substantial doubt about the Company's ability to continue as a going concern within one year from the date these financial statements were issued.

2. Summary of Significant Accounting Policies

The accounting policies of the Company are set forth in Note 2. *Summary of Significant Accounting Policies* to the consolidated and combined financial statements contained in the Company's 2019 annual report on Form 10-K. The Company includes herein certain updates to those policies.

Leases

The Company has a property lease for its headquarters location at 301 Binney Street, Cambridge, MA (the "Master Lease"). The Company determines if an arrangement is a lease at the inception of the contract. The asset component of the Company's operating leases is recorded as operating lease right-of-use ("ROU") assets, and the liability component is recorded as current portion of operating lease liabilities and operating lease liabilities, net of current portion, in the Company's consolidated balance sheets.

ROU assets and operating lease liabilities are recognized based on the present value of lease payments over the lease term at the commencement date. The Company uses an incremental borrowing rate based on the information available at commencement date in determining the present value of lease payments if an implicit rate of return is not provided with the lease contract. Operating lease right-of-use assets are adjusted for incentives received.

Lease cost is recognized on a straight-line basis over the lease term, and includes amounts related to short-term leases. Variable lease costs that do not depend on an index or rate are recognized as incurred.

ROU assets and operating lease liabilities are remeasured upon certain modifications to leases using the present value of remaining lease payments and estimated incremental borrowing rate upon lease modification. The difference between the remeasured ROU assets and the operating lease liabilities are recognized as a gain or loss in operating expenses. The Company reviews any changes to its lease agreements for potential modifications and/or indicators of impairment of the respective ROU asset.

On October 18, 2019, the Company entered into an agreement to sublease 15,700 rentable square feet of its Master Lease to a subtenant. Sublease income is recognized on straight-line basis over the term of the sublease agreement and is recorded net of the related rent expense from the Master Lease within interest and other income, net in the condensed consolidated and combined statements of operations and comprehensive loss. In sublease agreements that contain non-monetary consideration, the Company estimates the fair market value of the non-monetary consideration received using market data and recognizes it on a straight-line basis over the sublease term. Variable lease consideration that does not depend on an index or rate is allocated to a non-lease component and is recognized over time in accordance with the pattern of transfer. No modification or impairment was deemed to have occurred by entering into the sublease agreement because the Company was not released, either fully or in part, from its obligations under the Master Lease. See Note 8, *Leases*.

On February 28, 2020 the Company entered into an amendment to its Master Lease at 301 Binney Street in Cambridge, Massachusetts (the “Lease Amendment”). The Lease Amendment provided for the partial termination of the Company's rights and obligations with respect to a portion of the leased premises of approximately 40,000 rentable square feet. The Company will continue to lease approximately 74,000 rentable square feet under terms of the amended lease. The Lease Amendment was determined to be a lease modification that qualified as a change of accounting on the existing lease and not a separate contract. As such, the ROU assets and operating lease liabilities were remeasured using an incremental borrowing rate at the date of modification and the Company recorded a gain of approximately $2.1 million as a component of operating expenses for the three months ended March 31, 2020. No impairment of the ROU asset was deemed to have occurred. See Note 8, *Leases*.

Paycheck Protection Program Loan

On April 21, 2020, the Company received loan proceeds in the amount of approximately $3.5 million pursuant to a promissory note agreement (the “Promissory Note”) with a bank under the Paycheck Protection Program (“PPP”). The PPP, established as part of the Coronavirus Aid, Relief and Economic Security Act (“CARES Act”), provides for loans to qualifying businesses for amounts up to 2.5 times of the average monthly payroll expenses of the qualifying business. The Promissory Note has a loan maturity of April 20, 2022, a stated interest rate of 1.0% per annum, and has payments of principal and interest that are due monthly after an initial six-month deferral period where interest accrues, but no payments are due. The Promissory Note provides for customary events of default, including, among others, those relating to failure to make payment when due and breaches of representations. The Company may prepay the principal of the Promissory Note at any time without incurring any prepayment charges. The loan is subject to all the terms and conditions applicable under the PPP and is subject to review by the Small Business Association (the “SBA”) for compliance with program requirements, including the Company’s certification that the current economic uncertainty made the PPP loan request nescessary to support ongoing operations and the Company’s obtaining approval from the SBA for the private placement equity transaction (See Note 13, *Subsequent Events*).

In June 2020, the Payroll Protection Program Flexibility Act (“PPPFA”) was signed into law adjusting certain key terms of loans issued under the PPP. In accordance with the PPPFA, the initial deferral period may be extended from six to up to ten months and the loan maturity may be extended from two to five years. The PPPFA also provided for certain other changes, including the extent to which the loan may be forgiven.

The loan's principal and accrued interest are forgivable to the extent that the proceeds are used for eligible purposes, subject to certain limitations, and that the Company maintains its payroll levels over a twenty-four-week period following the loan date. The loan forgiveness amount may be reduced if the Company terminates employees or reduces salaries during the twenty-four-week period. The Company intends to use the proceeds for eligible purposes consistent with the provisions of the PPPFA. However, there can be no assurance that any portion of the loan will be forgiven and that we will not have to repay the loan in full.

As the legal form of the Promissory Note is a debt obligation, the Company is accounting for it as debt under Accounting Standards Codification (ASC) 470, *Debt* and recorded an initial short-term liability of $3.5 million in the condensed consolidated balance sheet upon receipt of the loan proceeds. The Company is accruing interest over the term of the loan and is not imputing additional interest at a market rate because the guidance on imputing interest in ASC 835-30, *Interest* excludes transactions where interest rates are prescribed by a government agency. A de minimis amount of interest expense has been recognized within interest and other income, net in the condensed consolidated statements of operations and comprehensive loss for the three and six months ended June 30, 2020 and a de minimis amount of interest expense has been accrued within accrued expenses and other current liabilities on the condensed consolidated balance sheet as of June 30, 2020. If any amount of the loan is ultimately forgiven, income from the extinguishment of debt would be recognized as a gain on loan extinguishment in the consolidated statement of operations and comprehensive loss.

New Accounting Pronouncements

From time to time, new accounting pronouncements are issued by the Financial Accounting Standards Board ("FASB") or other standard setting bodies that are adopted by the Company as of the specified effective date. Except as discussed elsewhere in the notes to the condensed consolidated and combined financial statements, the Company did not adopt any new accounting pronouncements during the six months ended June 30, 2020 that had a material effect on its condensed consolidated and combined financial statements.

In June 2016, the FASB issued ASU No. 2016-13, *Measurement of Credit Losses on Financial Instruments* ("ASU 2016-13"). ASU 2016-13 will change how companies account for credit losses for most financial assets and certain other instruments. For trade receivables, loans and held-to-maturity debt securities, companies will be required to recognize an allowance for credit losses rather than reducing the carrying value of the asset. Subsequent to the issuance of ASU 2016-13, the FASB issued ASU No. 2019-04, *Codification Improvements to Topic 326, Financial Instruments—Credit Losses, Topic 815, Derivatives and Hedging, and Topic 825, Financial Instruments* ("ASU 2019-04"), ASU No. 2019-05, *Financial Instruments—Credit Losses (Topic 326): Targeted Transition Relief* ("ASU 2019-05") to provide additional guidance on the adoption of ASU 2016-13, ASU No. 2019-10, *Credit Losses (Topic 326), Derivatives and Hedging (Topic 815), and Leases (Topic 842)* ("ASU 2019-10"), ASU No. 2019-11, *Codification Improvements to Topic 326, Financial Instruments-Credit Losses ("ASU 2019-11")* and ASU No. 2020-02, *Financial Instruments—Credit Losses (Topic 326) and Leases (Topic 842) ("ASU 2020-02")*. ASU 2019-04 added Topic 326, Financial Instruments—Credit Losses, and made several amendments to the codification and also modified the accounting for available-for-sale debt securities. ASU 2019-05 provides targeted transition relief by providing an option to irrevocably elect the fair value option for certain financial assets previously measured at amortized cost basis. ASU 2019-10 aligned the effective dates of certain major updates not yet effective to conform to the FASB's new philosophy of staggering major updates between large public companies and all other entities. ASU 2019-11's major provisions included additional clarifications and practical expedients related to expected recoveries for purchased assets with credit deterioration, troubled debt restructuring, accrued interest receivables, and other areas when adopting ASU 2016-13. ASU 2020-02 provided amendments to the Topic 326 including a new section related to credit losses measured at amortized cost and a clarification to Topic 842 and is effective when adopting other areas of *Financial Instruments-Credit Losses* Topic 326. As a public business entity that qualifies as a smaller reporting company, ASU 2016-13, ASU 2019-04 and ASU 2019-05 are effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years. Early adoption is permitted. The Company is currently evaluating the potential impact that the adoption of these ASUs will have on the Company's financial position and results of operations.

In August 2018, the FASB issued ASU No. 2018-13, *Fair Value Measurement ("ASU 2018-13"): Disclosure Framework—Changes to the Disclosure Requirement for Fair Value Measurement* ("ASU 2018-13") which amends the disclosure requirements for fair value measurements. The amendments in ASU 2018-13 are effective for fiscal years beginning after December 15, 2019, with early adoption permitted. The Company adopted ASU 2018-13 in the first quarter of 2020 and the adoption of this standard did not have a material impact on the Company's financial position or results of operations.

In August 2018, the FASB issued ASU No. 2018-15, *Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement that is a Service Contract* ("ASU 2018-15"). ASU 2018-15 requires a customer in a cloud computing arrangement that is a service contract to follow the internal-use software guidance in ASC 350-40, *Intangibles—Goodwill and Other—Internal Use Software* (ASC 350-40), to determine which implementation costs to capitalize as assets or expense as incurred. The internal-use software guidance in ASC 350-40 requires that certain costs incurred during the application development stage be capitalized and other costs incurred during the preliminary project and post-implementation stages be expensed as they are incurred. A customer's accounting for the hosting component of the arrangement is not affected by this guidance. The amendments in ASU 2018-15 are effective for fiscal years beginning after December 15, 2019, with early adoption permitted. The Company adopted ASU 2018-15 in the first quarter of 2020 and the adoption of this standard did not have a material impact on the Company's financial position or results of operations.

No other accounting standards known by the Company to be applicable to it that have been issued by the FASB or other standard-setting bodies and that do not require adoption until a future date are expected to have a material impact on the Company's condensed consolidated and combined financial statements upon adoption.

3. Related Party Transactions

Relationship with Ironwood

Prior to April 1, 2019, the Company was managed and operated in the normal course of business under Ironwood. Ironwood became a related party when Mark Currie, Ironwood's former Chief Scientific Officer and the Company's President, joined Ironwood's board in April 2019 following the Separation.

Certain shared costs were allocated to the Company and reflected as expenses in the Company's stand-alone combined financial statements for periods prior to the Separation. The expenses reflected in the condensed combined financial statements for periods prior to the Separation may not be indicative of expenses that will be incurred by the Company in the future.

(a) Corporate costs

Ironwood incurred significant corporate costs for services provided to Cyclerion. These costs included expenses for information systems, accounting, other financial services (such as treasury, audit and purchasing), human resources, legal, facilities and Separation-related costs. A portion of these costs benefited Cyclerion and have been allocated to Cyclerion using a pro-rata method based on project related costs, headcount, or other measures that management believes are consistent and reasonable. The corporate costs allocated to Cyclerion, prior to the Separation, and included in the combined statements of operations was approximately $6.8 million for the three months ended March 31, 2019 and was included in general and administrative expenses.

(b) Cash Management and Financing

Cyclerion participated in Ironwood's centralized cash management and financing programs prior to the Separation. Disbursements were made through centralized accounts payable systems operated by Ironwood. Cash receipts were transferred to centralized accounts, also maintained by Ironwood. As cash is disbursed and received by Ironwood, it was accounted for by Cyclerion through net parent investment. All obligations were financed by Ironwood and financing decisions were determined by central Ironwood treasury operations until the Separation.

Other Transactions with Ironwood

As part of the Separation from Ironwood, the Company entered into Transition Services Agreements and a Development Agreement with Ironwood.

Under the Transition Services Agreements, the Company provides certain services to Ironwood, and Ironwood provides certain services to the Company, each related to corporate functions such as finance, procurement, facilities and development for a period of up to two years from the date of the Separation, unless earlier terminated or extended by mutual agreement. These services are charged to and from Ironwood and are recorded as part of operating expenses. All services provided to and from the Company under the Transition Services Agreements were completed as of March 31, 2020 and the agreements were terminated. The net charge to operating expenses for the Transition Services Agreements was de minimis for the six months ended June 30, 2020 and was $0.1 million for the three and six months ended June 30, 2019.

Under the Development Agreement, the Company provides certain research and development services to Ironwood at mutually agreed upon rates and the amounts earned are recorded as revenue from related party. Such research and development activities are governed by a joint steering committee composed of representatives of both Ironwood and the Company. Ironwood has informed Cyclerion that it will not renew the Development Agreement beyond its initial term which ends on March 31, 2021. The Company recorded approximately $0.8 and $1.8 million in revenue from related party for services provided under the Development Agreement for the three and six months ended June 30, 2020, respectively, and recorded $1.6 million for the three and six months ended June 30, 2019.

In accordance with the Separation Agreement, there were certain other transactions and adjustments post-Separation between the Company and Ironwood. The total amount due from Ironwood at June 30, 2020 and December 31, 2019 was approximately $0.8 million and $1.5 million, respectively, primarily from the Development Agreement, and is reflected as related party accounts receivable. There was approximately $0.1 million due to Ironwood at June 30, 2020 and December 31, 2019.

Peter Hecht, Ironwood's former Chief Executive Officer and the Chief Executive Officer and board member of Cyclerion, donated 2.5 million of his shares of Ironwood common stock to American Endowment Foundation for the creation of a donor advised fund that divested these shares to invest $34.0 million in Cyclerion as part of the financing transaction completed by Cyclerion on April 2, 2019. Mark Currie has invested $4.0 million in Cyclerion as part of this financing. Dr. Currie and certain other investors have funded a portion of their investment through sales of Ironwood common stock.

Other Related Party Transactions

During the three and six months ended June 30, 2020, the Company recorded approximately $0.5 million and $0.6 million, respectively, of research and development costs to a related party which it engaged to provide research and development transaction support services. The entity became a related party when Mark Currie, the Company's President, joined its board in January 2020. There was approximately $0.3 million and a de minimis amount due to the related party at June 30, 2020 and December 31, 2019, respectively.

4. Fair Value of Financial Instruments

The Company's cash equivalents are generally classified within Level 1 of the fair value hierarchy. The following tables presents information about the Company's financial assets measured at fair value on a recurring basis and indicate the level of the fair value hierarchy used to determine such fair values as of June 30, 2020 and December 31, 2019 (in thousands):

	Fair Value Measurements as of June 30, 2020 Using:			
	Level 1	Level 2	Level 3	Total
Cash equivalents:				
Money market funds	$ 55,447	$ -	$ -	$ 55,447
Cash equivalents	$ 55,447	$ -	$ -	$ 55,447

	Fair Value Measurements as of December 31, 2019 Using:			
	Level 1	Level 2	Level 3	Total
Cash equivalents:				
Money market funds	$ 93,859	$ -	$ -	$ 93,859
Cash equivalents	$ 93,859	$ -	$ -	$ 93,859

5. Property and Equipment

Property and equipment, net consisted of the following (in thousands):

	June 30, 2020	December 31, 2019
Laboratory equipment	$ 12,850	$ 14,505
Software	2,261	2,232
Construction in progress	-	915
Computer and office equipment	1,547	1,890
Leasehold improvements	15,217	13,673
Property and equipment, gross	31,875	33,215
Less: accumulated depreciation and amortization	(21,088)	(21,602)
Property and equipment, net	$ 10,787	$ 11,613

As of June 30, 2020, and December 31, 2019, the Company's property and equipment was primarily located in Cambridge, Massachusetts.

Depreciation and amortization expense of the Company's property and equipment was approximately $0.6 million and $0.8 million for the three months ended June 30, 2020 and 2019, respectively, and approximately $1.2 million and $1.4 million for the six months ended June 30, 2020 and 2019, respectively. The Company recorded a loss on disposal of property and equipment of $0.2 million for the three and six months ended June 30, 2020 recognized within operating expenses in the condensed consolidated and combined statements of operations and comprehensive loss. Leasehold improvements of $1.5 million were put into service in the six months ended June 30, 2020, of which $0.9 million was included in construction in progress as of December 31, 2019.

6. Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities consisted of the following (in thousands):

	June 30, 2020	December 31, 2019
Accrued incentive compensation	$ 1,924	$ 3,767
Salaries	1,106	1,730
Accrued vacation	834	969
Professional fees	617	441
Accrued severance and benefit costs	53	2,009
Other	579	404
Accrued expenses and other current liabilities	$ 5,113	$ 9,320

7. Commitments and Contingencies

Other Funding Commitments

As of June 30, 2020 and December 31, 2019, the Company had several on-going studies in various clinical trial stages. The Company's most significant clinical trial expenditures are related to contract research organizations. These contracts are generally cancellable, with notice, at the Company's option and do not have any significant cancellation penalties.

Guarantees

On September 6, 2018, Cyclerion was incorporated in Massachusetts and its officers and directors are indemnified for certain events or occurrences while they are serving in such capacity. Prior to the Separation, the Company's officers and directors were similarly indemnified under Delaware law.

The Company enters into certain agreements with other parties in the ordinary course of business that contain indemnification provisions. These typically include agreements with directors and officers, business partners, contractors, clinical sites and customers. Under these provisions, the Company generally indemnifies and holds harmless the indemnified party for losses suffered or incurred by the indemnified party as a result of the Company's activities. These indemnification provisions generally survive termination of the underlying agreements. The maximum potential amount of future payments the Company could be required to make under these indemnification provisions is unlimited. However, to date the Company has not incurred material costs to defend lawsuits or settle claims related to these indemnification provisions. As a result, the estimated fair value of these obligations is minimal. Accordingly, the Company did not have any liabilities recorded for these obligations as of June 30, 2020 and December 31, 2019.

8. Leases

The FASB issued ASU 2016-02, or the leasing standard or ASC 842, in February 2016. ASU 2016-02 requires lessees to recognize assets and liabilities on the balance sheet for the rights and obligations created by all leases with terms of more than 12 months. ASU 2016-02 also requires certain qualitative and quantitative disclosures designed to give financial statement users information on the amount, timing, and uncertainty of cash flows arising from leases.

On April 1, 2019, the Company entered into the Master Lease, a direct operating lease for its existing premises located at 301 Binney Street, Cambridge, MA consisting of approximately 114,000 rentable square feet of office and lab space on the first and second floors. The Master Lease is for a term of 123 months with two five-year extension options and certain expansion rights. The Master Lease includes a letter of credit, initially in the amount of $7.7 million, posted with the landlord as a security deposit, which is collateralized by a money market account recorded as restricted cash on the Company's condensed consolidated balance sheets. Cyclerion has also entered into customary non-disturbance arrangements with the building landlord's mortgagee and with the property ground lessor recognizing Cyclerion's leasehold interest in this property.

The Master Lease provides for annual base rent of approximately $11.0 million in the first year, which increases on a yearly basis by 3.0% (subject to an abatement of base rent of approximately $2.7 million in the first year of the lease). The Company is obligated to pay the landlord for certain costs, taxes and operating expenses related to the premises, subject to certain exclusions; however, the Company has concluded that these payments are not in-substance fixed payments and therefore are not included in the calculation of the related lease liability and asset under ASC 842. Additionally, the Company has made the policy election to adopt the practical expedient to not separate lease components from non-lease components for the right-to-use asset class of office and laboratory space. This policy election results in the Company accounting for the lease component, the use of the premises, and the non-lease components, which include a property management fee, as a single lease component.

The Company recorded the liability associated with the Master Lease at the present value of the lease payments not yet paid, discounted using the discount rate for the Master Lease established at the commencement date. As the Master Lease does not provide an implicit rate, the Company had to estimate the incremental borrowing rate, or IBR, as of the commencement date. The IBR is defined under ASC 842 as the rate of interest that the Company would have to pay to borrow on a collateralized basis over a similar term for an amount equal to the lease payments in a similar economic environment. The Company determined its IBR to be 10.9% at the time of the agreement, which was used to discount the remaining lease payments over the remaining lease term and recorded a lease liability of $71.3 million on April 1, 2019. This lease liability will be amortized over the remaining lease term in an amount equal to the difference between the cash rent paid and the monthly interest calculated on the remaining lease liability.

The Company had a tenant improvement allowance from the landlord of approximately $2.3 million for certain permitted costs related to the buildout of the premises. The Company is deemed to be the owner of these tenant improvements during the lease term. These $2.3 million of improvements are included in the Company's property, plant and equipment balances in its consolidated balance sheets as of June 30, 2020 and December 31, 2019 and are depreciated over the shorter of their useful life or the related lease term. The Company received the payment for the tenant allowance in the third quarter of 2019.

On April 1, 2019, the Company recorded a right-of-use asset in the amount $71.3 million. The right-of-use asset is being amortized over the remaining lease term in an amount equal to the difference between the calculated straight-line expense of the total lease payments less the monthly interest calculated on the remaining lease liability.

On February 28, 2020 the Company entered into an amendment to our Master Lease at 301 Binney Street in Cambridge, Massachusetts. The Lease Amendment provides for the partial termination of the Company's rights and obligations with respect to a portion of the leased premises of approximately 40,000 rentable square feet. The Company will continue to lease approximately 74,000 square feet including the area covered by the subleased premise, discussed below. The Company reduced its remaining lease payments through June 2029 by approximately $41.9 million. In connection with the Lease Amendment, the Company paid $6.3 million for a termination fee and $0.2 million for other initial direct costs, which will be deferred and recognized over the remaining lease term. The Company's security deposit was reduced by approximately $2.7 million to approximately $5.0 million, which is classified as restricted cash on the Company's condensed consolidated balance sheet as of June 30, 2020.

The Lease Amendment was determined to be a lease modification that qualified as a change of accounting on the existing lease and not a separate contract. As such, the ROU assets and operating lease liabilities were remeasured using an incremental borrowing rate at the date of modification of 9.7%, which resulted in a reduction of the ROU asset of $21.4 million and a reduction in the operating lease liabilities of $23.5 million. The Company recorded the resulting gain of approximately $2.1 million as a component of operating expenses in the condensed consolidated statement of operations and comprehensive loss for the six months ended June 30, 2020.

The Company has an operating lease right-of-use asset of approximately $51.3 million and $68.1 million related to the amended Master Lease recorded in its condensed consolidated balance sheets as of June 30, 2020 and December 31, 2019, respectively. The Company has current operating lease liabilities of approximately $2.8 million and $3.4 million, and noncurrent operating lease liabilities of approximately $46.3 million and $70.5 million, related to the amended Master Lease recorded in its condensed consolidated balance sheets as of June 30, 2020 and December 31, 2019, respectively.

Lease cost is recognized on a straight-line basis over the lease term. For the three and six months ended June 30, 2020, the Company recognized a total of approximately $2.2 million and $4.9 million, respectively, of total lease costs. Variable lease costs not subject to an index or rate are recognized as incurred. For the three and six months ended June 30, 2020, the Company recognized a total of approximately $0.5 million and $1.5 million, respectively, of variable lease costs related to the Master Lease, as amended.

Supplemental cash flow information related to leases for the six months ended June 30, 2020 is as follows:

	Six Months Ended June 30, 2020
Decrease in right-of-use assets related to lease modification	$ 21,386
Decrease in operating lease liabilities due to lease modification	$ 23,499
Cash paid for amounts included in the measurement of lease liabilities (in thousands)	$ 4,249
Weighted-average remaining lease term of operating leases (in years)	9.0
Weighted-average discount rate of operating leases	9.7%

On March 31, 2019, the Company entered into a short-term sublease of approximately 24,000 rentable square feet with Ironwood to provide temporary working space for a portion of its workforce while the buildout of the Company's new premises was being completed. The sublease was for an initial one-month term with several one-month extension options. The Company subleased the space for approximately 1.5 months, vacating the space and terminating the sublease in mid-May 2019. The Company incurred $0.2 million in rent expense related to the sub-lease for the three and six months ended June 30, 2019.

On October 18, 2019, the Company entered into an agreement with a third party to sublease 15,700 rentable square feet of its current lease premises under the Master Lease. The sublease will expire on June 30, 2029, unless earlier terminated in accordance with the sublease agreement, and has no extension options. The sublease provides for annual base rent of approximately $1.5 million in the first year, which increases on a yearly basis by 3.0% (subject to an abatement of base rent of approximately $0.7 million for the first six months of the sublease). The sublessee is responsible for its pro rata share of certain costs, taxes and operating expenses related to the subleased space, the consideration for which is variable and is based on the actual operating costs of the lessor. The variable consideration relates exclusively to non-lease components representing such services and will be recognized as incurred. The sublease includes an initial security deposit of $0.5 million, which was provided by the sublessee in the form of a letter of credit, and an additional security deposit of $0.4 million within nine months of the sublease commencement.

As part of the consideration for the sublease, the sublessee will provide licensed rooms within the sublease premises and licensed services to the Company over the sublease term free of charge. The licensed rooms have been excluded from the measurement of the sublease as control of the rooms reverts to the Company. The Company expects to receive the benefit of the licensed rooms and services beginning in late 2020. The Company estimated the fair value of the services to be approximately $4.2 million, which will be recorded on a gross basis as the services are received as a component of research and development costs in the condensed consolidated and combined statements of operations and comprehensive loss.

The Company allocated the consideration in the sublease agreement between the lease and non-lease components based on their relative standalone prices. For the three and six months ended June 30, 2020, gross sublease income of $0.5 million and $1.1 million, respectively, was recorded. Net sublease income of approximately $0.1 million and $0.2 million was recorded in interest and other income, net in the condensed consolidated and combined statements of operations and comprehensive loss for the three and six months ended June 30, 2020.

Future minimum lease payments under non-cancelable operating leases under ASC 842 as well as the total future minimum lease payments to be received under the sublease agreement as of June 30, 2020 are as follows:

	Operating Lease Payments	Sublease Payments to be Received
2020 (remaining nine months)	$ 3,656	$ 800
2021	7,469	1,636
2022	7,686	1,683
2023	7,909	1,733
2024	8,139	1,783
2025 and thereafter	39,658	8,694
Total future minimum lease payments (receipts)	74,517	$ 16,329
Less: present value adjustment	25,438	
Operating lease liabilities at June 30, 2020	49,079	
Less: current portion of operating lease liabilities	2,787	
Operating lease liabilities, net of current portion	$ 46,292	

9. Share-based Compensation Plans

Prior to the Separation, share-based compensation expense was allocated to Cyclerion using a combined specific identification and pro-rata method based on internal project related costs and headcount that management believed were consistent and reasonable.

In connection with the Separation, Cyclerion adopted its own share-based compensation plans. Specifically, Cyclerion adopted the 2019 Employee Stock Purchase Plan (“2019 ESPP”) and the 2019 Equity Incentive Plan (“2019 Equity Plan”). Under the 2019 ESPP, eligible employees may use payroll deductions to purchase shares of stock in offerings under the plan, and thereby acquire an interest in the future of the Company. Under the 2019 Equity Plan, new post-Separation awards, including stock options and restricted stock units (“RSUs”), may be granted to employees of the Company.

Cyclerion also mirrored two of Ironwood’s existing plans, the Amended and Restated 2005 Stock Incentive Plan (“2005 Equity Plan”) and the Amended and Restated 2010 Employee, Director and Consultant Equity Incentive Plan (“2010 Equity Plan). These mirror plans were adopted to facilitate the exchange of Ironwood equity awards for Cyclerion equity awards upon the Separation as part of the equity conversion. As a result of the Separation and in accordance with the EMA, employees of both companies retained their existing Ironwood vested options and received a pro-rata share of Cyclerion options, regardless of which company employed them post-Separation. For employees that were ultimately employed by Cyclerion, unvested Ironwood options and RSUs were converted to unvested Cyclerion options and RSUs.

The conversion of equity awards resulting from the Separation impacted approximately 143 employees and was treated as a Type 1 modification under ASC Topic 718, *Share Based Payments*, as the awards are expected to vest under the original terms. Incremental compensation expense was measured as the excess, if any, of the fair value of the modified award over the fair value of the original award immediately before its terms were modified. The fair value of RSUs and restricted stock awards was measured using the fair value stock price immediately before and immediately after the modification date which resulted in no incremental compensation expense. The fair value of stock options was measured using the Black-Scholes option pricing method using the appropriate valuation assumptions immediately before and immediately after the modification date. As a result of the modification, Cyclerion recognized a one-time incremental expense of approximately $0.3 million for the vested stock options and will recognize an incremental expense of approximately $7.5 million for the unvested stock options over their remaining vesting period.

The following table provides share-based compensation reflected in the Company's condensed consolidated and combined statements of operations and comprehensive loss for the three and six months ended June 30, 2020 and 2019 (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Research and development	$ 1,880	$ 2,787	$ 3,801	$ 4,582
General and administrative	2,073	3,437	4,188	5,631
	$ 3,953	$ 6,224	$ 7,989	$ 10,213

For the three and six months ended June 30, 2020, the Company granted stock options to purchase an aggregate of 105,000 shares and 270,846 shares, respectively, at weighted average grant date fair values per option share of $2.84 and $2.15, respectively.

As of June 30, 2020, the unrecognized share-based compensation expense, net of estimated forfeitures, related to all unvested time-based stock options held by Cyclerion's employees is $19.2 million and the weighted average period over which that expense is expected to be recognized is 3.6 years.

As of June 30, 2020, the unrecognized share-based compensation expense related to stock options containing market conditions held by Cyclerion's employees is $0.3 million, which is expected to be recognized over a weighted-average period of 3.8 years.

As of June 30, 2020, the unrecognized share-based compensation expense, net of estimated forfeitures, related to all unvested RSUs held by the Company's employees is $4.5 million and the weighted-average period over which that expense is expected to be recognized is 2.3 years.

10. Loss per share

Basic and diluted net loss per common share is computed by dividing net loss by the weighted average number of common shares outstanding during the period as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Numerator:				
Net loss (in thousands)	$ (19,534)	$ (32,254)	$ (39,762)	$ (69,635)
Denominator:				
Weighted average shares used in calculating net loss per share — basic and diluted (in thousands)	27,791	27,393	27,730	27,380
Net loss per share — basic and diluted	$ (0.70)	$ (1.18)	$ (1.43)	$ (2.54)

For both the three and six months ended June 30, 2020 there were 7,717,184 shares of common stock related to stock options and 474,923 shares of common stock related to RSUs were excluded from the calculation of diluted net loss per share since the inclusion of such shares would be anti-dilutive.

Prior to April 1, 2019, there were no Cyclerion shares outstanding, as such, the shares outstanding immediately after the distribution and the Private Placement were used to calculate the basic and diluted net loss per share for the six months ended June 30, 2019.

11. Defined Contribution Plan

Prior to the Separation, Ironwood maintained a defined contribution 401(k) Savings Plan in the form of a qualified 401(k) plan for the benefit of substantially all of its employees, which included Ironwood employees who became Cyclerion employees. Compensation expense related to the 401(k) match was allocated to Cyclerion using a pro-rata method based on project-related costs and headcount that management believes are consistent and reasonable.

Subsequent to the Separation, Cyclerion adopted a defined contribution 401(k) Savings Plan similar to the plan in place at Ironwood. The plan assets under the Ironwood defined contribution 401(k) Savings Plan were transferred to the Cyclerion plan. Subject to certain IRS limits, eligible employees may elect to contribute from 1% to 100% of their compensation. Cyclerion contributions to the plan are at the sole discretion of the board of directors. Currently, Cyclerion provides a matching contribution of 75% of the employee's contributions, up to $6,000 annually.

Included in compensation expense is approximately $0.1 million and $0.4 million related to the defined contribution 401(k) Savings Plan for the three and six months ended June 30, 2020, respectively. Included in compensation expense for employees that are directly attributable to Cyclerion is approximately $0.1 million and $0.5 million for the three and six months ended June 30, 2019, respectively.

12. Workforce Reduction

On October 30, 2019, the Company began a reduction of its current workforce by approximately thirty (30) full-time employees in order to align its resources with its ongoing clinical and preclinical programs, innovation strategy and partnering work. The total one-time costs related to the workforce reduction were approximately $3.0 million. The workforce reduction was substantially completed during the year ended December 31, 2019, in which the Company recorded approximately $2.8 million of severance and benefits costs. The workforce reduction was finalized during the three months ended March 31, 2020, in which the Company recorded approximately $0.2 million in additional severance and benefits costs.

The following table summarizes the accrued liabilities activity recorded in connection with the reduction in workforce for the six months ended June 30, 2020 (in thousands):

	Amounts accrued at December 31, 2019	Charges	Amount paid	Adjustments	Amounts accrued at June 30, 2020
October 2019 workforce reduction	$ 2,009	$ 158	$ 2,085	$ (30)	$ 52
Total	$ 2,009	$ 158	$ 2,085	$ (30)	$ 52

13. Subsequent Events

On July 29, 2020, the Company closed on a private placement of 6,062,500 shares of the Company's common stock at a purchase price of $4.00 per share pursuant to a Common Stock Purchase Agreement for total proceeds of approximately $24.3 million.

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

Forward-Looking Information

The following discussion of our financial condition and results of operations should be read in conjunction with the unaudited condensed consolidated and combined financial statements and the corresponding notes included in this Quarterly Report on Form 10-Q, as well as the audited consolidated and combined financial statements and notes thereto included in our Annual Report on Form 10-K. This discussion contains forward-looking statements that involve significant risks and uncertainties. As a result of many factors, such as those referenced or set forth under "Cautionary Note Regarding Forward-Looking Statements" and "Risk Factors" in Item 1A of this Quarterly Report on Form 10-Q, our actual results may differ materially from those anticipated in these forward-looking statements.

Overview

We are a clinical-stage biopharmaceutical company harnessing the power of soluble guanylate cyclase, or sGC, pharmacology to discover, develop and commercialize breakthrough treatments for serious and orphan diseases. Our focus is enabling the full therapeutic potential of next-generation sGC stimulators. Our strategy rests on a solid scientific foundation that is enabled by our people and capabilities, external collaborations and a responsive capital allocation approach.

We operate in one reportable business segment—human therapeutics.

Separation from Ironwood Pharmaceuticals

On April 1, 2019, Ironwood Pharmaceuticals Inc., or Ironwood, completed the separation of its sGC business, and certain other assets and liabilities, into us as a separate, independent publicly traded company by way of a pro-rata distribution of our common stock through a dividend distribution of one share of our common stock, with no par value per share, for every 10 shares of Ironwood common stock held by Ironwood stockholders as of the close of business on March 19, 2019, the record date for the distribution, which we refer to herein as the Separation. As a result of the Separation, we became an independent public company and commenced trading under the symbol "CYCN" on the Nasdaq Global Select Market on April 2, 2019.

In connection with the Separation, on March 30, 2019, we entered into certain agreements with Ironwood to provide a framework for our relationship with Ironwood following the Separation, including, among others, a Separation Agreement, a Tax Matters Agreement, and an Employee Matters Agreement.

In addition, in connection with the Separation, on April 1, 2019, we entered into a Development Agreement, an Ironwood Transition Services Agreement, a Cyclerion Transition Services Agreement and an Intellectual Property License Agreement with Ironwood. All services provided to and from the Company under the Transition Services Agreements were completed as of March 31, 2020 and the agreements were terminated. Ironwood has informed Cyclerion that it will not renew the Development Agreement beyond its initial term which ends on March 31, 2021.

On April 2, 2019, we issued 11,817,165 shares of our common stock, in the Private Placement to accredited investors for gross proceeds of $175 million (net proceeds of approximately $165 million).

Our historical condensed consolidated and combined financial statements for the periods prior to the Separation have been derived from Ironwood's combined financial statements and accounting records and are presented in conformity with United States Generally Accepted Accounting Principles, or U.S. GAAP.

Our historical financial statements may not be indicative of our future performance and do not necessarily reflect what our results of operations, financial condition and cash flows would have been had we operated as a separate, publicly traded company for the periods presented prior to the Separation. The condensed consolidated and combined financial statements prior to the Separation included herein do not reflect any changes that occurred in our financing or operations as a result of the Separation from Ironwood.

Financial Overview

Research and Development Expense. Research and development expenses are incurred in connection with the discovery and development of our product candidates. These expenses consist primarily of the following costs: compensation, benefits and other employee-related expenses, research and development related facilities, third-party contracts relating to nonclinical study and clinical trial activities. All research and development expenses are charged to operations as incurred.

The core of our research and development strategy is to harness the power of sGC pharmacology to develop therapies for serious and orphan diseases. Our portfolio of programs includes:

Olinciguat is a once-daily, orally administered vascular sGC stimulator that is well suited for the potential treatment of sickle cell disease, or SCD. We are conducting a randomized, placebo-controlled, dose-ranging Phase 2 study, STRONG-SCD, that has closed enrollment with 70 participants enrolled from both US and ex-US sites. This study is designed to explore a broad range of tolerated doses and optimize our understanding of the therapeutic potential of olinciguat in SCD. All follow up visits are now complete, and we are conducting study closeout activities. We expect topline data from this study in late Q3 2020.

In June 2018, the U.S. Food and Drug Administration, or the FDA, granted Orphan Drug Designation to olinciguat for the treatment of patients with SCD. Orphan Drug Designation provides marketing exclusivity for seven years from the date of the product’s approval for marketing and contributes to a significant reduction in development costs.

IW-6463 is an orally administered central nervous system-penetrant sGC stimulator that, because it readily crosses the blood-brain barrier, affords an unprecedented opportunity to expand the utility of sGC pharmacology to serious neurodegenerative diseases. On January 13, 2020 we released positive top line results from our first-in-human study of IW-6463. IW-6463 was generally well tolerated in healthy human adults. The study demonstrated IW-6463 penetration across the blood-brain-barrier at levels expected to be pharmacologically active as well as a mild reduction in blood pressure providing evidence of peripheral pharmacological activity. The Company intends to continue development activities for IW-6463. In December 2019 we initiated an ongoing translational pharmacology study in elderly subjects. Dosing has been completed in this study and topline data is expected in mid-Q3 2020.

The Company anticipates initiating two parallel exploratory Phase 2 studies of IW-6463 to evaluate safety and a variety of efficacy measures, including engagement of CNS biomarkers using novel trial designs in Mitochondrial Encephalomyopathy, Lactic Acidosis and Stroke-like Episodes (MELAS) and Alzheimer's disease with vascular features (ADv). These studies are designed to de-risk and direct future development in CNS diseases.

Praliciguat is an orally administered, once-daily systemic sGC stimulator that was evaluated in two Phase 2 proof-of-concept studies: a dose-ranging study in 156 adult patients with diabetic nephropathy, and a study in 196 adult patients with heart failure with preserved ejection fraction (HfpEF), CAPACITY-HfpEF. On October 30, 2019, we released topline results from these studies.

In CAPACITY-HFpEF, the study did not meet statistical significance on its primary endpoint of improved exercise capacity from baseline as compared to placebo, measured by cardiopulmonary exercise testing. There was clear evidence of drug exposure and pharmacological activity as judged by expected reductions in blood pressure. Praliciguat was generally well tolerated. We have discontinued development of praliciguat in HFpEF.

The study of praliciguat in participants with diabetic nephropathy also did not meet statistical significance on its primary endpoint of reduction in albuminuria from baseline as compared to placebo, measured by urine albumin creatinine ratio. However, there was a trend toward improvement across the total intention-to-treat study population. Praliciguat was generally well tolerated. The Company’s efforts to out-license global rights to praliciguat have expanded to discussions beyond treatment of cardiometabolic disorders to include additional indications where sGC stimulators have demonstrated efficacy.

Discovery Research. Our orally administered liver-targeted sGC stimulator is designed to selectively partition to the liver. By achieving liver concentrations many fold higher than corresponding plasma concentrations, we intend to maximize hepatic pharmacology. In animal models of liver fibrosis treated with systemic sGC stimulators, we have observed reductions in liver fibrosis, inflammation and steatosis, pathophysiological processes that underlie multiple chronic liver diseases.

Our lung-targeted sGC stimulator will be administered via inhalation and will be aimed at realizing the full potential of sGC stimulation in pulmonary diseases by selectively increasing exposure in the lung. By achieving significantly greater selectivity for lung over plasma, we intend to maximize pulmonary pharmacology.

Additional discovery efforts are ongoing and aimed at further expanding the potential of sGC stimulation in disorders of the central nervous system, or CNS.

The following table summarizes our research and development expenses related to our product pipeline, as well as employee and facility related costs allocated to research and development expense, for the three and six months ended June 30, 2020 and 2019. These product pipeline expenses relate primarily to external costs associated with nonclinical studies and clinical trial costs, which are presented by development candidates.

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
	(in thousands)		(in thousands)	
Product pipeline external costs:				
Olinciguat	$ 1,635	$ 3,932	4,261	$ 7,903
IW-6463	1,500	1,777	2,838	2,238
Praliciguat	79	3,789	215	9,527
Discovery research	189	101	202	635
Total product pipeline external costs	3,403	9,599	7,516	20,303
Personnel and related internal costs	6,738	10,264	14,474	20,021
Facilities and other	3,653	5,896	8,629	11,839
Total research and development expenses	$ 13,794	$ 25,759	$ 30,619	$ 52,163

Securing regulatory approvals for new drugs is a lengthy and costly process. Any failure by us to obtain, or any delay in obtaining, regulatory approvals would materially adversely affect our product development efforts and our business overall.

Given the inherent uncertainties of pharmaceutical product development, we cannot estimate with any degree of certainty how our programs will evolve, and therefore the amount of time or money that would be required to obtain regulatory approval to market them. As a result of these uncertainties surrounding the timing and outcome of any approvals, we are currently unable to estimate precisely when, if ever, our discovery and development candidates will be approved. We invest carefully in our pipeline, and the commitment of funding for each subsequent stage of our development programs is dependent upon the receipt of clear, supportive data.

The successful development of our product candidates is highly uncertain and subject to a number of risks including, but not limited to:

- The COVID-19 pandemic could affect our programs and operations in ways that are difficult to precisely judge at this time, including its operations, clinical trials, corporate development discussions and other activities. Cyclerion is working closely with its clinical trial sites and investigators to deliver its ongoing and planned trials in a manner consistent with the safety of study participants and healthcare professionals.

- The duration of clinical trials may vary substantially according to the type and complexity of the product candidate and may take longer than expected.

- The U.S FDA and comparable agencies outside the U.S. impose substantial and varying requirements on the introduction of therapeutic pharmaceutical products, which typically require lengthy and detailed laboratory and clinical testing procedures, sampling activities and other costly and time-consuming procedures.

- Data obtained from nonclinical and clinical activities at any step in the testing process may be adverse and lead to discontinuation or redirection of development activity. Data obtained from these activities also are susceptible to varying interpretations, which could delay, limit or prevent regulatory approval.

- The duration and cost of discovery, nonclinical studies and clinical trials may vary significantly over the life of a product candidate and are difficult to predict.

- The costs, timing and outcome of regulatory review of a product candidate may not be favorable, and, even if approved, a product may face post-approval development and regulatory requirements.

- The emergence of competing technologies and products and other adverse market developments may reduce or eliminate the potential value of our pipeline.

As a result of the factors listed in the "Risk Factors" section in Item 1A of our annual report on Form 10-K for the fiscal year ended December 31, 2019, and elsewhere in this Quarterly Report on Form 10-Q, we are unable to determine the duration and costs to complete current or future nonclinical and clinical stages of our product candidates or when, or to what extent, we will generate revenues from the commercialization and sale of our product candidates. Development timelines, probability of success and development costs vary widely. We anticipate that we will make determinations as to which additional programs to pursue and how much funding to direct to each program on an ongoing basis in response to the data from the studies of each product candidate, the competitive landscape and ongoing assessments of such product candidate's commercial potential.

General and Administrative Expense. General and administrative expense consists primarily of compensation, benefits and other employee-related expenses for personnel in our administrative, finance, legal, information technology, business development, communications and human resource functions. Other costs include the legal costs of pursuing patent protection of our intellectual property, general and administrative related facility costs, insurance costs and professional fees for accounting and legal services. Certain costs associated with our Separation from Ironwood are included in these expenses. We record all general and administrative expenses as incurred.

Critical Accounting Policies and Estimates

Our discussion and analysis of our financial condition and results of operations is based upon our condensed consolidated and combined financial statements prepared in accordance with U.S. GAAP. The preparation of these financial statements requires us to make certain estimates and assumptions that may affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the condensed consolidated and combined financial statements, and the amounts of expenses during the reported periods. Significant estimates and assumptions in our condensed consolidated and combined financial statements include those related to allocation of expenses, assets and liabilities from Ironwood's historical financial statements for the periods prior to the Separation, impairment of long-lived assets; income taxes, including the valuation allowance for deferred tax assets; research and development expenses; contingencies and share-based compensation. We base our estimates on our historical experience and on various other assumptions that are believed to be reasonable, the results of which form the basis for making judgments about the carrying values of assets and liabilities. Actual results may differ materially from our estimates under different assumptions or conditions. Changes in estimates are reflected in reported results in the period in which they become known.

We believe that our application of accounting policies requires significant judgments and estimates on the part of management and is the most critical to aid in fully understanding and evaluating our reported financial results. Our significant accounting policies are more fully described in Note 2, *Summary of Significant Accounting Policies*, of the condensed consolidated and combined financial statements elsewhere in this Quarterly Report on Form 10-Q.

All research and development expenses are expensed as incurred. We defer and capitalize nonrefundable advance payments we make for research and development activities until the related goods are received or the related services are performed. See Note 2, *Summary of Significant Accounting Policies*, of the condensed consolidated and combined financial statements appearing elsewhere in this Quarterly Report on Form 10-Q.

Results of Operations

For the period prior to the Separation, our condensed consolidated and combined financial statements include an allocation of expenses related to certain Ironwood corporate functions, including senior management, legal, human resources, finance, information technology and quality assurance. These expenses were allocated to Cyclerion based on direct usage or benefit where identifiable, with the remainder allocated pro-rata based on project related costs, headcount or other measures. We considered the allocation methodologies used to be a reasonable and appropriate reflection of the historical Ironwood expenses attributable to us. The expenses reflected in the condensed consolidated and combined financial statements may not be indicative of expenses that will be incurred by us in the future. After the Separation, we began performing these corporate functions using internal resources or purchased services, certain of which were provided by Ironwood under the Transition Services Agreement. The following discussion summarizes the key factors we believed are necessary for an understanding of our consolidated financial statements.

Expenses

	Three Months Ended June 30,		Change		Six Months Ended June 30,		Change	
	2020	2019	$	%	2020	2019	$	%
	(dollars in thousands)				(dollars in thousands)			
Revenue from related party	$ 749	$ 1,628	$ (879)	(54)%	$ 1,763	$ 1,628	$ 135	8%
Cost and expenses:								
Research and development	13,794	25,759	(11,965)	(46)%	30,619	52,163	(21,544)	(41)%
General and administrative	6,627	8,923	(2,296)	(26)%	13,518	19,900	(6,382)	(32)%
Gain on lease modification	-	-	-	100%	(2,113)	-	(2,113)	100%
Total cost and expenses	20,421	34,682	(14,261)	(41)%	42,024	72,063	(30,039)	(42)%
Loss from operations	(19,672)	(33,054)	13,382	(40)%	(40,261)	(70,435)	30,174	(43)%
Interest and other income, net	138	800	(662)	83%	499	800	(301)	(38)%
Net loss	$ (19,534)	$ (32,254)	$ 12,720	(39)%	$ (39,762)	$ (69,635)	$ 29,873	(43)%

Revenue from related party. The decrease in revenue from related party for the three months ended June 30, 2020 compared to the three months ended June, 2019 is the result of a decrease in services performed under the Development Agreement for Ironwood, which was entered into in connection with the Separation. The increase in revenue from related party for the six months ended June 30, 2020 compared to the six months ended June, 2019 is due to the Company providing services to Ironwood for two quarters in 2020 compared to only one quarter post-Separation in 2019, partially offset by the decrease in services provided in the current quarter as compared to the prior year.

Research and development expense. The decrease in research and development expense of approximately $12.0 million for the three months ended June 30, 2020 compared to the three months ended June 30, 2019 was driven by a decrease of approximately $3.5 million in stock-based compensation, salaries and other employee-related expenses primarily due to lower average headcount, a decrease of approximately $2.2 million of facilities and operating costs allocated to research and development primarily due to the sublease agreement and lease amendment which reduced the Company's total leased premises, and an overall decrease of approximately $6.2 million in external research costs. The net decrease in external research costs was primarily due to decreases over the periods of approximately $3.7 million associated with the completion of two praliciguat phase 2 proof of concept studies both of which reported top-line data on October 30, 2019, $2.3 million associated with olinciguat primarily due to the completion of supporting ancillary studies and $0.3M in IW-6463 offset by an increase of approximately $0.1 million discovery.

The decrease in research and development expense of approximately $21.5 million for the six months ended June 30, 2020 compared to the six months ended June 30, 2019 was primarily due to decreases of approximately $2.9 million in stock-based compensation, approximately $2.7 million in salaries and other employee-related expenses primarily due to lower average headcount and fewer temporary support resources, approximately $3.2 million in facilities and operating costs allocated to research and development primarily due to the sublease agreement and lease amendment which reduced the Company's total leased premises, and approximately $12.8 million in net external research costs. The net decrease in external research costs was primarily due to decreases over the periods of approximately $9.3 million in praliciguat studies, $3.6 million in olinciguat studies and approximately $0.4 million in discovery research, offset by an increase of approximately $0.6 million in IW-6463 study costs.

General and administrative expense. The decrease in general and administrative expenses of approximately $2.3 million for the three months ended June 30, 2020 compared to the three months ended June 30, 2019 was primarily due to a decrease of approximately $1.4 million in stock-based compensation and a decrease of approximately $0.9 million in salaries, bonus and other employee-related expenses due to lower average headcount and fewer temporary support resources.

The decrease in general and administrative expenses of approximately $6.4 million for the six months ended June 30, 2020 compared to the six months ended June 30, 2019 was primarily driven by approximately $3.5 million of non-recurring outsourced professional services and other costs associated with the Separation recorded in the prior period and a decrease of approximately $2.8 million in stock-based compensation and salaries, bonus and other employee-related costs primarily due to lower average headcount.

Gain on lease modification. The gain on lease modification of $2.1 million recorded in the six months ended June 30, 2020 is related to the Lease Amendment to our Master Lease at 301 Binney Street in Cambridge, Massachusetts that was executed on February 28, 2020.

Interest and other income, net. Interest and other income, net decreased by approximately $0.7 million for the three months ended June 30, 2020 compared to the three months ended June 30, 2019 due to a decrease of approximately $0.8 million in interest income driven by lower cash balances and lower interest rates, partially offset by an increase of approximately $0.1 million in net sublease income.

Interest and other income, net decreased by approximately $0.3 million for the six months ended June 30, 2020 compared to the six months ended June 30, 2019 due to a decrease of approximately $0.5 million in interest income driven by a lower cash balances and lower interest rates, partially offset by an increase of approximately $0.2 million in net sublease income.

Liquidity and Capital Resources

Prior to the Separation, the primary source of liquidity for our business was cash flow allocated to Cyclerion from Ironwood. Post Separation, transfers of cash to and from Ironwood related to the Transition Service Agreements, Development Agreement and provisions of the Separation Agreement, have been reflected in the condensed consolidated and combined statement of cash flows.

After giving effect to the completion of the Separation on April 1, 2019, we raised approximately $165 million net of direct financing expenses with the closing of the Private Placement on April 2, 2019. Subsequent to the Separation, we no longer participate in Ironwood's centralized cash management or receive direct funding from Ironwood.

On June 30, 2020, we had approximately $56.5 million of unrestricted cash and cash equivalents. Our cash equivalents include amounts held in U.S. government money market funds. We invest cash in excess of immediate requirements in accordance with our investment policy, which requires all investments held by us to be at least "AAA" rated or equivalent, with a remaining final maturity when purchased of less than twelve months, so as to primarily achieve liquidity and capital preservation.

On July 29, 2020, we closed on a private placement of 6,062,500 shares of our common stock, pursuant to a Common Stock Purchase Agreement, for total gross proceeds of approximately $24.3 million (see Item 5. *Other information)*. There were no material fees or commissions related to the transaction. The Company intends to use the proceeds to fund working captial and other general corporate purposes. Our ability to continue to fund our operations and capital needs will depend on our ongoing ability to generate cash from operations and access to capital markets and other sources of capital, as further described below. We anticipate that our principal uses of cash in the future will be primarily to fund our operations, working capital needs, capital expenditures and other general corporate purposes.

Going Concern

Based on our development plans and clinical stage patient testing and our timing expectations related to the progress of our discovery research programs, we expect that our existing cash and cash equivalents as of June 30, 2020, will be sufficient to fund our planned operating expenses and capital expenditure requirements into the second half of 2021, excluding net cash flows from potential business development activities. We have based this estimate on assumptions that may prove to be wrong, particularly as the process of testing drug candidates in clinical trials is costly and the timing of progress in these trials is uncertain.

Cash Flows

The following is a summary of cash flows for the years ended June 30, 2020 and 2019:

	Six Months Ended June 30,		Change	
	2020	2019	$	%
	(dollars in thousands)			
Net cash used in operating activities	$ (43,401)	$ (56,240)	$ 12,840	(23)%
Net cash used in investing activities	$ (1,421)	$ (6,061)	$ 4,640	(77)%
Net cash provided by financing activities	$ 3,664	$ 211,061	$ (207,397)	(98)%

Cash Flows from Operating Activities

Net cash used in operating activities was $43.4 million for the six months ended June 30, 2020 compared to $56.2 million for the six months ended June 30, 2019. The decrease in net cash used in operations of $12.8 million primarily relates to a decrease of $29.9 million in our net loss, partially offset by the payment of a $6.3 million termination fee related to the master lease modification in the current year, an increase in working capital accounts of $6.5 million, the recording of a non-cash gain on lease modification of $2.1 million in the current year, and a decrease of $2.1 million in other non-cash items.

Cash Flows from Investing Activities

Net cash used in investing activities was $1.4 million for the six months ended June 30, 2020 compared to $6.1 million for the six months ended June 30, 2019. The decrease in net cash used in investing activities of $4.6 million was primarily from a decrease in purchases of property and equipment, primarily leasehold improvements.

Cash Flows from Financing Activities

Cash provided by financing activities for the six months ended June 30, 2020 was $3.7 million, resulting from the cash received from the short-term note payable of $3.5 million and proceeds from the purchases of shares under the ESPP and other stock plans. Cash provided by financing activities for the six months ended June 30, 2019 was $211.1 million, resulting from the net cash proceeds received from the private placement of $164.6 million and the cash transferred to us from Ironwood based on changes in our cash used for operations prior to the Separation of $46.4 million.

Debt – Paycheck Protection Program

On April 21, 2020, we received loan proceeds in the amount of approximately $3.5 million pursuant to a promissory note agreement (the "Promissory Note") with a bank under the Paycheck Protection Program ("PPP"), of which certain key terms were adjusted by the Paycheck Protection Program Flexibility Act ("PPPFA"). The Promissory Note has an initial loan maturity of April 20, 2022, a stated interest rate of 1.0% per annum, and has payments of principal and interest that are due monthly after an initial deferral period where interest accrues, but no payments are due. The Promissory Note provides for customary events of default, including, among others, those relating to failure to make payment when due and breaches of representations. We may prepay the principal of the Promissory Note at any time without incurring any prepayment charges. The loan is subject to all the terms and conditions applicable under the PPPFA and is subject to review by the Small Business Association for compliance with program requirements.

The loan's principal and accrued interest are forgivable to the extent that the proceeds are used for eligible purposes, subject to certain limitations, and that we maintain our payroll levels over a twenty-four-week period following the loan date. The loan forgiveness amount may be reduced if we terminate employees or reduce salaries during the twenty-four-week period. We intend to use the proceeds for eligible purposes consistent with the provisions of the PPPFA. However, the Company cannot assure at this time that the loan under the Promissory Note will be forgiven partially, or in full.

Funding Requirements

We expect our expenses to fluctuate as we advance the preclinical activities and clinical trials of our product candidates. Our expenses will also fluctuate as we:

- continue advancing our product candidates into preclinical and clinical development;
- seek regulatory approvals for any product candidates that successfully complete clinical trials;
- may potentially hire additional clinical, quality control and scientific personnel;
- enhance our operational, financial and management systems; and
- maintain, expand and protect our intellectual property portfolio.

We believe that our existing cash and cash equivalents as of June 30, 2020 will enable us to fund our planned operating expenses and capital expenditure requirements into the second half of 2021 excluding net cash flows from potential business development activities. We have based this estimate on assumptions that may prove to be wrong, and we could exhaust our available capital resources sooner than we expect.

Because of the many risks and uncertainties associated with research, development and commercialization of product candidates, we are unable to estimate the exact amount of our working capital requirements. Our future funding requirements will depend on, and could increase or decrease significantly as a result of, many factors, including the:

- scope, progress, results and costs of researching and developing our product candidates, and conducting preclinical studies and clinical trials;
- costs, timing and outcome of regulatory review of our product candidates;
- costs of future activities, including medical affairs, manufacturing and distribution, for any of our product candidates for which we receive marketing approval;
- cost and timing of necessary actions to support our strategic objectives;
- costs of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending intellectual property-related claims; and

- timing, receipt and amount of sales of, or milestone payments related to or royalties on, our current or future product candidates, if any.

A change in any of these or other variables with respect to the development of any of our product candidates could significantly change the costs and timing of the development of that product candidate. Further, our operating plans may change in the future, and we may need additional funds to meet operational needs and capital requirements associated with such operating plans.

Until such time, if ever, as we can generate substantial product revenue, we expect to finance our cash needs through a combination of public or private equity offerings, debt financings, collaborations, strategic alliances or licensing arrangements with third parties. As discussed under the "Risk Factors" in Item 1A of our Annual Report on Form 10-K for the fiscal year ended December 31, 2019, to preserve the tax-free treatment of the Separation, we may be barred, in certain circumstances, for a two year period following the Separation, from engaging in certain capital raising transactions. To the extent that we raise additional capital through the sale of equity or convertible debt securities, outstanding equity ownership may be materially diluted, and the terms of securities sold in such transactions could include liquidation or other preferences that adversely affect the rights of holders of common stock. Debt financing and preferred equity financing, if available, may involve agreements that include restrictive covenants that limit our ability to take specified actions, such as incurring additional debt, making capital expenditures or declaring dividends. In addition, debt financing would result in increased fixed payment obligations.

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

If we are unable to raise additional funds when needed, we may be required to delay, reduce or eliminate our product development or future commercialization efforts, or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves.

Contractual Commitments and Obligations

Tax-related Obligations

We exclude assets, liabilities or obligations pertaining to uncertain tax positions from our summary of contractual commitments and obligations as we cannot make a reliable estimate of the period of cash settlement with the respective taxing authorities. As of June 30, 2020, we had no uncertain tax positions.

Other Funding Commitments

As of June 30, 2020, we had, and continue to have, several ongoing studies in various clinical trial stages. Our most significant clinical trial spending is with clinical research organizations, or CROs. The contracts with CROs generally are cancellable, with notice, at our option and do not have any significant cancellation penalties.

Transition from Ironwood and Costs to Operate as an Independent Company

Our condensed consolidated and combined financial statements for the period prior to the Separation reflect our operating results and financial position as it was operated by Ironwood, rather than as an independent company. As a result of the Separation, we have incurred additional ongoing operating expenses to operate as an independent, publicly traded, company. These costs include the cost of various corporate headquarters functions, incremental information technology-related costs and incremental costs to operate stand-alone accounting, legal, human resources and other administrative functions. We also incur non-recurring expenses and non-recurring capital expenditures.

We entered into the Ironwood Transition Services Agreement that provided us with certain services and resources related to corporate functions for an initial term of up to two years from the date of the Separation (as applicable). All services provided by Ironwood to the Company under the Ironwood Transition Services Agreement were completed as of March 31, 2020, and it has been terminated.

It is not practicable to estimate the costs that would have been incurred in each of the periods presented in the historical financial statements for the functions described above. Actual costs that would have been incurred if we operated as a stand-alone company for the periods prior to the Separation would have depended on various factors, including organizational design, outsourcing and other strategic decisions related to corporate functions, information technology and back office infrastructure.

Off-Balance Sheet Arrangements

We do not have any relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities, that would have been established for the purpose of facilitating off-balance sheet arrangements (as that term is defined in Item 303(a)(4)(ii) of Regulation S-K) or other contractually narrow or limited purposes. As such, we are not exposed to any financing, liquidity, market or credit risk that could arise if we had engaged in those types of relationships. We enter into guarantees in the ordinary course of business related to the guarantee of our own performance.

New Accounting Pronouncements

For a discussion of new accounting pronouncements see Note 2, *Summary of Significant Accounting Policies*, of the condensed consolidated and combined financial statements appearing elsewhere in this Quarterly Report on Form 10-Q.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

We are a smaller reporting company as defined by Rule 12b-2 of the Securities Exchange Act of 1934, as amended (the "Exchange Act") and are not required to provide the information required under this item.

Item 4. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act refers to controls and procedures that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure. Because there are inherent limitations in all control systems, a control system, no matter how well conceived and operated, can provide only reasonable, as opposed to absolute, assurance that the objectives of the control system are met. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the control. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Our management, with the participation of our chief executive officer and chief financial officer, evaluated the effectiveness of our disclosure controls and procedures as of the end of the period covered by this report. Based on that evaluation, our chief executive officer and chief financial officer concluded that our disclosure controls and procedures were effective, at the reasonable assurance level, as of the end of the period covered by this report. However, our management does not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent all errors and all fraud.

Changes in Internal Control over Financial Reporting

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

PART II

Item 1. ***Legal Proceedings***

From time to time we may become involved in legal proceedings or be subject to claims arising in the ordinary course of our business. We are not presently subject to any pending or threatened litigation that we believe, if determined adversely to us, would individually, or taken together, reasonably be expected to have a material adverse effect on our business or financial results.

Item 1A. ***Risk Factors***

You should carefully review and consider the information regarding certain factors which could materially affect our business, financial condition or future results set forth under the heading "Risk Factors" in our Annual Report on Form 10-K for the fiscal year ended December 31, 2019, as updated in our Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2020.

There have been no material changes to the risk factors described therein, except the following:

As reflected in Form 8-K filed with the SEC on July 9, 2020, the Company remains in ongoing efforts to out-license global rights to praliciguat and it has expanded discussions beyond treatment of cardiometabolic disorders to additional indications in which sGC stimulators have shown efficacy. The Company has updated the following risk factors based on that development:

Research and development of biopharmaceutical products is inherently risky. We may encounter substantial delays in our clinical studies, or we may fail to demonstrate safety and efficacy to the satisfaction of applicable regulatory authorities.

Our current product candidates are at an early stage of development. Our business depends heavily on successful preclinical development, clinical testing, regulatory approvals and commercialization of our lead product candidates. On October 30, 2019, we announced that our topline results from our Phase 2 proof-of-concept trials of praliciguat in participants with diabetic nephropathy and in HFpEF did not meet statistical significance on their respective primary endpoints. In light of this topline data, we determined not to continue development of praliciguat in participants with HFpEF. However, there was a trend towards improvement across the total intention-to-treat diabetic nephropathy study population and praliciguat was generally well tolerated. Accordingly we determined to pursue an out-license of rights to praliciguat. Our other lead product candidates, olinciguat and IW-6463, as well as any other of our current product candidates or product candidates that we may discover in the future, will require regulatory approvals resulting from substantial additional development and testing prior to commercialization.

Before obtaining regulatory approvals for the commercial sale of any of our product candidates, we must demonstrate through lengthy, complex and expensive preclinical and clinical studies that our product candidates are both safe and effective for use in each target indication. Each product candidate must demonstrate an adequate benefit-risk profile for its intended use in its intended patient population. In some instances, significant variability in safety or efficacy appear in different clinical studies of the same product candidate due to numerous factors, including changes in study protocols, differences in the number and characteristics of the enrolled study participants, variations in the dosing regimen and other clinical study parameters or the dropout rate among study participants. Product candidates in later stages of clinical studies often fail to demonstrate adequate safety and efficacy despite promising preclinical testing and earlier clinical studies. A number of companies in the biopharmaceutical industry have suffered significant setbacks in later-stage clinical studies. Most product candidates that begin clinical studies are never approved for commercialization by regulatory authorities.

We may not succeed in our pursuit of an out-license agreement for the development and commercialization of praliciguat, which would materially adversely affect our financial condition and results of operations.

We seek an out-license of rights to praliciguat for the purpose of furthering development and commercialization of praliciguat. There can be no assurance that we will find a commercial or financial partner to fund and undertake development and commercialization, and failure to find such a partner may result in the discontinuation of development of praliciguat. We also may incur costs to wind down our activities related to this product candidate. Failure to find a partner for the continued development and commercialization of praliciguat would materially adversely affect our financial condition and results of operations.

Any collaboration or license arrangements that we enter into in the future may not be successful, which could impede our ability to develop and commercialize our product candidates.

We intend to seek collaboration or license arrangements for the commercialization, and/or potentially for the development, of certain of our product candidates depending on the merits of retaining commercialization rights for ourselves as compared to entering into collaboration or license arrangements. We will face significant challenges in seeking appropriate partners. Moreover, collaboration and license arrangements are complex and time-consuming to negotiate, document, implement and maintain. We may not be successful in our efforts to establish and implement such arrangements. The terms of any collaborations, licenses or other arrangements that we may establish may not be favorable to us.

Any future collaboration or license arrangements that we enter into may not be successful. The success of such arrangements will depend heavily on the efforts and activities of our partners. Collaboration and license arrangements are subject to numerous risks, including that:

- partners have significant discretion in determining the efforts and resources that they will apply to collaborations;

- a partner with marketing, manufacturing and distribution rights to one or more products may not commit sufficient resources to or otherwise not perform satisfactorily in carrying out these activities;

- partners may not properly maintain or defend our intellectual property rights or may use our intellectual property or proprietary information in a way that gives rise to actual or threatened litigation that could jeopardize or invalidate our intellectual property or proprietary information or expose us to potential liability;

- collaboration and license arrangements may be terminated, and, if terminated, this may result in a need for additional capital to pursue further development or commercialization of the applicable current or future product candidates;

- partners may own or co-own intellectual property covering products that results from our collaborating with them, and in such cases, we would not have the exclusive right to develop or commercialize such intellectual property;

- disputes may arise with respect to the ownership of any intellectual property developed pursuant to our collaboration or license arrangements; and

- a partner's sales and marketing activities or other operations may not be in compliance with applicable laws resulting in civil or criminal proceedings.

See the "Risk Factors" section in Item 1A of our annual report on Form 10-K for the fiscal year ended December 31, 2019, and elsewhere in this Quarterly Report on Form 10-Q for a further description of these and other factors. We caution you that the risks, uncertainties and other factors referenced above may not contain all of the risks, uncertainties and other factors that are important to you. In addition, we cannot assure you that we will realize the results, benefits or developments that we expect or anticipate or, even if substantially realized, that they will result in the consequences or affect us or our business in the way expected.

Item 5. ***Other Information***

On July 29, 2020, the Company entered into a Common Stock Purchase Agreement (the "Purchase Agreement") with two investors (collectively, the "Investors") for the private placement of 6,062,500 shares (the "Shares") of the Company's common stock, at a purchase price of $4.00 per share (the "PIPE Transaction"). The closing of the PIPE Transaction occurred on July 29, 2020. The Company did not utilize the services of a placement agent or broker in connection with the PIPE Transaction and accordingly incurred no material related transaction fees or commissions. Pursuant to the Purchase Agreement, the Company is required to file a registration statement with the Securities and Exchange Commission under the Securities Act of 1933, as amended (the "Securities Act"), covering the resale of the Shares and to obtain and maintain effectiveness thereof for up to three years, subject to certain exceptions and penalties.

In the PIPE Transaction, the Shares were issued and sold to "accredited investors" (as defined by Rule 501 under the Securities Act, as amended) in reliance upon exemptions from registration afforded by Section 4(a)(2) of the Securities Act and Rule 506 of Regulation D promulgated thereunder and corresponding provisions of state securities laws. The Company intends to file a Form D in accordance with the requirements of Regulation D in connection with the PIPE Transaction.

The foregoing description of the Purchase Agreement does not purport to be complete and is qualified in its entirety by reference to the full text of the form of the Purchase Agreement filed as Exhibit 10.1 hereto.

On April 21, 2020, the Company borrowed approximately $3.5 million pursuant to a promissory note agreement under the Paycheck Protection Program ("PPP"), as amended by the Paycheck Protection Program Flexibility Act ("PPPFA"). The PPP, established as part of the Coronavirus Aid, Relief and Economic Security Act ("CARES Act"), provides for loans to qualifying businesses for amounts up to 2.5 times the average monthly payroll expenses of the qualifying business. In accordance with the promissory note agreement, the loan is scheduled to mature on April 20, 2022, has a stated interest rate of 1.0% per annum, and has payments of principal and interest due monthly after an initial deferral period when interest accrues, but no payments are due. Prior to the execution of the Purchase Agreement, the Company submitted an application for approval of the PIPE Transaction as required under the promissory note agreement and applicable regulations, but no such approval has been received to date. Accordingly, at any time the loan may be deemed to be in default, accelerated and required to be repaid in full with interest. The Company intends to continue to seek such approval. There can be no assurances that such approval can be obtained, that all or any part of the loan will be forgiven or that acceleration and repayment will not be required at any time.

Item 6. ***Exhibits***

See the Exhibit Index on the following page of this Quarterly Report on Form 10-Q.

EXHIBIT INDEX

Exhibit No.	Description
10.1	Common Stock Purchase Agreement dated as of July 29, 2020, by and between Cyelerion Therapeuties, Inc. and he Investors Named Therein
31.1	Certificate of Chief Executive Officer (Principal Executive Officer) pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2	Certificate of Chief Financial Officer (Principal Financial Officer) pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1	Certificate of Chief Executive Officer (Principal Executive Officer) pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2	Certificate of Chief Financial Officer (Principal Executive Officer) pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.INS	XBRL Instance Document.
101.SCH	XBRL Taxonomy Extension Schema Document.
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB	XBRL Taxonomy Extension Label Linkbase Document.
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.

SIGNATURES

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

CYCLERION THERAPEUTICS, INC.

By: /s/ Peter M. Hecht
Name: Peter M. Hecht
Title: *Chief Executive Officer (Principal Executive Officer)*

By: /s/ William I. Huyett
Name: William I. Huyett
Title: *Chief Financial Officer (Principal Financial and Accounting Officer)*

Date: July 31, 2020

Exhibit 10.1

CONFIDENTIAL **EXECUTION VERSION**

COMMON STOCK PURCHASE AGREEMENT

by and between

CYCLERION THERAPEUTICS, INC.,

and

THE INVESTORS NAMED HEREIN

Dated as of July 29, 2020

This COMMON STOCK PURCHASE AGREEMENT (this "***Agreement***"), dated as of July 29, 2020, is entered into by and between Cyclerion Therapeutics, Inc., a Massachusetts corporation (the "***Company***"), and the Persons named on the signature pages hereto under the heading "Investors" (together, the "***Investors***"). Certain terms used and not otherwise defined in the text of this Agreement are defined in Section 9 hereof.

BACKGROUND

A. The Company and each Investor is executing and delivering this Agreement in reliance upon the exemption from securities registration afforded by Section 4(a)(2) of the Securities Act and Rule 506 of Regulation D as promulgated by the Commission under the Securities Act.

B. Each Investor, severally and not jointly, wishes to purchase, and the Company wishes to sell, upon the terms and conditions stated in this Agreement, (i) that aggregate number of shares of the common stock of the Company, no par value (the "***Common Stock***"), set forth below such Investor's name on the signature page of this Agreement (which aggregate amount for all Investors together shall be 6,062,500 shares of Common Stock and shall be collectively referred to herein as the "***Shares***").

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing and the mutual representations, warranties and covenants herein contained, the parties hereto, intending to be bound, hereby agree as follows:

1. Sale and Purchase of the Shares; Additional Investors; Aggregate Sales Cap.

1.1. Sale and Purchase of Shares. Upon the terms and subject to the conditions herein contained, the Company shall sell to the Investors, and each Investor, severally and not jointly, shall purchase from the Company, at the Closing, the number of Shares determined by dividing (i) the amount set forth in the column entitled "Investor Commitment Amount" opposite such Investor's name on Schedule I attached hereto (the "***Investor Commitment Amount***") by (ii) the Purchase Price, rounded down to the nearest whole share. The "***Purchase Price***" shall be $4.00 per share.

2. Closing; Payment of Purchase Price; Use of Proceeds.

2.1. Closing. Upon the closing of the transactions contemplated in Section 1 hereof following the satisfaction or waiver of the conditions specified in Section 5 (the "***Closing***"), the Company shall issue to each Investor the number of Shares determined pursuant to the provisions of Section 1, against payment of the aggregate Purchase Price for such Shares by wire transfer to a bank account designated by the Company. The Closing shall take place remotely via the exchange of funds, documents and signatures at 1:30 p.m. Eastern Standard Time (after the satisfaction or waiver of the conditions specified in Section 5 (other than conditions that by their nature must be satisfied on the Closing Date)) on the date hereof, provided that the Closing may occur at such other location or time as the Company and the Investors may agree. The date on which the Closing occurs is hereinafter referred to as the "***Closing Date***".

2.2. Use of Proceeds. The Company shall use the proceeds from the sale of Shares hereunder to fund working capital and other general corporate purposes.

3. Representations and Warranties of the Investors. Each Investor, severally and not jointly, hereby represents and warrants to the Company as follows:

3.1. Organization. Such Investor is duly formed or organized, validly existing and in good standing under the laws of its jurisdiction of organization or formation, and has all requisite corporate, limited liability company or partnership (as the case may be) power and authority to enter into this Agreement and perform its obligations thereunder.

3.2. Authorization; Enforceability. Such Investor has full right, power, authority and capacity to enter into this Agreement and to consummate the transactions contemplated hereby. The execution, delivery and performance of this Agreement has been duly authorized by all necessary action on the part of such Investor and its equityholders. This Agreement has been duly executed and delivered by such Investor, and constitutes a valid and binding obligation of such Investor enforceable against it in accordance with its terms, subject to bankruptcy, insolvency, fraudulent conveyance or other similar laws affecting creditors' rights generally and to general equitable principles.

3.3. Brokers. There is no investment banker, broker, finder, financial advisor or other person that has been retained by or is authorized to act on behalf of such Investor and who is entitled to any fee or commission in connection with the transactions contemplated by this Agreement other than such fees or commissions for which the Company will be solely responsible.

3.4. Investment Representations and Warranties. Such Investor understands that the offer and sale of Shares by the Company to the Investors as contemplated hereby has not been, nor (except pursuant to the provisions of Section 8) will be, registered under the Securities Act and is being made in reliance upon federal and state exemptions for transactions not involving a public offering which depend upon, among other things, the bona fide nature of the investment intent and the accuracy of such Investor's representations as expressed herein.

3.5. Acquisition for Own Account. Such Investor is acquiring the Shares for its own account for investment and not with a view toward distribution in a manner which would violate the Securities Act.

3.6. Ability to Protect Its Own Interests and Bear Economic Risks. Such Investor acknowledges that it can bear the economic risk and complete loss of its investment in the Shares and has such knowledge and experience in financial or business matters that it is capable of evaluating the merits and risks of the investment contemplated hereby.

3.7. Investor Status. Such Investor is an "accredited investor" as that term is defined in Regulation D promulgated under the Securities Act. Such Investor is not party to any voting agreements or similar arrangements with respect to the Shares. With regard to acquiring, holding, voting, or disposing of any stock of Ironwood or the Company, including the Shares, such Investor (a) has not acted in concert with any Person; (b) other than any Investors that are Affiliates of such Investor, is not, and has never been, a member or beneficiary of a trust, partnership, limited partnership, syndicate, or other group with any agreement, understanding, or arrangement, whether formal or informal (for the avoidance of doubt, the fact that an Investor is a trust or partnership or limited partnership in and of itself shall not breach this clause (b)); and (c) has no plan or intention to enter into an arrangement described in clause (a) or clause (b).

3.8. Foreign Investors. If such Investor is not a United States person (as defined by Section 7701(a)(30) of the Code), such Investor hereby represents that it has satisfied itself as to the full observance of the laws of its jurisdiction in connection with any invitation to subscribe for the Shares, including (i) the legal requirements within its jurisdiction for the purchase of the Shares, (ii) any foreign exchange restrictions applicable to such purchase, (iii) any governmental or other consents that may need to be obtained, and (iv) the income tax and other tax consequences, if any, that may be relevant to the purchase, holding, redemption, sale, or transfer of the Shares.

3.9. Consents. The execution, delivery and performance by such Investor of this Agreement requires no consent of, authorization by, exemption from, filing with or notice to any Governmental Entity or any other Person.

3.10. No Violations. The execution, delivery and performance by such Investor of, and compliance with, this Agreement, and the consummation by such Investor of the transactions contemplated by this Agreement (including, without limitation, the issuance and sale of the Shares) will not (a) result in a violation of the organizational documents of such Investor, (b) violate or result in the breach of the terms, conditions or provisions of or constitute a default (or an event which with notice or lapse of time or both would become a default) under, or give rise to any right of termination, acceleration or cancellation under, any agreement, lease, mortgage, license, indenture, instrument or other contract to which such Investor is a party, (c) result in a violation of any law, rule, regulation, order, judgment or decree (including, without limitation, U.S. federal and state securities laws and regulations) applicable to such Investor or by which any property or asset of such Investor is bound or affected, (d) result in a violation of any rule or regulation of FINRA or the Nasdaq Global Select Market or (e) result in the creation of any Encumbrance upon any of such Investor's assets, in each case (other than with respect to foregoing clause (a)) except for such violations, defaults, rights of termination, acceleration or cancellation, or Encumbrances that would not have a material adverse effect on such Investor's ability to perform its obligation under this Agreement.

3.11. Access to Information. Such Investor has been given access to Company documents, records and other information it has requested, and has had adequate opportunity to ask questions of, and receive answers from, the Company's officers, employees, agents, accountants, and representatives concerning the Company's business, operations, financial condition, assets, liabilities and all other matters relevant to its investment in the Shares. Neither such inquiries nor any other investigation conducted by or on behalf of such Investor or its representatives or counsel shall modify, amend or affect such Investor's right to rely on the truth and accuracy of the Company's representations and warranties contained in this Agreement.

3.12. Restricted Securities. Such Investor understands that the Shares will be characterized as "restricted securities" under the federal securities laws inasmuch as they are being acquired from the Company in a transaction not involving a public offering and that under such laws and applicable regulations such Shares may be resold without registration under the Securities Act only in certain limited circumstances, and such Investor further understands that the Shares will be subject to the transfer restrictions and legending requirements specified in Section 7.

3.13. Sufficient Funds. Such Investor has sufficient funds available to it to pay its full Investor Commitment Amount at Closing.

3.14. Ownership of Company Stock and 2019 Private Placement.

(a) Neither such Investor nor any of its Affiliates or Investor Tax Affiliates purchased shares of Common Stock in the 2019 Private Placement.

(b) Neither such Investor nor any of its Investor Tax Affiliates has a current plan or intention to sell, exchange, or otherwise dispose of any stock of the Company as of the date of such Investor's entrance into this Agreement and will not have any such plan or intention with respect to any stock of the Company as of the Closing. For purposes of this clause (b) and for the avoidance of doubt, Investor anticipates that it may dispose of some or all of such shares in the future.

3.15. No Solicitation. The Shares were not offered or sold to such Investor by any form of general advertising or, to such Investor's knowledge, general solicitation as contemplated under Rule 502(c) in Regulation D promulgated under the Securities Act or otherwise.

3.16. Bad Actor Disqualifications. Such Investor represents on its behalf and the behalf of its officers, directors and principal stockholders, that neither such Investor nor any of its officers, directors and principal stockholders are subject to any "Bad Actor" disqualifications described in Rule 506(d)(1) (subject to Rule 506(d)(2) and 506(d)(3)) with respect to the Company.

3.17. OFAC. Neither such Investor nor, as of the date hereof to the knowledge of the Investor, any director, officer, agent, employee or person acting on behalf of the Investor is currently subject to any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Treasury Department ("***OFAC***").

4. Representations and Warranties by the Company. The Company represents and warrants to the Investors, subject to exceptions for disclosures in the SEC Reports (other than any information in the "Risk Factors" or "Cautionary Statement Concerning Forward-Looking Statements" sections of the SEC Reports), as follows:

4.1. Capitalization. All of the outstanding shares of capital stock of the Company are duly authorized, validly issued, fully paid and non-assessable, have been issued in compliance in all material respects with all applicable federal and state securities laws, and none of such outstanding shares was issued in violation of any preemptive rights or similar rights to subscribe for or purchase any capital stock of the Company. As of the date hereof, the authorized capital stock of the Company consists of (i) 400,000,000 shares of Common Stock, of which as of the date hereof, 27,857,710 are issued and outstanding, 12,676,383 shares are reserved for issuance pursuant to the Company's stock option and purchase plans and no shares are reserved for issuance pursuant to securities (other than the aforementioned options) exercisable or exchangeable for, or convertible into, shares of Common Stock and (ii) 100,000,000 shares of preferred stock, no par value, of which no shares are issued and outstanding. No shares of Common Stock are held in treasury.

4.2. Issuance of Securities. As of the Closing Date, the Shares being purchased by the Investors hereunder will be duly authorized for issuance and sale pursuant to this Agreement and, when issued and delivered by the Company against payment therefor pursuant to this Agreement, will be validly issued, fully paid and nonassessable and will be free and clear of any Encumbrances or restrictions on transfer other than restrictions under this Agreement, the Articles of Organization and Bylaws, under applicable state and federal securities laws, or any Encumbrances created by an Investor on its Shares. The sale of the Shares hereunder is not subject to any preemptive rights, rights of first refusal or other similar rights or provisions contained in the Articles of Organization, Bylaws or any agreement to which the Company is a party. Assuming the accuracy of the representations and warranties of each Investor in Section 3 hereof, the Shares will be issued in compliance with all applicable federal and state securities laws.

4.3. Incorporation and Good Standing of the Company. The Company has been duly incorporated and is validly existing as a corporation in good standing under the laws of the jurisdiction of its incorporation and has the corporate power and authority to own, lease and operate its properties and to conduct its business as currently conducted and to enter into and perform its obligations under this Agreement. The Company is duly qualified to transact business and is in good standing in the Commonwealth of Massachusetts and each other jurisdiction in which such qualification is required, whether by reason of the ownership or leasing of property or the conduct of business, except whether the failure to so qualify or be in good standing would not have a Material Adverse Effect.

4.4. Consents. Assuming the accuracy of the Investors' representations and warranties set forth in Section 3 of this Agreement and the accuracy of the information disclosed by them in the questionnaires delivered to the Company on or prior to the date of this Agreement, the execution, delivery and performance by the Company of this Agreement and the offer, issuance and sale of the Shares require no consent of, authorization by, exemption from, filing with or notice to any Governmental Entity, other than (a) the filings required to comply with the Company's registration obligations pursuant to Section 8 and (b) a Form D and a Current Report on Form 8-K filings in compliance with applicable U.S. federal and filings and/or qualifications under state securities laws, which compliance will have occurred within the appropriate time periods; provided, however, that, although the Company has submitted an application therefor, the Company has not received approval (the "***SBA Approval***") from the U.S. Small Business Administration for the sale of the Shares hereunder, which approval may be required in connection with the Company's $3.5 million loan under the Coronavirus Aid, Relief and Economic Security Act. There can be no assurance if or when such approval may be obtainable.

4.5. Authorization; Enforcement.

(a) The Company has all requisite corporate power and has taken all necessary corporate action required for (a) the due authorization, execution, delivery and performance by the Company of this Agreement, (b) the authorization of the performance of all obligations of the Company under this Agreement, and (c) the authorization, issuance and delivery of the Shares. This Agreement has been duly executed and delivered by the Company, and constitutes a valid and binding obligation of the Company enforceable against it in accordance with its terms, subject to bankruptcy, insolvency, fraudulent conveyance or other similar laws affecting creditors' rights generally and to general equitable principles.

(b) On or prior to the date of this Agreement, the Board of Directors of the Company (the "***Board***") has duly adopted resolutions, among other things, authorizing and approving this Agreement and the transactions contemplated hereby.

4.6. No Violations. The Company is not in violation of its articles of organization or bylaws and the execution, delivery and performance by the Company of, and compliance with, this Agreement, and the consummation by the Company of the transactions contemplated by this Agreement (including, without limitation, the issuance and sale of the Shares) will not (a) result in a violation of its articles of organization or bylaws, (b) violate or result in the breach of the terms, conditions or provisions of or constitute a default (or an event which with notice or lapse of time or both would become a default) under, or give rise to any right of termination, acceleration or cancellation under, any agreement, lease, mortgage, license, indenture, instrument or other contract to which the Company is a party, (c) result in a violation of any law, rule, regulation, order, judgment or decree (including, without limitation, U.S. federal and state securities laws and regulations) applicable to the Company or by which any property or asset of the Company is bound or affected, (d) result in a violation of any rule or regulation of FINRA or the Nasdaq Global Select Market or (e) result in the creation of any Encumbrance upon any of the Company's assets, in each such case (other than with respect to foregoing clause (a)) except for the SBA Approval and such violations, defaults, rights of termination, acceleration or cancellation, or Encumbrances that would not have a Material Adverse Effect.

4.7. SEC Reports. The Company has filed all reports, schedules, forms, statements and other documents required to be filed by it under the Exchange Act (the foregoing materials, including, solely for the purposes of this Agreement, the draft Quarterly Report on Form 10-Q of the Company for the quarter ended June 30, 2020 (the "***Draft Form 10-Q***") in the form attached hereto as Exhibit A and the exhibits to all of the foregoing and documents incorporated by reference therein, being collectively referred to herein as the "***SEC Reports***"), on a timely basis or has received a valid extension of such time of filing and has filed any such SEC Reports prior to the expiration of any such extension. As of their respective filing dates, or to the extent corrected by a subsequent restatement, the SEC Reports complied in all material respects with the requirements of the Securities Act and the Exchange Act and the rules and regulations of the Commission promulgated thereunder, and none of the SEC Reports, when filed or, in the case of the Draft Form 10-Q, as of the date hereof, contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading. On or prior to July 31, 2020, the Company will file the Draft Form 10-Q with the Commission in substantially the form set forth in Exhibit A hereto.

4.8. Internal Accounting and Disclosure Controls. The Company maintains a system of internal accounting controls sufficient to provide reasonable assurance that (i) transactions are executed in accordance with management's general or specific authorizations, (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles and to maintain asset and liability accountability, (iii) access to assets or incurrence of liabilities is permitted only in accordance with management's general or specific authorization and (iv) the recorded accountability for assets and liabilities is compared with the existing assets and liabilities at reasonable intervals and appropriate action is taken with respect to any difference. The Company maintains disclosure controls and procedures (as such term is defined in Rule 13a-15 under the Exchange Act) that are effective in ensuring that 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 rules and forms of the Commission, including, without limitation, controls and procedures designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the Company's management, including its principal executive officer or officers and its principal financial officer or officers, as appropriate, to allow timely decisions regarding required disclosure. During the twelve (12) months prior to the date, the Company has not received any written notice or correspondence from any accountant relating to any material weakness in any part of the system of internal accounting controls of the Company.

4.9. Absence of Certain Changes. Since June 30, 2020, there has been no material adverse change and no material adverse development in the business, assets, liabilities, properties, operations, condition (financial or otherwise) or results of operations of the Company or any of its subsidiaries taken as a whole. Since June 30, 2020, neither the Company nor any of its subsidiaries has (i) declared or paid any dividends, (ii) sold any assets, individually or in the aggregate, outside of the ordinary course of business or (iii) had any material capital expenditures. Neither the Company nor any of its subsidiaries has taken any steps to seek protection pursuant to any law or statute relating to bankruptcy, insolvency, reorganization, receivership, liquidation or winding up, nor does the Company or any subsidiary have any knowledge or reason to believe that any of their respective creditors intend to initiate involuntary bankruptcy proceedings or any actual knowledge of any fact which would reasonably lead a creditor to do so. The Company and its subsidiaries, individually and on a consolidated basis, are not as of the date hereof, and after giving effect to the transactions contemplated hereby to occur at the Closing, will not be Insolvent.

4.10. Conduct of Business; Regulatory Permits. Neither the Company nor any of its subsidiaries is in violation of any term of or in default under its Articles of Organization, any certificate of designations, preferences or rights of any other outstanding series of preferred stock of the Company or any of its subsidiaries or Bylaws or their organizational charter, certificate of formation or certificate of incorporation or bylaws, respectively. Neither the Company nor any of its subsidiaries is in violation of any judgment, decree or order applicable to the Company or any of its subsidiaries, and neither the Company nor any of its subsidiaries will conduct its business in violation of any of the foregoing, except in all cases for violations which would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. Without limiting the generality of the foregoing, the Company is not in violation of any of the rules, regulations or requirements of the Nasdaq Global Select Market and has no knowledge of any facts or circumstances that would reasonably lead to delisting or suspension of the Common Stock by the Nasdaq Global Select Market in the foreseeable future. During the two (2) years prior to the date hereof, (i) the Common Stock has been listed or designated for quotation on the Nasdaq Global Select Market, (ii) trading in the Common Stock has not been suspended by the Commission or the Nasdaq Global Select Market and (iii) the Company has received no communication, written or oral, from the Commission the Nasdaq Global Select Market regarding the suspension or delisting of the Common Stock from the Nasdaq Global Select Market. The Company and each of its subsidiaries possess all certificates, authorizations and permits issued by the appropriate foreign, federal or state regulatory authorities necessary to conduct their respective businesses as currently conducted, except where the failure to possess such certificates, authorizations or permits would not have, individually or in the aggregate, a Material Adverse Effect, and neither the Company nor any such subsidiary has received any written notice of proceedings relating to the revocation or modification of any such certificate, authorization or permit.

4.11. Brokers. There is no investment banker, broker, finder, financial advisor or other person that has been retained by or is authorized to act on behalf of the Company and who is entitled to any fee or commission in connection with the sale of Shares pursuant to this Agreement.

4.12. Shell Company Status. The Company is not, and has never been, an issuer identified in, or subject to, Rule 144(i).

4.13. U.S. Real Property Holding Corporation. The Company is not, has never been, and currently does not intend to become, a U.S. real property holding corporation within the meaning of Section 897 of the Internal Revenue Code of 1986, as amended, and the Company shall so certify upon any Investor’s request.

4.14. Investment Company Status. Neither the Company nor any of its subsidiaries is, and upon consummation of the sale of the Shares will not be, and currently does not intend to become, an "investment company," an affiliate of an "investment company," a company controlled by an "investment company" or an "affiliated person" of, or "promoter" or "principal underwriter" for, an "investment company" as such terms are defined in the Investment Company Act of 1940, as amended.

4.15. Intellectual Property Rights. The Company and its subsidiaries owns, free and clear of all liens, encumbrances and defects, or has obtained valid and enforceable licenses for, all Intellectual Property (i) described in the SEC Reports as being owned or licensed by it or (ii) which are necessary for the conduct of their respective businesses as currently conducted or as currently proposed to be conducted, in each case as such business is described in the SEC Reports. To the Company's knowledge: (i) there are no third parties (including any present or former employees or contractors of the Company or any of its respective subsidiaries) who have rights to any Intellectual Property, except for customary reversionary rights of third-party licensors, and the conduct of the Company's or any of its subsidiaries businesses as currently conducted or as currently proposed to be conducted (as such business is described in the SEC Reports) does not infringe, misappropriate or otherwise violate the Intellectual Property of any third party; and (ii) there is no infringement, misappropriation or other violation by third parties of any Intellectual Property. There is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim by others: (A) challenging the Company's or any of its subsidiaries' rights in or to any Intellectual Property, and the Company is unaware of any facts which would form a reasonable basis for any such action, suit, proceeding or claim; (B) challenging the validity, enforceability or scope of any Intellectual Property, and the Company is unaware of any facts which would form a reasonable basis for any such action, suit, proceeding or claim; or (C) asserting that the Company or any of its subsidiaries infringes, misappropriates or otherwise violates, or would, upon the commercialization of any product or service described in the SEC Reports as under development, infringe, misappropriate or otherwise violate, any Intellectual Property rights of others, and the Company is not aware of any facts which would form a reasonable basis for any such action, suit, proceeding or claim. The Company has complied in all material respects with the terms of each agreement pursuant to which Intellectual Property has been licensed to the Company or any of its subsidiaries, and all such agreements are in full force and effect. The products or product candidates described in the SEC Reports (each a "***Company Product***") as under development by the Company or any of its subsidiaries fall within the scope of the claims of one or more patents or patent applications owned by, or exclusively licensed to, the Company or any of their respective subsidiaries, the rights of the Company or any of its subsidiaries under which entitle (or in the case of patent applications, once issued, would entitle) the Company or any of its subsidiaries to claim in good faith that a third party should cease the manufacture, use, sale or importation of such Company Product. The Company has taken commercially reasonable efforts to protect, enforce and maintain the material Intellectual Property. All present or former employees, consultants or independent contractors involved the development of any material Intellectual Property have executed written agreements under which he, she or it assigns all rights to such Intellectual Property to the Company or any of its subsidiaries and agrees to protect the Company's and its subsidiaries' trade secrets and other confidential information.

4.16. Intentionally omitted.

4.17. Compliance with Anti-Money Laundering Laws. The Company and its affiliates are and have been at all times in compliance with applicable financial recordkeeping and reporting requirements and all other applicable U.S. and non-U.S. anti-money laundering and anti-terrorism laws, rules and regulations, including, but not limited to, those of the Currency and Foreign Transactions Reporting Act of 1970, as amended, the United States Bank Secrecy Act, as amended by the USA PATRIOT Act of 2001, and the United States Money Laundering Control Act of 1986 (18 U.S.C. §§1956 and 1957), as amended, as well as the implementing rules and regulations promulgated thereunder, and the applicable money laundering statutes of all applicable jurisdictions, the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any governmental agency or self-regulatory body (collectively, the "***Anti-Money Laundering Laws***"), and no action, suit or proceeding by or before any court or governmental agency, authority or body, self-regulatory body, or any arbitrator involving the Company with respect to the Anti-Money Laundering Laws is pending or, to the knowledge of the Company, threatened.

4.18. Compliance with Sanctions Laws. Neither the Company nor any of its directors, officers, employees, representatives, agents, affiliates or other Persons acting on behalf of the Company or any of its affiliates is, or is directly or indirectly owned fifty (50) percent or more or controlled by, a Person that is currently the subject or the target of any economic or financial sanctions or trade embargoes imposed, administered or enforced by the U.S. government (including, without limitation, the OFAC or the U.S. Departments of State or Commerce and including, without limitation, the designation as a "***Specially Designated National***" or on the "***Sectoral Sanctions Identifications List***", collectively "***Blocked Persons***"), the United Nations Security Council, the European Union, Her Majesty's Treasury or any other relevant sanctions authority (collectively, "***Sanctions Laws***"); neither the Company, nor any of its directors, officers, or employees, or to the best of the Company's knowledge any of its representatives, agents, affiliates or other Persons acting on behalf of the Company or its affiliates, is located, organized or resident in a country or territory that is the subject or target of a comprehensive embargo or Sanctions Laws prohibiting trade with the country or territory, including, without limitation, Crimea, Cuba, Iran, North Korea, and Syria (each, a "***Sanctioned Country***"); neither the Company, nor any of its directors, officers, or employees, or to the best of the Company's knowledge any of its representatives, agents, affiliates or other Persons acting on behalf of the Company or its affiliates, has violated in the prior five (5) years or is in violation of any applicable Sanctions Laws, including but not limited to the Sanctions Laws of the United States; the Company maintains in effect and enforces policies and procedures reasonably designed to ensure compliance by the Company and its affiliates with applicable Sanctions Laws; neither the Company, nor any of its directors, officers, or employees, or to the best of the Company's knowledge any of its representatives, agents, affiliates or other Persons acting on behalf of the Company and acting in any capacity in connection with the operations of the Company conducts any business with or for the benefit of any Blocked Person or engages in making or receiving any contribution of funds, goods or services to, from or for the benefit of any Blocked Person, or deals in, or otherwise engages in any transaction relating to, any property or interests in property blocked or subject to blocking or rejection pursuant to any applicable Sanctions Laws unless authorized by OFAC or other agency with jurisdiction over the transaction; neither the Company nor to the best of the Company's knowledge any of its affiliates derives revenues from investments in, or transactions with, Blocked Persons or Sanctioned Countries in violation of Sanctions Laws; no action of the Company in connection with (i) the execution, delivery and performance of this Agreement and, (ii) the issuance and sale of the Shares, or (iii) the direct or indirect use of proceeds from the Shares or the consummation of any other transaction contemplated hereby or the fulfillment of the terms hereof or thereof, will result in the proceeds of the transactions contemplated hereby being used, or loaned, contributed or otherwise made available, directly or indirectly, to any joint venture partner or other Person, for the purpose of (i) unlawfully funding or facilitating any activities of or business with any Person that, at the time of such funding or facilitation, is the subject or target of Sanctions Laws, (ii) unlawfully funding or facilitating any activities of or business in any Sanctioned Country or (iii) 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 Laws. From its inception, the Company has not knowingly engaged in and is not now knowingly engaged in any dealings or transactions in violation of any Sanctions Laws or with any Person that at the time of the dealing or transaction is or was the subject or the target of Sanctions Laws or with any Sanctioned Country.

4.19. Compliance with Anti-Bribery Laws. The Company has not made any contribution or other payment, or offered to make such contribution or payment, to any official of, or candidate for, any federal, state or foreign office in violation of any law. Neither the Company, nor any of their respective affiliates, nor any directors, officers, agents, employees or other Persons acting on behalf of the Company or any of its affiliates, has (i) used any funds for any unlawful contribution, gift, entertainment or other unlawful expense relating to political activity, (ii) made any direct or indirect unlawful payment to any foreign or domestic government official or employee, to any employee or agent of a private entity with which the Company or any of its affiliates does or seeks to do business or to foreign or domestic political parties or campaigns, (iii) violated or is in violation of any provision of any applicable law or regulation implementing the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions or any applicable provision of the U.S. Foreign Corrupt Practices Act of 1977, as amended, the U.K. Bribery Act 2010, or any other similar applicable law of any other jurisdiction, including laws of any jurisdiction in which the Company or its affiliates operate their business, including, in each case, the rules and regulations thereunder (the "***Anti-Bribery Laws***"), (iv) taken, is currently taking or will take any action in furtherance of an offer, payment, gift or anything else of value, directly or indirectly, to any Person while knowing that all or some portion of the money or value will be offered, given or promised to anyone to improperly influence official action, to obtain or retain business or otherwise to secure any improper advantage or (v) otherwise made any offer, bribe, rebate, payoff, influence payment, unlawful kickback or other unlawful payment; the Company and its affiliates have instituted and have maintained, and will continue to maintain, as applicable, policies and procedures reasonably designed to promote and achieve compliance with the laws referred to in (iii) above and with this representation and warranty; none of the Company, nor any of its affiliates will directly or indirectly use the proceeds of the Common Shares or lend, contribute or otherwise make available such proceeds to any subsidiary, affiliate, joint venture partner or other Person for the purpose of financing or facilitating any activity that would violate the laws and regulations referred to in (iii) above; there are, and have been, no allegations, investigations or inquiries with regard to a potential violation of any Anti-Bribery Laws by the Company or its affiliates, or any of their respective current or former directors, officers, employees, stockholders, representatives or agents, or other Persons acting or purporting to act on their behalf.

4.20. Clinical Data and Regulatory Compliance. Except as would not individually or in the aggregate have a Material Adverse Effect: the preclinical tests and clinical trials, and other studies (collectively, "***studies***") that are described in, or the results of which are referred to in, the SEC Reports were and, if still pending, are being conducted in accordance with the protocols, procedures and controls designed and approved for such studies and with standard medical and scientific research procedures; each description of the results of such studies is accurate and complete and fairly presents the data derived from such studies, and the Company does not have any knowledge of any other studies the results of which are inconsistent with, or otherwise call into question, the results described or referred to in the SEC Reports. To the best knowledge of the Company: each of the Company and its subsidiaries has made all such filings and obtained all such approvals as may be required by the Food and Drug Administration of the U.S. Department of Health and Human Services or any committee thereof or from any other U.S. or foreign government or drug or medical device regulatory agency, or health care facility Institutional Review Board (collectively, the "***Regulatory Agencies***") based on the location and nature of the relevant study; the Company has not received any written notice of, or correspondence from, any Regulatory Agency requiring the termination, suspension or modification of any clinical trials that are described or referred to in the SEC Reports; and the Company and each of its subsidiaries has operated and currently is in compliance with all applicable rules, regulations and policies of the Regulatory Agencies.

4.21. Compliance with Health Care and Privacy Laws. Except as would not individually or in the aggregate have a Material Adverse Effect, each of the Company and its subsidiaries is, and at all times has been, in compliance with all applicable Health Care and Privacy Laws. For purposes of this Agreement, "***Health Care and Privacy Laws***" means: (i) the Federal Food, Drug, and Cosmetic Act and the regulations promulgated thereunder; (ii) all applicable federal, state, local and foreign health care laws, including, without limitation, the U.S. Anti-Kickback Statute (42 U.S.C. Section 1320a-7b(b)), the Civil Monetary Penalties Law (42 U.S.C. Section 1320a-7a), the U.S. Civil False Claims Act (31 U.S.C. Section 3729 et seq.), all applicable federal, state, local and all foreign criminal laws relating to health care fraud and abuse, including but not limited to the U.S. False Statements Law (42 U.S.C. Section 1320a-7b(a)), 18 U.S.C. Sections 286 and 287, and 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 exclusion laws (42 U.S.C. Section 1320a-7), the statutes, regulations and directives of applicable government funded or sponsored healthcare programs, and the regulations promulgated pursuant to such statutes; (iii) to the extent applicable, the Standards for Privacy of Individually Identifiable Health Information (the "***Privacy Rule***"), the Security Standards, and the Standards for Electronic Transactions and Code Sets promulgated under HIPAA, the Health Information Technology for Economic and Clinical Health Act (42 U.S.C. Section 17921 et seq.), and the regulations promulgated thereunder and any state or non-U.S. counterpart thereof or other law or regulation the purpose of which is to protect the privacy of individuals or prescribers; (iv) the Patient Protection and Affordable Care Act of 2010, as amended by the Health Care and Education Reconciliation Act of 2010, the regulations promulgated thereunder; (v) the U.S. Controlled Substances Act (21 U.S.C. Section 801 et seq.); (vi) licensure, quality, safety and accreditation requirements under applicable federal, state, local or foreign laws or regulatory bodies; and (vii) all other local, state, federal, national, supranational and foreign laws, relating to the regulation of the Company, including any of the foregoing concerning data security or privacy (including the collection, use, storage, processing or disposal of any information that identifies or could reasonably be used to identify any natural Person). Neither the Company or 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, that, if adversely determined, would individually or in the aggregate have a Material Adverse Effect, alleging that any product, operation or activity is in violation of any Health Care and Privacy Laws nor to the best knowledge of the Company is any such claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action threatened. Except as would not individually or in the aggregate have a Material Adverse Effect: each of the Company and each of its subsidiaries has filed, obtained, maintained or submitted all reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Health Care and Privacy Laws, and all such reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments were timely, complete and accurate on the date filed (or were corrected or supplemented by a subsequent submission). Neither the Company nor any of its subsidiaries has received written notice of any claim, action, suit, proceeding, hearing, enforcement, investigation 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 that, if adversely determined, would individually or in the aggregate have a Material Adverse Effect. Additionally, to the best of the Company's knowledge, neither the Company, any of its subsidiaries nor any of their respective employees, officers or directors has been excluded, suspended or debarred from participation in any U.S. federal health care program or human clinical research.

4.22. No Other Representations and Warranties. The representations and warranties set forth in this Section 4 are the only representations and warranties made by the Company (or any of its Affiliates) with respect to the transactions contemplated by this Agreement. Except for the representations and warranties expressly set forth in this Section 4, none of the Company or its Affiliates makes any other express or implied representation or warranty with respect to the Company or any of its Affiliates, and each of the Company and its Affiliates hereby disclaim all liability and responsibility for any and all projections, forecasts, estimates, plans or prospects (including the reasonableness of the assumptions underlying such forecasts, estimates, projections, plans or prospects), management presentations, financial statements, internal ratings, financial information, appraisals, statements, promises, advice, data or information made, communicated or furnished (orally or in writing, including electronically) to any Investor or any of its Affiliates or representatives, including omissions therefrom.

5. Conditions of Parties' Obligations.

5.1. Conditions of the Investors' Obligations at the Closing. The obligations of the Investors to purchase the Shares set forth on Schedule I attached hereto at the Closing (except where otherwise specified) are subject to the fulfillment prior to the Closing Date of all of the following conditions, any of which may be waived in whole or in part by the Required Investors in their sole discretion.

(a) Representations and Warranties. The representations and warranties of the Company contained in Section 4 of this Agreement shall be true and correct as of immediately prior to the Closing as though such representations and warranties were made, as written herein, as of immediately prior to the Closing (subject to the specified time periods, as applicable, qualifying such representations and warranties), except where the failure of such representations and warranties to be so true and correct does not constitute, individually or in the aggregate, a Material Adverse Effect.

(b) Performance. The Company shall have performed in all material respects all covenants and agreements contained in this Agreement required to be performed by the Company on or prior to the Closing.

(c) Resolutions of the Board. The Investors at the Closing shall have received copies of resolutions of the Board, certified by the Secretary of the Company, authorizing and approving the execution, delivery and performance of this Agreement.

(d) No Material Adverse Effect. Since the date of this Agreement, except as disclosed in the SEC Reports, or as contemplated by this Agreement, there shall not have occurred a Material Adverse Effect.

(e) Compliance Certificate. The Company shall have delivered to the Investors a Compliance Certificate, executed by the Chief Executive Officer of the Company, dated as of the Closing Date to the effect that the conditions specified in subsections (a) and (b) of this Section 5.1 have been satisfied.

(f) Opinions. The Investors shall have received (i) from Hughes Hubbard & Reed LLP a copy of an opinion that the Intended Tax Treatment will apply, excluding any attachments thereto, and (ii) from Hughes Hubbard & Reed LLP and Foley Hoag LLP an opinion that contains customary corporate and securities law matters for transactions of the type contemplated by this Agreement in form and substance reasonably acceptable to each Investor.

(g) Evidence of Issuance. The Company shall have delivered or cause to be delivered to each Investor evidence of the book-entry issuance of the Shares purchased by such Investor on the Closing Date.

(h) Ironwood Approval. The Investors shall have received the written approval of Ironwood required to consummate the transactions contemplated by this Agreement under the Tax Matters Agreement.

(i) Regulatory Approvals. All authorizations, approvals or permits, if any, of any governmental authority or regulatory body of the United States or of any state that are required in connection with the lawful issuance and sale of the Shares pursuant to this Agreement, including, without limitation of Nasdaq, shall be obtained and effective as of the Closing.

5.2. Conditions of the Company's Obligations. The obligations of the Company under Section 1 hereof with respect to each Investor (on a several, and not joint, Investor-by-Investor basis) are subject to the fulfillment prior to or on the Closing Date of all of the following conditions with respect to such Investor, any of which may be waived in whole or in part by the Company.

(a) Covenants; Representations and Warranties. (i) The Investors shall have performed in all material respects all covenants and agreements contained in this Agreement required to be performed by the Investors on or prior to the Closing, (ii) the representations and warranties of the Investors contained in Section 3.7 and Section 3.14 shall be true and correct as of immediately prior to the Closing as though such representations and warranties were made, as written herein, as of immediately prior to the Closing (subject to the specified time periods, as applicable, qualifying such representations and warranties), except where the failure of such representations and warranties to be so true and correct could not, individually or in the aggregate, reasonably be expected to affect the Intended Tax Treatment, and (iii) the representations and warranties of the Investors contained in Section 3 shall be true and correct as of immediately prior to the Closing as though such representations and warranties were made, as written herein, as of immediately prior to the Closing (subject to the specified time periods, as applicable, qualifying such representations and warranties), except where the failure of such representations and warranties to be so true and correct does not constitute, individually or in the aggregate, material adverse effect on such Investor's ability to perform its obligation under this Agreement.

(b) Performance. The Investors shall have performed in all material respects all covenants and agreements contained in this Agreement required to be performed by the Investors on or prior to the Closing.

(c) Tax Opinion. The Company shall have received an opinion from Hughes Hubbard & Reed LLP that the Intended Tax Treatment will apply.

(d) Ironwood Approval. The Company shall have received the written approval of Ironwood required to consummate the transactions contemplated by this Agreement under the Tax Matters Agreement.

5.3. Conditions of Each Party's Obligations. The respective obligations of each party to consummate the transactions at the Closing contemplated hereunder are subject to the absence of any statute, rule, regulation, injunction, order or decree, enacted, enforced, promulgated, entered, issued or deemed applicable to this Agreement or the transactions contemplated hereby by any court, government or governmental authority or agency or legislative body, domestic, foreign or supranational, in each case of the foregoing authorities, agencies or bodies, of competent jurisdiction, prohibiting or enjoining the transactions contemplated by this Agreement.

6. Covenants.

6.1. Disclosure of Transactions and Other Material Information. (A) On the first Business Day after this Agreement has been executed, the Company shall issue a press release reasonably acceptable to the Investors disclosing all material terms of the transactions contemplated hereby and (B) on or before July 31, 2020, the Company will, at its discretion, file a Current Report on Form 8-K or a Quarterly Report on Form 10-Q describing the terms of the transactions contemplated by this Agreement as required by the Exchange Act in the applicable form (the "***Filing***"). From and after the filing of the Filing, no Investor shall be in possession of any material, nonpublic information received from the Company, any of its subsidiaries or any of their respective officers, directors, employees, affiliates or agents, that is not disclosed in the Filing. In addition, effective upon the filing of the Filing, the Company acknowledges and agrees that any and all confidentiality or similar obligations under any agreement, including, without limitation, the Confidentiality Agreements, whether written or oral, between the Company, any of its subsidiaries or any of their respective officers, directors, affiliates, employees or agents, on the one hand, and any of the Investors or any of their affiliates, on the other hand, shall terminate.

6.2. Form D; Blue Sky. The Company agrees to timely file a Form D with respect to the Shares as required under Regulation D and to provide a copy thereof, promptly upon the written request of any Investor. The Company, on or before the Closing Date, shall take such action as the Company shall reasonably determine is necessary (if any) in order to obtain an exemption for or to qualify the Shares solely with respect to the sale contemplated by this Agreement to the Investors (and without any obligation on the Company as to any resales) under applicable securities or "Blue Sky" laws of the states of the United States (or to obtain an exemption from such qualification) and shall provide evidence of such actions promptly upon the written request of any Investor.

7. Transfer Restrictions; Restrictive Legend.

7.1. Transfer Restrictions. Each Investor understands that the Company (or its transfer agent) may, as a condition to the transfer of the Shares, require that the request for transfer be accompanied by an opinion of counsel reasonably satisfactory to the Company, to the effect that the proposed transfer does not result in a violation of the Securities Act or by Rule 144 under the Securities Act, unless such transfer is covered by an effective registration statement. It is understood that the certificates evidencing the Shares may bear substantially the following legend:

"THESE SECURITIES HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933. THEY MAY NOT BE SOLD, OFFERED FOR SALE, PLEDGED OR HYPOTHECATED IN THE ABSENCE OF A REGISTRATION STATEMENT IN EFFECT WITH RESPECT TO THE SECURITIES UNDER SUCH ACT OR AN OPINION OF COUNSEL REASONABLY SATISFACTORY TO THE COMPANY THAT SUCH REGISTRATION IS NOT REQUIRED UNDER SUCH ACT OR UNLESS SOLD PURSUANT TO RULE 144 OF SUCH ACT."

The Company acknowledges and agrees that an Investor may from time to time pledge, and/or grant a security interest in, some or all of the legended Shares in compliance with applicable securities laws, pursuant to a bona fide margin agreement in compliance with a bona fide margin loan with a nationally recognized NASDAQ-member prime broker. Such a pledge would not be subject to approval or consent of the Company and no legal opinion of legal counsel to the pledgee, secured party or pledgor shall be required in connection with the pledge. No notice shall be required of such pledge, but Investor must notify the Company as promptly as practicable prior to any such subsequent transfer or foreclosure. Each Investor acknowledges that the Company shall not be responsible for any pledges relating to, or the grant of any security interest in, any of the Shares or for any agreement, understanding or arrangement between any Investor and its pledgee or secured party. The Company will use commercially reasonable efforts (and in any event, at the appropriate Investor's expense) to execute and deliver such reasonable documentation as a pledgee or secured party of Shares may reasonably request in connection with a pledge or transfer of the Shares. Each Investor acknowledges and agrees that, except as otherwise provided in Section 7.2, any Shares subject to a pledge or security interest as contemplated by this Section 7.1 shall continue to bear the legend set forth in this Section 7.1 and be subject to the restrictions on transfer set forth in this Section 7.1.

7.2. Unlegended Certificates. The Company shall be obligated to reissue unlegended certificates representing the Shares (x) subject to the receipt of standard written documentation reasonably acceptable to the Company's counsel provided by the holder pursuant to Rule 144, which, for the avoidance of doubt, shall not include a legal opinion, and a representation that the holder is not an Affiliate of the Company, within five (5) trading days of the request of any holder thereof at such time as the holding period under Rule 144 or another applicable exemption from the registration requirements of the Securities Act for a transfer of such Shares to the public has been satisfied or (y) within five (5) trading days of a registration statement being declared effective for the resale of such Shares.

8. Registration Rights.

8.1. Registration Statements.

(a) Filing of Registration Statement. On or prior to the 10th Business Day following the Closing Date, the Company shall prepare and submit to the Commission one draft Registration Statement on Form S-3 (provided, however, that there shall be no obligation to effect such registration through an underwritten offering), covering the resale of all of the Registrable Securities, and shall use commercially reasonable efforts to cause such Registration Statement to be declared effective as promptly as reasonably practicable thereafter, but in any event on or prior to (i) in the event that the Registration Statement is not subject to a full review by the Commission, sixty (60) calendar days after the Closing Date or (ii) in the event that the Registration Statement is subject to a full review by the Commission, ninety (90) calendar days after the Closing Date. Such Registration Statement (and each amendment or supplement thereto, and each request for acceleration of effectiveness thereof) shall be provided in accordance with Section 8.2(c) to the Investors and their counsel prior to its filing or other submission.

(b) Expenses. The Company shall pay all Company expenses associated with effecting the registration of the Registrable Securities, including filing and printing fees, the Company's counsel (but excluding any fees of any counsel to the Investors) and accounting fees and expenses, costs associated with clearing the Registrable Securities for sale under applicable state securities laws and listing fees, but excluding discounts, commissions, fees of underwriters, selling brokers, dealer managers or similar securities industry professionals with respect to the Registrable Securities being sold.

(c) Effectiveness.

(1) The Company shall respond as promptly as reasonably practicable to any and all comments made by the staff of the Commission on such Registration Statement, and shall submit to the Commission, with three (3) Business Days after the Company learns that no review of such Registration Statement will be made by the staff of the Commission or that the staff of the Commission has no further comments on such Registration Statement, as the case may be, a request for acceleration of the effectiveness of such Registration Statement to a time and date not later than two (2) Business Days after the submission of such request. The Company shall notify the Investors by e-mail as promptly as reasonably practicable, and in any event, within twenty-four (24) hours, after such Registration Statement is declared effective and shall simultaneously provide or make available to the Investors copies of any related Prospectus to be used in connection with the sale or other disposition of the securities covered thereby.

(2) At any time and from time to time, the Company may suspend the use of any Prospectus included in such Registration Statement for such period(s) as it determines in its sole discretion in the event that the Company determines in good faith that such suspension is necessary or appropriate to (A) delay the disclosure of material non-public information concerning the Company, the disclosure of which at the time is not, in the good faith opinion of the Company, in the best interests of the Company, (B) amend or supplement such Registration Statement or the related Prospectus so that such Registration Statement or Prospectus will not include 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 the case of the Prospectus, in light of the circumstances under which they were made, not misleading, or (C) without limiting the generality of the foregoing, facilitate proposed offerings of Company securities (an "***Allowed Delay***"); provided, that the Allowed Delays, in the aggregate, shall not exceed ninety (90) days (which need not be consecutive days) in the aggregate in any twelve (12) month period; provided, further, that the Company shall promptly (a) notify each Investor in writing of the commencement of an Allowed Delay, but shall not (without the prior written consent of an Investor) disclose to such Investor any material non-public information giving rise to an Allowed Delay, and (b) advise the Investors in writing to cease all sales under the Registration Statement until the end of the Allowed Delay. In the event of the Company's breach of its obligations with respect to clause (A) of this Section 8.1(c)(2), each Investor shall be entitled to a payment (with respect to the Registrable Securities of each such Investor), as compensation and not as a penalty, of 0.25% of the Liquidated Damages Multiplier per 60-day period, which shall accrue daily, for the first 60 days following the 90th day, increasing by an additional 0.25% of the Liquidated Damages Multiplier per 60-day period, which shall accrue daily, for each subsequent 60 days (i.e., 0.5% for 61-120 days, 0.75% for 121-180 days and 1.0% thereafter), up to a maximum of 1.00% of the Liquidated Damages Multiplier per 60-day period (the "***Liquidated Damages***"). The Liquidated Damages payable pursuant to the immediately preceding sentence shall be payable within twenty Business Days after the end of each such 60-day period. Any Liquidated Damages shall be paid to each Investor in immediately available funds. The accrual of Liquidated Damages to an Investor shall cease at the earlier of (i) the cessation of such suspension, (ii) when such Investor no longer holds Registrable Securities, or (iii) the expiration of any obligation to maintain such Registration Statement or Prospectus pursuant hereto, and any payment of Liquidated Damages shall be prorated for any period of less than 60 days in which the payment of Liquidated Damages ceases. The Company may request a waiver of the Liquidated Damages, which may be granted by the Required Investors on behalf of all of the Investors, and notwithstanding the failure to obtain such waiver, each Investor may individually grant or withhold its consent to such request in its discretion. "***Liquidated Damages Multiplier***" means the product of the Purchase Price times the number of Registrable Securities purchased by such Investor that may not be disposed of without restriction and without the need for current public information pursuant to any section of Rule 144 (or any similar provision then in effect) under the Securities Act. The Investors acknowledge and agree that the Investor's actual harm caused by a breach of the Company's obligations with respect to clause (A) of this Section 8.1(c)(2) would be impossible or very difficult to accurately estimate or prove, and that the Liquidated Damages are a reasonable estimate of the anticipated or actual harm that might arise from such breach. The Company's payment of the Liquidated Damages is the Company's sole liability and entire obligation, and the Investor's exclusive monetary remedy, for any such breach.

8.2. Company Obligations. The Company shall use commercially reasonable efforts to effect the registration of the Registrable Securities in accordance with the terms hereof, and pursuant thereto the Company shall:

(a) use commercially reasonable efforts to cause such Registration Statement, or a successor Registration Statement, to become effective and to remain continuously effective (other than during an Allowed Delay) for a period (the "***Effectiveness Period***") that will terminate upon the earlier of (i) the date on which all Registrable Securities covered by such Registration Statement, as amended from time to time, no longer constitute Registrable Securities, and (ii) three (3) years from the Closing Date;

(b) use commercially reasonable efforts to prepare and file with the Commission such amendments and post-effective amendments to the Registration Statement and the Prospectus as may be necessary to keep the Registration Statement effective for the Effectiveness Period and to comply with the provisions of the Securities Act and the Exchange Act with respect to the distribution of all of the Registrable Securities covered thereby;

(c) (i) provide copies to and permit counsel designated by the Investors to review and provide comments on each Registration Statement no fewer than two (2) Business Days prior to their filing with the Commission and all amendments and supplements thereto no fewer than one (1) Business Day prior to their filing with the Commission, and (ii) consider comments from the Required Investors for incorporation in such Registration Statements or amendments and supplements thereto in good faith;

(d) furnish or otherwise make available (including via EDGAR) to the Investors (i) promptly after the same is prepared and publicly distributed, filed with the Commission, or received by the Company (but not later than two (2) Business Days after the filing date, receipt date or sending date, as the case may be) one (1) copy of any Registration Statement and any amendment thereto, each preliminary prospectus and Prospectus and each amendment or supplement thereto, and each letter written by or on behalf of the Company to the Commission or the staff of the Commission, and each item of correspondence from the Commission or the staff of the Commission, in each case relating to such Registration Statement (other than any portion of any thereof which contains information for which the Company has sought or plans to seek confidential treatment), and (ii) such number of copies of a Prospectus, including a preliminary prospectus, and all amendments and supplements thereto and such other documents as each Investor may reasonably request in order to facilitate the disposition of the Registrable Securities owned by such Investor that are covered by the related Registration Statement;

(e) use commercially reasonable efforts to (i) prevent the issuance of any stop order or other suspension of effectiveness, and (ii) if such order is issued, obtain the withdrawal of any such order and to notify the Investors of the issuance of such order and the resolution thereof, if applicable;

(f) use commercially reasonable efforts to register or qualify (unless an exemption from the registration or qualification exists) or cooperate with the Investors and their counsel in connection with the registration or qualification of such Registrable Securities for offer and sale under the securities or blue sky laws of such domestic jurisdictions as are reasonably requested by the Investors and do any and all other commercially reasonable acts or things necessary or advisable to enable the distribution in such jurisdictions of the Registrable Securities covered by the Registration Statement**;** provided, however, that the Company will not be required in connection therewith or as a condition thereto to (i) qualify to do business in any jurisdiction where it would not otherwise be required to qualify, but for this Section 8.2(f), (ii) subject itself to general taxation in any jurisdiction where it would not otherwise be so subject, but for this Section 8.2(f), or (iii) file a general consent to service of process in any such jurisdiction;

(g) use commercially reasonable efforts to cause all Registrable Securities covered by a Registration Statement to be listed on the securities exchange, interdealer quotation system or other market on which the Common Stock is then listed;

(h) promptly notify the Investors, at any time prior to the end of the Effectiveness Period, following discovery that, or following the happening of any event as a result of which, the Prospectus includes an untrue statement of a material fact or omits to state any material fact required to be stated therein or necessary to make the statements therein not misleading in light of the circumstances then existing, and, subject to Section 8.1(c)(2) hereof, promptly prepare, file with the Commission and furnish to such holder a supplement to or an amendment of such Prospectus as may be necessary so that such Prospectus will not include 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 not misleading in light of the circumstances then existing;

(i) otherwise use commercially reasonable efforts to comply with all applicable rules and regulations of the Commission under the Securities Act and the Exchange Act, including, without limitation, Rule 172 under the Securities Act, file any final Prospectus, including any supplement or amendment thereof, with the Commission pursuant to Rule 424 under the Securities Act, promptly inform the Investors in writing if, at any time during the Effectiveness Period, the Company does not satisfy the conditions specified in Rule 172 and, as a result thereof, the Investors are required to deliver a Prospectus in connection with any disposition of Registrable Securities and take such other actions as may be reasonably necessary to facilitate the registration of the Registrable Securities hereunder; and

(j) with a view to making available to the Investors the benefits of Rule 144 (or its successor rule) and any other rule or regulation of the Commission that may at any time permit the Investors to sell shares of Common Stock to the public without registration, the Company covenants and agrees to use commercially reasonable efforts to: (i) make and keep public information available, as those terms are understood and defined in Rule 144, for a period of twelve (12) months from the consummation of the Closing; (ii) file with the Commission in a timely manner all reports required of the Company under the Exchange Act; and (iii) furnish to each Investor upon request (including via EDGAR), as long as such Investor owns any Registrable Securities, (A) a written statement by the Company whether it has complied with the reporting requirements of the Exchange Act, (B) a copy (or a link to a website containing the same) of the Company's most recent Annual Report on Form 10-K or Quarterly Report on Form 10-Q, and (C) such other information as may be reasonably requested in order to avail such Investor of any rule or regulation of the Commission that permits the selling of any such Registrable Securities without registration under Rule 144.

8.3. Obligations of the Investors.

(a) Each Investor shall furnish in writing to the Company such information regarding itself, the Registrable Securities and other Company securities held by it and the intended method of disposition of the Registrable Securities held by it, as the Company may reasonably request (and in any event within two (2) Business Days of the Company's request), to respond to requests by the Commission, FINRA or any state securities commission or as may be required to be disclosed by applicable securities laws and shall execute such documents in connection with such registration as the Company may reasonably request. At least two (2) Business Days prior to the first anticipated filing date of any Registration Statement, the Company shall notify each Investor of the information the Company requires from such Investor if such Investor elects to have any of the Registrable Securities included in the Registration Statement.

(b) Each Investor agrees that, upon receipt of any notice from the Company of either (i) the commencement of an Allowed Delay pursuant to Section 8.1(c)(2), or (ii) the happening of an event pursuant to Section 8.2(h) hereof, such Investor shall use its commercially reasonable efforts to promptly discontinue disposition of Registrable Securities pursuant to the Registration Statement covering such Registrable Securities, until the Investor is advised by the Company that such dispositions may again be made. The Company may provide appropriate stop orders to enforce the provisions of this paragraph.

8.4. Indemnification.

(a) Indemnification by the Company. In consideration of each Investor's execution and delivery of this Agreement and in addition to all of the Company's other obligations under this Agreement, subject to the provisions of this Section 8.4, the Company shall indemnify and hold harmless each Investor, each of its (as applicable) directors, officers, shareholders, employees and agents (and any other Persons with a functionally equivalent role of a Person holding such titles notwithstanding the lack of such title or any other title) and each Person, if any, who controls the Investor (within the meaning of Section 15 of the Securities Act or Section 20(a) of the Exchange Act) (each, an "***Investor Party***"), from and against all losses, liabilities, obligations, claims, contingencies, damages, costs and expenses (including all judgments, amounts paid in settlement, court costs, reasonable attorneys' fees and costs of defense and investigation) (collectively, "***Damages***") that any Investor Party may suffer or incur as a result of or relating to any action, suit, claim or proceeding (including for these purposes a derivative action brought on behalf of the Company) instituted against such Investor Party arising out of or resulting from (i) any untrue or alleged untrue statement of a material fact contained in any Registration Statement under which such Registrable Securities are registered or sold under the Securities Act (including any final, preliminary or summary Prospectus contained therein or any amendment thereof or supplement thereto or any documents incorporated by reference therein) or any other disclosure document produced by or on behalf of the Company including any report and other document filed under the Exchange Act or (ii) any omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein (in the case of a Prospectus or preliminary Prospectus, in light of the circumstances under which they were made) not misleading; provided, however, that the foregoing indemnity will not apply to any Damages to the extent, but only to the extent, that such Damages arise out of or result from any untrue statement or omission contained in any information relating to such Investor furnished in writing by an Investor Party (other than another Investor) to the Company expressly for inclusion in a Registration Statement.

(b) Indemnification by the Investors. In consideration of each Investor's execution and delivery of this Agreement and in addition to all of the Investor's other obligations under this Agreement, subject to the provisions of this Section 8.4, each Investor shall indemnify and hold harmless the Company, each of its directors, officers, shareholders, employees and agents (and any other Persons with a functionally equivalent role of a Person holding such titles notwithstanding the lack of such title or any other title), each Person, if any, who controls the Company (within the meaning of Section 15 of the Securities Act or Section 20(a) of the Exchange Act) (each, a "***Company Party***"), from and against all Damages that any Company Party may suffer or incur as a result of or relating to any action, suit, claim or proceeding (including for these purposes a derivative action brought on behalf of the Company) instituted against such Company Party to the extent arising out of or resulting from (i) any untrue statement of a material fact in any Registration Statement under which such Registrable Securities were registered or sold under the Securities Act (including any final, preliminary or summary Prospectus contained therein or any amendment thereof or supplement thereto or any documents incorporated by reference therein) or (ii) any omission to state therein a material fact required to be stated therein or necessary to make the statements therein (in the case of a Prospectus or preliminary Prospectus, in light of the circumstances under which they were made) not misleading, in each case to the extent that such untrue statement or omission is contained in any information relating to such Investor furnished in writing by an Investor Party (other than another Investor) to the Company expressly for inclusion in a Registration Statement. Notwithstanding anything herein to the contrary, any Investor shall be liable under this Section 8.4(b) for only that amount of Damages as does not exceed the net proceeds to such Investor as a result of the sale of Registrable Securities pursuant to such Registration Statement.

(c) Promptly after receipt by an indemnified party under this Section 8.4 of notice of the commencement of any action (including any governmental action) for which a party may be entitled to indemnification hereunder, such indemnified party shall, if a claim in respect thereof is to be made against any indemnifying party under this Section 8.4, give the indemnifying party notice of the commencement thereof. The indemnifying party will have the right to participate in such action and, to the extent the indemnifying party so desires, participate jointly with any other indemnifying party to which notice has been given, and to assume the defense thereof with counsel mutually satisfactory to the parties; provided, however, that an indemnified party (together with all other indemnified parties that may be represented without conflict by one counsel) will have the right to retain one separate counsel, with the fees and expenses to be paid by the indemnifying party, if representation of such indemnified party by the counsel retained by the indemnifying party would be inappropriate due to differing interests between such indemnified party and any other party represented by such counsel in such action. The failure to give notice to the indemnifying party within a reasonable time of the commencement of any such action shall not relieve such indemnifying party of any liability to the indemnified party under this Section 8.4, unless and to the extent such failure prejudices the indemnifying party's ability to defend such action. If the indemnifying party assumes the defense of a claim pursuant to this Section 8.4(c), (x) the indemnifying party shall not be subject to any liability for any settlement made without its prior written consent, and (y) the indemnifying party shall not settle such claim unless the settlement includes an unconditional release of the indemnified party from all liability with respect to all claims that are the subject of the proceeding. If such defense is not assumed by the indemnifying party, the indemnifying party will not be subject to any liability for any settlement made without its prior written consent.

(d) To provide for just and equitable contribution to joint liability under the Securities Act in any case in which either (i) any party otherwise entitled to indemnification hereunder makes a claim for indemnification pursuant to this Section 8.4 but it is judicially determined (by the entry of a final judgment or decree by a court of competent jurisdiction and the expiration of time to appeal or the denial of the last right of appeal) that such indemnification may not be enforced in such case, notwithstanding the fact that this Section 8.4 provides for indemnification in such case, or (ii) contribution under the Securities Act may be required on the part of any party hereto for which indemnification is provided under this Section 8.4, then, and in each such case, such parties shall contribute to the aggregate losses, claims, damages, liabilities, or expenses to which they may be subject (after contribution from others) in such proportion as is appropriate to reflect the relative fault of each of the indemnifying party and the indemnified party in connection with the statements, omissions, or other actions that resulted in such loss, claim, damage, liability, or expense, as well as to reflect any other relevant equitable considerations. The relative fault of the indemnifying party and of the indemnified party will be determined by reference to, among other things, whether the untrue or allegedly untrue statement of a material fact, or the omission or alleged omission of a material fact, relates to information supplied by the indemnifying party or by the indemnified party and the parties' relative intent, knowledge, access to information, and opportunity to correct or prevent such statement or omission; provided, however, that, in any such case, (x) no Investor will be required to contribute any amount in excess of the public offering price of all such Registrable Securities offered and sold by such Investor pursuant to such registration statement, and (y) no Person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) will be entitled to contribution from any Person who was not guilty of such fraudulent misrepresentation.

(e) The obligations of the Company and each Investor under this Section 8.4 will survive the completion of any offering or sale of Registrable Securities pursuant to a Registration Statement under this Agreement or otherwise.

9. Definitions. Unless the context otherwise requires, the terms defined in this Section 9 shall have the meanings specified for all purposes of this Agreement.

Except as otherwise expressly provided, all accounting terms used in this Agreement, whether or not defined in this Section 9, shall be construed in accordance with GAAP.

"***2019 Private Placement***" means the Company's private placement of Common Stock with investors party to an Amended and Restated Common Stock Purchase Agreement, dated February 25, 2019, which closed on April 2, 2019.

"***Affected Holders***" has the meaning assigned to it in this Section 9.

"***Affiliate***" shall have the meaning ascribed to such term in Rule 12b-2 promulgated under the Exchange Act.

"***Agreement***" has the meaning assigned to it in the introductory paragraph hereof.

"***Allowed Delay***" has the meaning assigned to it in Section 8.1(c)(2) hereof.

"***Anti-Bribery Laws***" has the meaning assigned to it in Section 4.19 hereof.

"***Anti-Money Laundering Laws***" has the meaning assigned to it in Section 4.17 hereof.

"***Articles of Organization***" means the Company's Restated Articles of Organization attached as Exhibit 4.1 to the Registration Statement on Form S-8 filed on March 29, 2019.

"***Blocked Persons***" has the meaning assigned to it in Section 4.18 hereof.

"***Board***" has the meaning assigned to it in Section 4.5(b) hereof.

"***Business Day***" means any day that is not a Saturday, a Sunday or other day on which banks are required or authorized by law to be closed in the City of New York.

"***Bylaws***" means the Company's Amended and Restated Bylaws in the form attached as Exhibit 4.2 to the Registration Statement on Form S-8 filed on March 29, 2019.

"***Closing***" has the meaning assigned to it in Section 2.1 hereof.

"***Closing Date***" has the meaning assigned to it in Section 2.1 hereof.

"***Code***" means the Internal Revenue Code of 1986, as amended.

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

"***Common Stock***" has the meaning assigned to it in the recitals hereof.

"***Company***" has the meaning assigned to it in the introductory paragraph hereof.

"***Company Party***" has the meaning assigned to it in Section 8.4(b) hereof.

"***Company Product***" has the meaning assigned to it in Section 4.13 hereof.

"***Confidentiality Agreement***" means, with respect to any Investor, the confidentiality agreement (if any) referred to opposite such Investor's name on Schedule I in the column entitled "Other Information".

"***control***," "***controlled***," "***controlled by***" and "***under common control with***" means the possession, directly or indirectly or as trustee or executor, of the power to direct or cause the direction of the management policies of a Person, whether through the ownership of a majority of such Person's outstanding voting equity or by contract, and with respect to "controlled Affiliates" includes Affiliates controlled by such Person.

"***Damages***" has the meaning assigned to it in Section 8.4(a) hereof.

"***Distribution***" has the meaning given to such term in the Separation Agreement.

"***Draft Form 10-Q***" has the meaning assigned to it in Section 4.7 hereof.

"***Effectiveness Period***" has the meaning assigned to it in Section 8.2(a) hereof.

"***Encumbrances***" means any lien, claim, judgment, charge, mortgage, security interest, pledge, escrow, equity or other encumbrance.

"***Exchange Act***" means the Securities Exchange Act of 1934, as amended.

"***Filing***" has the meaning assigned to it in Section 6.1 hereof.

"***FINRA***" means the Financial Industry Regulatory Authority, Inc.

"***GAAP***" means U.S. generally accepted accounting principles consistently applied.

"***Governmental Entity***" means any national, federal, state, municipal, local, territorial, foreign or other government or any department, commission, board, bureau, agency, regulatory authority or instrumentality thereof, or any court, judicial, administrative or arbitral body or public or private tribunal.

"***Health Care and Privacy Laws***" has the meaning assigned to it in Section 4.21 hereof.

"***HIPAA***" has the meaning assigned to it in Section 4.21 hereof.

"***Insolvent***" means, with respect to any Person, (i) the present fair saleable value of such Person's assets is less than the amount required to pay such Person's total indebtedness, (ii) such Person is unable to pay its debts and liabilities, subordinated, contingent or otherwise, as such debts and liabilities become absolute and matured, (iii) such Person currently intends to incur or currently believes that it will incur debts that would be beyond its ability to pay as such debts mature or (iv) such Person has unreasonably small capital with which to conduct the business in which it is engaged as such business is now conducted and is proposed to be conducted.

"***Intellectual Property***" means all intellectual property rights, including inventions, patents, trademarks, trade names, service names, Internet domain names, copyrights, copyrightable works, and trade secrets and other confidential or proprietary information, and all registration or applications (including, as applicable, any renewals, reissues, reexaminations, continuations, continuations-in-part, or divisionals thereof) for any of the foregoing.

"***Intended Tax Treatment***" means the sale of Shares pursuant to this Agreement shall not result in Distribution Taxes, as such term is defined in the Tax Matters Agreement.

"***Investor Commitment Amount***" has the meaning assigned to it in Section 1.1 hereof.

"***Investor Party***" has the meaning assigned to it in Section 8.4(a) hereof.

"***Investors***" has the meaning assigned to it in the introductory paragraph of this Agreement.

"***Investor Tax Affiliate***" means, with respect to an Investor, any entity or individual whose ownership of stock would be attributable to or aggregated with such Investor under Section 355(e)(4)(C) of the Code.

"***Ironwood***" means Ironwood Pharmaceuticals, Inc., a Delaware corporation.

"***knowledge***" or any similar phrase means, with respect to each Investor, the actual knowledge of the persons included in the "Knowledge Group" listed opposite such Investor's name on Schedule I in the column entitled "Other Information".

"***Liquidated Damages***" has the meaning assigned to it in Section 8.1(c)(2) hereof.

"***Liquidated Damages Multiplier***" has the meaning assigned to it in Section 8.1(c)(2) hereof.

"***Material Adverse Effect***" means (a) any material adverse effect on the ability of the Company to consummate the issuance of Shares contemplated by this Agreement or (b) any material adverse effect on the financial condition, business or results of operations of the Company; provided that none of the following will constitute a Material Adverse Effect: any event, effect, circumstance, change, occurrence, fact or development resulting from or relating to (i) general business, industry or economic conditions, (ii) local, regional, national or international political or social conditions, including the engagement (whether new or continuing) by the United States in hostilities, whether or not pursuant to the declaration of a national emergency or war, or the occurrence of any military or terrorist attack upon the United States or any of its territories, possessions or diplomatic or consular offices or upon any military installation, equipment or personnel of the United States, any natural or man-made disaster or acts of God, pandemics (including COVID-19), acts of terrorism or sabotage, (iii) changes in financial, banking or securities markets (including any disruption thereof and any decline in the price of any security or any market index), (iv) changes in GAAP or regulatory accounting requirements or interpretations thereof that apply to the Company (including the proposal or adoption of any new law, statute, code, ordinance, rule or regulation, or any change in the interpretation or enforcement of any existing law, statute, code, ordinance, rule or regulation), (v) changes in laws (including the proposal or adoption of any new law, statute, code, ordinance, rule or regulation, or any change in the interpretation or enforcement of any existing law, statute, code, ordinance, rule or regulation), (vi) the negotiation, execution, or delivery of this Agreement, or the announcement, pendency or consummation of any of the transactions contemplated hereby, including the impact thereof on relationships with third parties (such as (A) any loss of existing employees, consultants or independent contractors, (B) any loss of, or reduction in business by or revenue from, existing customers, or (C) any disruption in or loss of vendors, suppliers, distributors, partners, contractors or similar third parties), (vii) the taking of, or the failure to take, any action expressly required by this Agreement or consented to, in writing by the Required Investors, (viii) any costs or expenses incurred or accrued by the Company in connection with this Agreement or the transactions contemplated hereby, or (ix) any failure by the Company (in the aggregate or otherwise) to meet estimates, expectations, projections or forecasts or revenue or earnings predictions for any period, or any failed clinical trials (provided that the exception set forth in this clause (x) shall not prevent or otherwise affect any determination that the underlying reasons for any such failure constitutes or contributed to a Material Adverse Effect), except to the extent that such event, effect, circumstance, change, occurrence, fact or development arising from or related to the matters in clauses (i), (ii), (iv) and (v) disproportionately affects the Company as compared to other businesses operating in the industries or markets in which the Company operates.

"***OFAC***" has the meaning assigned to it in Section 3.17 hereof.

"***Person***" means and includes all natural persons, corporations, business trusts, associations, companies, partnerships, joint ventures, limited liability companies and other entities and governments and agencies and political subdivisions.

"***Privacy Rules***" has the meaning assigned to it in Section 4.21 hereof.

"***Prospectus***" means (i) the prospectus included in any Registration Statement, as amended or supplemented by any prospectus supplement, with respect to the terms of the offering of any portion of the Registrable Securities covered by such Registration Statement and by all other amendments and supplements to the prospectus, including post-effective amendments and all material incorporated by reference in such prospectus, and (ii) any "free writing prospectus" as defined in Rule 405 under the Securities Act.

"***Purchase Price***" has the meaning assigned to it in Section 1 hereof.

"***Register***," "***registered***" and "***registration***" refer to a registration made by preparing and filing a Registration Statement or similar document in compliance with the Securities Act, and the declaration or ordering of effectiveness of such Registration Statement or document.

"***Registrable Securities***" means, collectively, the Shares and any other securities issued or issuable with respect to or in exchange for the Shares, whether by merger, charter amendment or otherwise; provided that a security shall cease to be a Registrable Security upon (A) a sale pursuant to a Registration Statement or Rule 144 under the Securities Act (in which case, only such security sold by the Investor shall cease to be a Registrable Security); or (B) becoming eligible for sale without restrictions or limitation by the applicable Investor pursuant to Rule 144 and without the requirement to be in compliance with Rule 144(c)(1) (but only if such shares are permitted to be unlegended under Section 7.2).

"***Registration Statement***" means any registration statement of the Company filed under the Securities Act that covers the resale of any of the Registrable Securities pursuant to the provisions of this Agreement, amendments and supplements to such Registration Statement, including post-effective amendments, all exhibits and all material incorporated by reference in such Registration Statement.

"***Regulatory Agencies***" has the meaning assigned to it in Section 4.20 hereof.

"***Required Investors***" means, prior to the Closing, Investors entitled to acquire at least two-thirds of the Shares to be issued hereunder based on the total Investor Commitment Amounts at such time, and following the Closing, Investors holding at least two-thirds of the Shares then beneficially and economically owned by all Investors, provided, that in the event that any modification, amendment or waiver for which approval by the Required Investors is required hereunder would disproportionately materially and adversely affect a holder or group of holders of the Shares (for the avoidance of doubt, not based on number of shares owned) (such holder or group of holders, the "***Affected Holders***"), then Required Investors shall include such Affected Holders.

"***Sanction Laws***" has the meaning assigned to it in Section 4.18 hereof.

"***Sanctioned Country***" has the meaning assigned to it in Section 4.18 hereof.

"***SBA Approval***" has the meaning assigned to it in Section 4.4 hereof.

"***SEC Reports***" has the meaning assigned to it in Section 4.7 hereof.

"***Sectoral Sanctions Identifications List***" has the meaning assigned to it in Section 4.18 hereof.

"***Securities Act***" or "***Act***" means the Securities Act of 1933, as amended.

"***Separation***" means Ironwood's separation into two separate, publicly traded companies, one for each of (i) the New Ironwood Pharmaceutical Business (as defined in the Separation Agreement), which is owned and conducted, directly or indirectly, by Ironwood and its subsidiaries and (ii) the Cyclerion Pharmaceutical Business (as defined in the Separation Agreement), which is owned and conducted, directly or indirectly, by the Company and its subsidiaries.

"***Separation Agreement***" means the Separation Agreement between the Company and Ironwood, dated March 30, 2019.

"***Shares***" has the meaning assigned to such term in the recitals hereto.

"***Specially Designated National***" has the meaning assigned to it in Section 4.18 hereof.

"***studies***" has the meaning assigned to it in Section 4.20 hereof.

"***Tax Matters Agreement***" means the Tax Matters Agreement between the Company and Ironwood, dated March 30, 2019.

10. Survival. The representations, warranties, covenants, indemnities and agreements contained in this Agreement shall survive the Closing of the transactions contemplated by this Agreement, subject applicable statutes of limitations.

11. Enforcement; Specific Performance. In addition to being entitled to exercise all rights provided herein or granted by law, including recovery of damages, the Investors and the Company will be entitled to specific performance, injunctive and other equitable relief under this Agreement. The parties agree that monetary damages will not be adequate compensation for any loss incurred by reason of any breach of obligations contained in this Agreement and hereby agree to waive and not to assert in any action for specific performance of any such obligation (i) security or the posting of any bond in connection with such relief, or (ii) the defense that a remedy at law would be adequate.

12. Miscellaneous.

12.1. Waivers and Amendments. Any term of this Agreement may be amended and the observance of any term of this Agreement may be waived (either generally or in a particular instance and either retroactively or prospectively), only in writing executed by the Company and the Required Investors; provided, that (i) such written consent must also be executed by any Investor that is materially, disproportionately and adversely affected, and (ii) no amendment or waiver may increase the obligations of any Investor without the prior written consent of such Investor. Any amendment or waiver effected in accordance with this paragraph shall be binding upon each holder of any Shares purchased under this Agreement at the time outstanding, each future holder of all such Shares, and the Company. Neither this Agreement, nor any provision hereof, may be changed, waived, discharged or terminated orally or by course of dealing, but only by an instrument in writing.

12.2. Notices. Any notices, requests, demands and other communications required or permitted in this Agreement shall be effective if in writing and (i) delivered personally, (ii) sent by e-mail or (iii) delivered by overnight courier, in each case, addressed as follows:

If to the Company to:

Cyclerion Therapeutics, Inc.
301 Binney Street
Cambridge, MA 02142
Attention: William Huyett
E-mail: whuyett@cyclerion.com

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

Hughes Hubbard & Reed LLP
One Battery Park Plaza, 12th floor
New York, NY 10004-1482
Attention: Ken Lefkowitz
E-mail: ken.lefkowitz@hugheshubbard.com

If to any Investor:

To the address set forth on Schedule I hereto;

or at such other address as the Company or such Investor each may specify by written notice to the other parties hereto. Any party may change the address to which notices, requests, consents or other communications hereunder are to be delivered by giving the other parties notice in the manner set forth in this Section 12.2. Any such notice or other communication shall be deemed to have been given as of the date so personally delivered or transmitted by e-mail (or, if delivered or transmitted after normal business hours at the location of recipient, on the next Business Day), one Business Day after the date when sent by overnight delivery services or seven days after the date so mailed if by certified or registered mail.

12.3. Cumulative Rights. The rights and remedies herein provided shall be cumulative and not exclusive of any rights or remedies provided by law.

12.4. Successors and Assigns; Syndication. All the terms and provisions of this Agreement shall be binding upon and inure to the benefit of and be enforceable by the respective parties hereto, the successors and permitted assigns of the Investors and the successors of the Company, whether so expressed or not. Following the Closing Date, (a) an Investor may transfer and assign the portion of its rights and obligations under this Agreement under Section 8 (but no other Section) to a transferee of all or a portion of the Shares purchased under this Agreement by such Investor, and (b) an Investor may transfer and assign all of its rights and obligations under this Agreement to its Affiliate in connection with the transfer of all or a portion of the Shares purchased under this Agreement by such Investor to such Affiliate. Any attempt to assign or transfer any right hereunder in violation of this Section 12.4 shall be void ab initio.

12.5. Headings. The headings of the Sections and paragraphs of this Agreement have been inserted for convenience of reference only and do not constitute a part of this Agreement.

12.6. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the Commonwealth of Massachusetts, without regard to its conflict of law principles.

12.7. Fees and Expenses. Each party shall bear its own fees and expenses incurred in connection with the transactions contemplated hereby.

12.8. Jurisdiction. Any suit, action or proceeding seeking to enforce any provision of, or based on any matter arising out of or in connection with, this Agreement or the transactions contemplated hereby shall be brought in any federal or state court located in the Commonwealth of Massachusetts, and each of the parties hereby consents to the jurisdiction of such courts (and of the appropriate appellate courts therefrom) in any such suit, action or proceeding and irrevocably waives, to the fullest extent permitted by law, any objection which it may now or hereafter have to the laying of the venue of any such suit, action or proceeding in any such court or that any such suit, action or proceeding which is brought in any such court has been brought in an inconvenient forum. Process in any such suit, action or proceeding may be served on any party anywhere in the world, whether within or without the jurisdiction of any such court. Without limiting the foregoing, each party agrees that service of process on such party as provided in Section 12.2 shall be deemed effective service of process on such party.

12.9. Waiver of Jury Trial. TO THE EXTENT NOT PROHIBITED BY APPLICABLE LAW WHICH CANNOT BE WAIVED, THE INVESTORS AND THE COMPANY HEREBY WAIVE, AND COVENANT THAT NEITHER THE COMPANY NOR THE INVESTORS WILL ASSERT, ANY RIGHT TO TRIAL BY JURY ON ANY ISSUE IN ANY PROCEEDING, WHETHER AS PLAINTIFF, DEFENDANT OR OTHERWISE, IN RESPECT OF ANY ISSUE, CLAIM, DEMAND, ACTION OR CAUSE OF ACTION ARISING OUT OF OR BASED UPON THIS AGREEMENT, ANY OTHER AGREEMENT OR THE SUBJECT MATTER HEREOF OR THEREOF OR IN ANY WAY CONNECTED WITH, RELATED OR INCIDENTAL TO THE DEALINGS OF THE INVESTORS AND THE COMPANY HEREUNDER OR THEREUNDER, IN EACH CASE WHETHER NOW EXISTING OR HEREAFTER ARISING AND WHETHER IN TORT OR CONTRACT OR OTHERWISE. The Company acknowledges that it has been informed by the Investors that the provisions of this Section 12.9 constitute a material inducement upon which the Investors are relying and will rely in entering into this Agreement. Any Investor or the Company may file an original counterpart or a copy of this Section 12.9 with any court as written evidence of the consent of the Investors and the Company to the waiver of the right to trial by jury.

12.10. Termination. If the Closing has not occurred on or before July 31, 2020, the Required Investors or the Company may terminate this Agreement in its entirety by written notice to the Company and each of the Investors; provided, further, that any such termination shall not relieve any party from liability for a willful breach of any of its obligations under this Agreement occurring prior to such termination.

12.11. Counterparts; Effectiveness. This Agreement may be executed in any number of counterparts and by different parties hereto in separate counterparts, with the same effect as if all parties had signed the same document. All such counterparts shall be deemed an original, shall be construed together and shall constitute one and the same instrument. This Agreement shall become effective when each party hereto shall have received counterparts hereof signed by all of the other parties hereto.

12.12. Entire Agreement. This Agreement contains the entire agreement among the parties hereto with respect to the subject matter hereof and thereof and such agreements supersede and replace all other prior agreements, written or oral, among the parties hereto with respect to the subject matter hereof and thereof.

12.13. No Presumption. With regard to each and every term and condition of this Agreement, the parties understand and agree that the same has been mutually negotiated, prepared and drafted, and if at any time the parties desire or are required to interpret or construe any such term or condition or any agreement or instrument subject hereto, no consideration shall be given to the issue of which party actually prepared, drafted or requested any term or condition of this Agreement.

12.14. Severability. If any provision of this Agreement shall be found by any court of competent jurisdiction to be invalid or unenforceable, the parties hereby waive such provision to the extent that it is found to be invalid or unenforceable. Such provision shall, to the maximum extent allowable by law, be modified by such court so that it becomes enforceable, and, as modified, shall be enforced as any other provision hereof, all the other provisions hereof continuing in full force and effect.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the parties hereto have caused this Common Stock Purchase Agreement to be duly executed as of the day and year first above written.

THE COMPANY

CYCLERION THERAPEUTICS, INC.

By: /s/ Peter M. Hecht
Name: Peter M. Hecht
Title: Chief Executive Officer

[Signature Page to Common Stock Purchase Agreement]

Investors:

A. M. PAPPAS LIFE SCIENCE VENTURES V, LP
By: AMP&A Management V, LLC, its General Partner

By: /s/ Arthur M. Pappas
Name: Arthur M. Pappas
Title: CEO & Managing Partner

Address:

A.M. PAPPAS LIFE SCIENCE VENTURES V, LP
c/o Matthew A. Boyer
Pappas Capital, LLC
2520 Meridian Parkway, Suite 400
Durham, NC 27713
mboyer@pappas-capital.com
(919) 998-3300

PV V CEO FUND, LP
By: AMP&A Management V, LLC, its General Partner

By: /s/ Arthur M. Pappas
Name: Arthur M. Pappas
Title: CEO & Managing Partner

Address:

PV V CEO FUND, LP
c/o Matthew A. Boyer
Pappas Capital, LLC
2520 Meridian Parkway, Suite 400
Durham, NC 27713
mboyer@pappas-capital.com
(919) 998-3300

SLATE PATH MASTER FUND LP

By: /s/ John Metzner
Name: John Metzner, Slate Path Capital GP LLC
Title: Chief Operating Officer

Address:

Slate Path Master Fund LP
717 Fifth Avenue, 16 Floor
New York, NY 10022

[Signature Page to Common Stock Purchase Agreement]

EXHIBIT A

SCHEDULE I

INVESTOR NAME AND ADDRESS	INVESTOR COMMITMENT AMOUNT	OTHER INFORMATION
A. M. Pappas Life Science Ventures V, LP c/o Matthew A. Boyer Pappas Capital, LLC 2520 Meridian Parkway, Suite 400 Durham, NC 27713 mboyer@pappas-capital.com (919) 998-3300	$3,931,312	Confidentiality and Non-Disclosure Agreement, dated July 2, 2020, between Cyclerion Therapeutics, Inc. and Pappas Capital, LLC
PV V CEO Fund, LP c/o Matthew A. Boyer Pappas Capital, LLC 2520 Meridian Parkway, Suite 400 Durham, NC 27713 mboyer@pappas-capital.com (919) 998-3300	$318,688	Confidentiality and Non-Disclosure Agreement, dated July 2, 2020, between Cyclerion Therapeutics, Inc. and Pappas Capital, LLC
Slate Path Master Fund LP 717 Fifth Avenue, 16 Floor New York, NY 10022 SLATEPATHOPS@slatepathcapital.com	$20,000,000	Letter Agreement, dated June 25, 2020, between Cyclerion Therapeutics, Inc. and Slate Path Capital

Exhibit 31.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Peter M. Hecht, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Cyclerion Therapeutics, 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)) 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) 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

(c) 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.

Date: July 31, 2020

By: /s/ Peter M. Hecht
Name: Peter M. Hecht
Title: Chief Executive Officer (Principal Executive Officer)

Exhibit 31.2

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, William I. Huyett, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Cyclerion Therapeutics, 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)) 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) 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

(c) 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.

Date: July 31, 2020

By: /s/ William I. Huyett
Name: William I. Huyett
Title: Chief Financial Officer (Principal Financial and Accounting Officer)

Exhibit 32.1

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

I, Peter M. Hecht, certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge, the Quarterly Report on Form 10-Q of Cyclerion Therapeutics, Inc. for the period ended June 30, 2020 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and the information contained in such Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of Cyclerion Therapeutics, Inc.

Date: July 31, 2020

By: /s/ Peter M. Hecht
Name: Peter M. Hecht
Title: Chief Executive Officer (Principal Executive Officer)

Exhibit 32.2

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

I, William I. Huyett, certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge, the Quarterly Report on Form 10-Q of Cyclerion Therapeutics, Inc. for the period ended June 30, 2020 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and the information contained in such Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of Cyclerion Therapeutics, Inc.

Date: July 31, 2020

By: /s/ William I. Huyett
Name: William I. Huyett
Title: Chief Financial Officer (Principal Financial and Accounting Officer)