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 March 31, 2018

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: 001-15911

CELSION CORPORATION
(Exact name of Registrant as specified in its charter)

Delaware	**52-1256615**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)

997 Lenox Drive, Suite 100,
Lawrenceville, **NJ 08648**
(Address of principal executive offices)

(609) 896-9100
(Registrant's telephone number, including area code)

NA

(Former name, former address and former fiscal year, if changed since last report)

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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post such files).
Yes ☑ No ☐

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of “large accelerated filer,” “accelerated filer”, “smaller reporting company” and “emerging growth company” in Rule 12b-2 of the Exchange Act (Check One):

Large accelerated filer ☐ Accelerated filer ☐

Non-accelerated filer ☐ (Do not check if a smaller reporting company) Smaller reporting company ☑

Emerging growth company ☐

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

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

As of May 10, 2018, the Registrant had 17,740,035 shares of common stock, $0.01 par value per share, outstanding.

CELSION CORPORATION
QUARTERLY REPORT ON
FORM 10-Q

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Forward-Looking Statements

This report includes “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended and Section 21E of the Securities Exchange Act of 1934, as amended. All statements other than statements of historical fact are “forward-looking statements” for purposes of this Quarterly Report on Form 10-Q, including, without limitation, any projections of earnings, revenue or other financial items, any statements of the plans and objectives of management for future operations (including, but not limited to, pre-clinical development, clinical trials, manufacturing and commercialization), any statements concerning proposed drug candidates potential therapeutic benefits, or other new products or services, any statements regarding future economic conditions or performance, any changes in the course of research and development activities and in clinical trials, any possible changes in cost and timing of development and testing, capital structure, financial condition, working capital needs and other financial items, any changes in approaches to medical treatment, any introduction of new products by others, any possible licenses or acquisitions of other technologies, assets or businesses, our ability to realize the full extent of the anticipated benefits of our acquisition of the assets of EGEN, Inc., including achieving operational cost savings and synergies in light of any delays we may encounter in the integration process and additional unforeseen expenses, any possible actions by customers, suppliers, partners, competitors and regulatory authorities, compliance with listing standards of The NASDAQ Capital Market and any statements of assumptions underlying any of the foregoing. In some cases, forward-looking statements can be identified by the use of terminology such as “may,” “will,” “expects,” “plans,” “anticipates,” “estimates,” “potential” or “continue,” or the negative thereof or other comparable terminology. Although we believe that our expectations are based on reasonable assumptions within the bounds of our knowledge of our industry, business and operations, we cannot guarantee that actual results will not differ materially from our expectations.

Our future financial condition and results of operations, as well as any forward-looking statements, are subject to inherent risks and uncertainties, including, but not limited to, the risk factors set forth in Part II, Item 1A “Risk Factors” below and for the reasons described elsewhere in this Quarterly Report on Form 10-Q. All forward-looking statements and reasons why results may differ included in this report are made as of the date hereof and we do not intend to update any forward-looking statements, except as required by law or applicable regulations. The discussion of risks and uncertainties set forth in this Quarterly Report on Form 10-Q is not necessarily a complete or exhaustive list of all risks facing us at any particular point in time. We operate in a highly competitive, highly regulated and rapidly changing environment and our business is in a state of evolution. Therefore, it is likely that new risks will emerge, and that the nature and elements of existing risks will change, over time. It is not possible for management to predict all such risk factors or changes therein, or to assess either the impact of all such risk factors on our business or the extent to which any individual risk factor, combination of factors, or new or altered factors, may cause results to differ materially from those contained in any forward-looking statement.

Except where the context otherwise requires, in this Quarterly Report on Form 10-Q, the “Company,” “Celsion,” “we,” “us,” and “our” refer to Celsion Corporation, a Delaware corporation, its wholly-owned subsidiaries CLSN Laboratories, Inc., also a Delaware corporation, and Celsion GmbH, a limited liability company in Zug Switzerland.

Trademarks

The Celsion brand and product names, including but not limited to Celsion® and ThermoDox® contained in this document are trademarks, registered trademarks or service marks of Celsion Corporation or its subsidiary in the United States (U.S.) and certain other countries. This document also contains references to trademarks and service marks of other companies that are the property of their respective owners.

PART I: FINANCIAL INFORMATION

Item 1. FINANCIAL STATEMENTS

CELSION CORPORATION

CONDENSED CONSOLIDATED BALANCE SHEETS

	March 31, 2018 (unaudited)	December 31, 2017
ASSETS		
Current assets:		
Cash and cash equivalents	$ 2,285,314	$ 11,444,055
Investment securities – available for sale, at fair value	18,411,162	12,724,020
Accrued interest receivable on investment securities	67,192	54,440
Advances, deposits and other current assets	89,186	89,186
Subtotal current assets	20,852,854	24,311,701
Property and equipment (at cost, less accumulated depreciation and amortization of $2,869,058 and $2,838,716 respectively)	175,066	175,771
Other assets:		
In-process research and development	20,246,491	20,246,491
Other intangible assets, net	738,779	795,608
Goodwill	1,976,101	1,976,101
Patent licensing fees and other assets, net	8,761	8,761
Subtotal other assets	22,970,132	23,026,961
Total assets	$ 43,998,052	$ 47,514,433

See accompanying notes to the condensed consolidated financial statements.

CELSION CORPORATION

CONDENSED CONSOLIDATED
BALANCE SHEETS
(Continued)

	March 31, 2018 (unaudited)	December 31, 2017
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable ─ trade	$ 3,416,878	$ 3,416,863
Other accrued liabilities	1,716,867	2,282,827
Deferred revenue – current portion	500,000	500,000
Subtotal current liabilities	5,633,745	6,199,690
Earn-out milestone liability	12,808,720	12,538,525
Deferred revenue – non-current portion	1,875,000	2,000,000
Other liabilities – non-current portion	70,232	71,710
Total liabilities	20,387,697	20,809,925
Commitments and contingencies	-	-
Stockholders' equity:		
Preferred Stock - $0.01 par value (100,000 shares authorized and no shares issued or outstanding at March 31, 2018 and December 31, 2017)	-	-
Common stock - $0.01 par value (112,500,000 shares authorized; 17,740,369 and 17,277,299 shares issued at March 31, 2018 and December 31, 2017, respectively, and 17,740,035 and 17,276,965 shares outstanding at March 31, 2018 and December 31, 2017, respectively)	177,403	172,772
Additional paid-in capital	289,810,437	288,408,976
Accumulated other comprehensive loss	(33,414)	(10,164)
Accumulated deficit	(266,258,883)	(261,781,888)
Subtotal	23,695,543	26,789,696
Treasury stock, at cost (334 shares at March 31, 2018 and December 31, 2017)	(85,188)	(85,188)
Total stockholders' equity	23,610,355	26,704,508
Total liabilities and stockholders' equity	$ 43,998,052	$ 47,514,433

See accompanying notes to the condensed consolidated financial statements.

CELSION CORPORATION

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited)

	Three Months Ended March 31,	
	2018	**2017**
Licensing revenue	$ 125,000	$ 125,000
Operating expenses:		
Research and development	2,741,076	3,475,276
General and administrative	1,665,028	1,468,122
Total operating expenses	4,406,104	4,943,398
Loss from operations	(4,281,104)	(4,818,398)
Other (expense) income:		
Loss from change in valuation of earn-out milestone liability	(270,195)	(283,751)
Investment income	73,724	1,991
Interest expense	-	(62,340)
Other income (expense)	580	2,362
Total other (expense) income, net	(195,891)	(341,738)
Net loss	$ (4,476,995)	$ (5,160,136)
Net loss per common share		
Basic and diluted	$ (0.25)	$ (3.09)
Weighted average shares outstanding		
Basic and diluted	17,683,847	1,670,582

See accompanying notes to the condensed consolidated financial statements.

CELSION CORPORATION

CONDENSED CONSOLIDATED
STATEMENTS OF COMPREHENSIVE LOSS
(Unaudited)

	Three Months Ended March 31,	
	2018	**2017**
Other comprehensive loss		
Change in unrealized loss on available for sale securities	$ (23,250)	$ -
Net loss	(4,476,995)	(5,160,136)
Comprehensive loss	$ (4,500,245)	$ (5,160,136)

See accompanying notes to the condensed consolidated financial statements.

CELSION CORPORATION

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)

	Three Months Ended March 31,	
	2018	**2017**
Cash flows from operating activities:		
Net loss	$ (4,476,995)	$ (5,160,136)
Non-cash items included in net loss:		
Depreciation and amortization	87,171	170,529
Change in fair value of earn-out milestone liability	270,195	283,751
Deferred revenue	(125,000)	(125,000)
Stock-based compensation costs	153,668	117,466
Restricted shares issued	15,840	-
Amortization of deferred finance charges and debt discount associated with notes payable	-	17,685
Change in deferred rent liability	(1,478)	(9,264)
Net changes in:		
Accrued interest on investment securities	(12,752)	4,008
Advances, deposits and other current assets	-	62,786
Accounts payable and accrued liabilities	(565,945)	1,508,171
Net cash (used in) operating activities:	(4,655,296)	(3,130,004)
Cash flows from investing activities:		
Purchases of investment securities	(5,710,392)	-
Proceeds from sale and maturity of investment securities	-	1,680,000
Purchases of property and equipment	(29,637)	(21,126)
Net cash (used in) provided by investing activities	(5,740,029)	1,658,874
Cash flows from financing activities:		
Proceeds from sale of common stock equity, net of issuance costs	1,236,584	4,284,373
Proceeds from exercise of common stock warrants	-	138,563
Principal payments on notes payable	-	(1,106,392)
Net cash provided by (used in) financing activities	1,236,584	3,316,544
(Decrease) increase in cash and cash equivalents	(9,158,741)	1,845,414
Cash and cash equivalents at beginning of period	11,444,055	2,624,162
Cash and cash equivalents at end of period	$ 2,285,314	$ 4,469,576
Supplemental disclosures of cash flow information:		
Interest paid	$ -	$ 44,655

See accompanying notes to the condensed consolidated financial statements.

CELSION CORPORATION

NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

FOR THE THREE MONTHS ENDED MARCH 31, 2018 AND 2017

Note 1. Business Description

Celsion Corporation, a Delaware corporation based in Lawrenceville, New Jersey, and its wholly owned subsidiary, CLSN Laboratories, Inc., also a Delaware corporation, referred to herein as "Celsion", "we", or "the Company," as the context requires, is a fully-integrated, development stage oncology drug company focused on developing a portfolio of innovative cancer treatments, including directed chemotherapies, immunotherapies and RNA- or DNA-based therapies. Our lead program is ThermoDox®, a proprietary heat-activated liposomal encapsulation of doxorubicin, currently in Phase III development for the treatment of primary liver cancer. Our product pipeline also includes GEN-1, a DNA-based immunotherapy for the localized treatment of ovarian and brain cancers. Our product pipeline is based on three platform technologies have demonstrated the potential to address a broad range of solid tumor cancer indications including novel nucleic acid-based immunotherapies, anti-cancer DNA or RNA therapies, and heat sensitive liposomal formulations of known chemotherapeutics. With these technologies we are working to develop and commercialize efficient, effective and targeted therapeutics that minimize the side-effects common to cancer treatments.

Note 2. Basis of Presentation

The accompanying unaudited condensed consolidated financial statements, which include the accounts of Celsion Corporation, CLSN Laboratories, Inc. and Celsion GmbH, have been prepared in accordance with generally accepted accounting principles in the United States (GAAP) for interim financial information and with the instructions to Form 10-Q and Article 10 of Regulation S-X. All intercompany balances and transactions have been eliminated. Certain information and disclosures normally included in financial statements prepared in accordance with GAAP have been condensed or omitted pursuant to such rules and regulations.

In the opinion of management, all adjustments, consisting only of normal recurring accruals considered necessary for a fair presentation, have been included in the accompanying unaudited condensed consolidated financial statements. Operating results for the three-month period ended March 31, 2018 are not necessarily indicative of the results that may be expected for any other interim period(s) or for any full year. For further information, refer to the financial statements and notes thereto included in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2017 filed with the Securities and Exchange Commission (SEC) on March 27, 2018.

The preparation of financial statements in conformity with GAAP requires management to make judgments, estimates, and assumptions that affect the amount reported in the Company's financial statements and accompanying notes. Actual results could differ materially from those estimates. Events and conditions arising subsequent to the most recent balance sheet date have been evaluated for their possible impact on the financial statements and accompanying notes. No events and conditions would give rise to any information that required accounting recognition or disclosure in the financial statements other than those arising in the ordinary course of business.

Note 3. Financial Condition and Business Plan

Since inception, the Company has incurred substantial operating losses, principally from expenses associated with the Company's research and development programs, clinical trials conducted in connection with the Company's product candidates, and applications and submissions to the Food and Drug Administration. We have not generated significant revenue and have incurred significant net losses in each year since our inception. We have incurred approximately $266 million of cumulated net losses. As of March 31, 2018, we had approximately $20.8 million in cash, investment securities and interest receivable. We have substantial future capital requirements to continue our research and development activities and advance our product candidates through various development stages. The Company believes these expenditures are essential for the commercialization of its technologies.

The Company expects its operating losses to continue for the foreseeable future as it continues its product development efforts, and when it undertakes marketing and sales activities. The Company's ability to achieve profitability is dependent upon its ability to obtain governmental approvals, produce, and market and sell its new product candidates. There can be no assurance that the Company will be able to commercialize its technology successfully or that profitability will ever be achieved. The operating results of the Company have fluctuated significantly in the past. We have substantial future capital requirements associated with our continued research and development activities and to advance our product candidates through various stages of development. The Company believes these expenditures are essential for the commercialization of its technologies.

The actual amount of funds the Company will need to operate is subject to many factors, some of which are beyond the Company's control. These factors include the following:

- the progress of research activities;
- the number and scope of research programs;
- the progress of preclinical and clinical development activities;
- the progress of the development efforts of parties with whom the Company has entered into research and development agreements;
- the costs associated with additional clinical trials of product candidates;
- the ability to maintain current research and development licensing arrangements and to establish new research and development and licensing arrangements;
- the ability to achieve milestones under licensing arrangements;
- the costs involved in prosecuting and enforcing patent claims and other intellectual property rights; and
- the costs and timing of regulatory approvals.

The Company has based its estimate on assumptions that may prove to be wrong. The Company may need to obtain additional funds sooner or in greater amounts than it currently anticipates. Potential sources of financing include strategic relationships, public or private sales of the Company's shares or debt and other sources. If the Company raises funds by selling additional shares of common stock or other securities convertible into common stock, the ownership interest of existing stockholders may be diluted.

With the $20.8 million in cash, investment securities and interest receivable at March 31, 2018, the Company believes it has sufficient capital resources to fund its operations into the third quarter of 2019. The Company will be required to obtain additional funding in order to continue the development of its current product candidates within the anticipated time periods, if at all, and to continue to fund operations. As more fully discussed in Note 11, the Company has $12.2 million available for future sale under a controlled equity offering facility it has with Cantor Fitzgerald & Co. as of March 31, 2018.

Note 4. New Accounting Pronouncements

From time to time, new accounting pronouncements are issued by Financial Accounting Standards Board (FASB) and are adopted by us as of the specified effective date. Unless otherwise discussed, we believe that the impact of recently issued accounting pronouncements will not have a material impact on the Company's consolidated financial position, results of operations, and cash flows, or do not apply to our operations.

In May 2014, the FASB issued Accounting Standards Update (ASU) No. 2014-09 "Revenue from Contracts with Customers (Topic 606)," which supersedes all existing revenue recognition requirements, including most industry-specific guidance. The new standard requires a company to recognize revenue when it transfers goods or services to customers in an amount that reflects the consideration that the company expects to receive for those goods or services. ASU 2014 - 09 was originally going to be effective on January 1, 2017; however, the FASB issued ASU 2015-14, "Revenue from Contracts with Customers (Topic 606) - Deferral of the Effective Date," which deferred the effective date of ASU 2014-09 by one year to January 1, 2018. In March 2016, the FASB issued ASU No. 2016 - 8, "Revenue from Contracts with Customers (Topic 606): Principal versus Agent Considerations. The amendments in this ASU do not change the core principle of ASU No. 2014 - 09 but the amendments clarify the implementation guidance on reporting revenue gross versus net. The effective date for the amendments in this ASU is the same as the effective date of ASU No. 2014-09. In April 2016, the FASB issued ASU No. 2016-10, "Revenue from Contracts with Customers (Identifying Performance Obligations and Licensing)," to clarify the implementation guidance on identifying performance obligations and licensing (collectively "the new revenue standards"). The new revenue standards allow for either "full retrospective" adoption, meaning the standard is applied to all periods presented, or "modified retrospective" adoption, meaning the standard is applied only to the most current period presented in the financial statements. The new revenue standard became effective for us on January 1, 2018. Under the new revenue standards, we recognize revenue following a five-step model prescribed under ASU No. 2014-09;(i) identify contract(s) with a customer;(ii) identify the performance obligations in the contract;(iii) determine the transaction price;(iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenues when (or as) we satisfy the performance obligation. As further described in Note 15, the Company currently has only one contract subject to the new revenue standards. After performance of the five-step model discussed above, the Company concluded the adoption of the new revenue standards as of January 1, 2018 did not change our revenue recognition policy nor does it have an effect on our financial statements using either the full retrospective or the modified retrospective adoption methods.

In January 2016, the FASB issued Accounting Standards Update No. 2016-01, Recognition and Measurement of Financial Assets and Financial Liabilities, which requires that most equity investments be measured at fair value, with subsequent changes in fair value recognized in net income (other than those accounted for under the equity method of accounting). This guidance is effective for fiscal years, and interim periods within those years, beginning after December 15, 2017. Based on the Company's evaluation, the adoption of the ASU 2016-01 does not have a material impact on its consolidated financial statements or its disclosures.

In February 2016, the FASB issued Accounting Standards Update No. 2016-02, Leases (Topic 842), which requires that lessees recognize assets and liabilities for leases with lease terms greater than twelve months in the statement of financial position. Leases will be classified as either finance or operating, with classification affecting the pattern of expense recognition in the income statement. This update also requires improved disclosures to help users of financial statements better understand the amount, timing and uncertainty of cash flows arising from leases. The update is effective for fiscal years beginning after December 15, 2018, including interim reporting periods within that reporting period. Early adoption is permitted. The Company is currently evaluating the impact the adoption of this guidance will have on its consolidated financial statements and disclosures.

In August 2016, the FASB issued Accounting Standard Update No. 2016-15, Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments. This update clarifies how certain cash receipts and payments should be presented in the statement of cash flows and is effective for interim and annual reporting periods beginning after December 15, 2017, with early adoption permitted. Based on the Company's evaluation, the adoption of the ASU 2016-01 did not have a material impact on its consolidated financial statements or its disclosures.

In November 2016, the FASB issued Accounting Standard Update No. 2016-18, Statement of Cash Flows (Topic 230): Restricted Cash. This update amends the guidance in ASC 230, including providing additional guidance related to transfers between cash and restricted cash and how entities present, in their statement of cash flows, the cash receipts and cash payments that directly affect the restricted cash accounts. This guidance is effective for annual reporting periods beginning after December 15, 2017, and interim periods within those years, with early adoption permitted. Based on the Company's evaluation, the adoption of the ASU 2016 - 01 did not have a material impact on its consolidated financial statements or its disclosures.

In January 2017, the FASB issued Accounting Standard Update No. 2017-01, Business Combinations (Topic 805): Clarifying the Definition of a Business, which clarifies the definition of a business with the objective of adding guidance to assist entities with evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. This guidance is effective for annual reporting periods beginning after December 15, 2018, and interim periods within those years, with early adoption permitted. The Company is currently evaluating the impact of adoption on its consolidated financial statements.

In January 2017, the FASB issued Accounting Standard Update *No. 2017-04*, Intangibles-Goodwill and Other, Simplifying the Test for Goodwill impairment, which eliminates Step *2* from the goodwill impairment test. Under the revised test, an entity should perform its annual, or interim, goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount. An entity should recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value; however, the loss recognized should *not* exceed the total amount of goodwill allocated to that reporting unit. This ASU is effective for any interim or annual impairment tests for fiscal years beginning after December 15, 2019, with early adoption permitted. The Company adopted this method for its impairment test of goodwill during 2017.

Note 5. Net Loss per Common Share

Basic loss per share is calculated based upon the net loss available to common shareholders divided by the weighted average number of common shares outstanding during the period. Diluted loss per share is calculated after adjusting the denominator of the basic earnings per share computation for the effects of all dilutive potential common shares outstanding during the period. The dilutive effects of preferred stock, options and warrants and their equivalents are computed using the treasury stock method.

The total number of shares of common stock issuable respectively upon exercise of warrants, stock option grants and equity awards was 3,655,643 and 2,684,841 shares for the three-month periods ended March 31, 2018 and 2017 respectively. For the three month periods ended March 31, 2018 and 2017, diluted loss per common share was the same as basic loss per common share as all options and all warrants that were exercisable into shares of the Company's common stock were excluded from the calculation of diluted earnings attributable to common shareholders per common share as their effect would have been anti-dilutive.

Note 6. Fair Value of Financial Instruments

Short-term investments available for sale of $18,411,162 and $12,724,020 as of March 31, 2018 and December 31, 2017, respectively, consist of money market funds, commercial paper, corporate debt securities, and government agency debt securities. They are valued at estimated fair value, with unrealized gains and losses reported as a separate component of stockholders' equity in accumulated other comprehensive loss.

Securities available for sale are evaluated periodically to determine whether a decline in their value is other than temporary. The term "other than temporary" is not intended to indicate a permanent decline in value. Rather, it means that the prospects for near term recovery of value are not necessarily favorable, or that there is a lack of evidence to support fair values equal to, or greater than, the carrying value of the security. Management reviews criteria such as the magnitude and duration of the decline, as well as the reasons for the decline, to predict whether the loss in value is other than temporary. Once a decline in value is determined to be other than temporary, the value of the security is reduced and a corresponding charge to earnings is recognized.

A summary of the cost, fair value and maturities of the Company's short-term investments is as follows:

	March 31, 2018		December 31, 2017	
	Cost	Fair Value	Cost	Fair Value
Short-term investments				
Certificate of deposit	$ 1,714,375	$ 1,713,833	$ -	$ -
Corporate debt securities	16,730,201	16,697,329	12,734,184	12,724,020
Total	$ 18,444,576	$ 18,411,162	$ 12,734,184	12,724,020

	March 31, 2018		December 31, 2017	
	Cost	Fair Value	Cost	Fair Value
Short-term investment maturities				
Within 3 months	$ 4,996,672	$ 4,993,850	$ -	$ -
Between 3-12 months	13,447,904	13,417,312	12,734,184	12,724,020
Total	$ 18,444,576	$ 18,411,162	$ 12,734,184	$ 12,724,020

Investment income, which includes net realized losses on sales of available for sale securities and investment income interest and dividends, is summarized as follows:

	Three Months Ended March 31,	
Description of Securities	**2018**	**2017**
Interest and dividends accrued and paid	$ 69,289	$ 1,991
Realized gains	4,435	-
Investment income	$ 73,724	$ 1,991

The following table shows the Company's investment securities gross unrealized losses and fair value by investment category and length of time that individual securities have been in a continuous unrealized loss position at March 31, 2018 and December 31, 2017. The Company has reviewed individual securities to determine whether a decline in fair value below the amortizable cost basis is other than temporary.

	March 31, 2018		December 31, 2017	
Description of Securities	**Fair Value**	**Unrealized Holding Gains (Losses)**	**Fair Value**	**Unrealized Holding Gains (Losses)**
Available for Sale (all unrealized holding gains and losses are less than 12 months at date of measurement)				
Investments with unrealized gains	$ 2,239,849	$ 1,463	$ 748,148	$ 570
Investments with unrealized losses	16,171,313	(35,877)	11,975,872	(10,734)
Total	$ 18,411,162	$ (34,414)	$ 12,724,020	$ (10,164)

Note 7. Fair Value Measurements

FASB Accounting Standards Codification (ASC) Section 820 "Fair Value Measurements and Disclosures," establishes a three level hierarchy for fair value measurements which requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. The three levels of inputs that may be used to measure fair value are as follows:

Level 1: Quoted prices (unadjusted) or identical assets or liabilities in active markets that the entity has the ability to access as of the measurement date;

Level 2: Significant other observable inputs other than Level 1 prices such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data; and

Level 3: Significant unobservable inputs that reflect a reporting entity's own assumptions that market participants would use in pricing an asset or liability.

The fair values of securities available for sale are determined by obtaining quoted prices on nationally recognized exchanges (Level 1 inputs) or matrix pricing, which is a mathematical technique widely used in the industry to value debt securities without relying exclusively on quoted prices for the specific securities but rather by relying on the securities' relationship to other benchmark quoted securities (Level 2 inputs).

Cash and cash equivalents, other current assets, accounts payable and other accrued liabilities are reflected in the balance sheet at their estimated fair values primarily due to their short-term nature. There were no transfers of assets or liabilities between Level 1 and Level 2 and no transfers in or out of Level 3 during the three months ended March 31, 2018 or 2017. All changes in Level 3 liabilities were the result of changes in the fair value of the earn-out milestone liability included in earnings (see Note 13).

Assets and liabilities measured at fair value are summarized below:

	Total Fair Value	Quoted Prices In Active Markets For Identical Assets/Liabilities (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Recurring items as of March 31, 2018				
Investment securities, available for sale	$ 18,411,162	$ 18,411,162	—	$ —
Recurring items as of December 31, 2017				
Investment securities, available for sale	$ 12,724,020	$ 12,724,020	—	$ —
Liabilities:				
Recurring items as of March 31, 2018				
Earn-out milestone liability (Note 13)	$ 12,808,720	$ —	—	$ 12,808,720
Recurring items as of December 31, 2017				
Earn-out milestone liability (Note 13)	$ 12,538,525	$ —	—	$ 12,538,525

Note 8. Acquisition of EGEN Assets

On June 20, 2014, we completed the acquisition of substantially all of the assets of EGEN, Inc., an Alabama corporation, which has changed its company name to EGWU, Inc. after the closing of the acquisition ("EGEN"), pursuant to an asset purchase agreement dated as of June 6, 2014, by and between EGEN and Celsion (the "Asset Purchase Agreement"). We acquired all of EGEN's right, title and interest in and to substantially all of the assets of EGEN, including cash and cash equivalents, patents, trademarks and other intellectual property rights, clinical data, certain contracts, licenses and permits, equipment, furniture, office equipment, furnishings, supplies and other tangible personal property. In addition, CLSN Laboratories assumed certain specified liabilities of EGEN, including the liabilities arising out of the acquired contracts and other assets relating to periods after the closing date.

The total purchase price for the asset acquisition is up to $44.4 million, including potential future earnout payments of up to $30.4 million contingent upon achievement of certain earnout milestones set forth in the Asset Purchase Agreement. At the closing, we paid approximately $3.0 million in cash after the expense adjustment and issued 193,728 shares of our common stock to EGEN. The shares of common stock were issued in a private transaction exempt from registration under the Securities Act, pursuant to Section 4 (2) thereof. In addition, 47,862 shares of common stock were held back by us at the closing and are issuable to EGEN pending satisfactory resolution of any post-closing adjustments for expenses or in relation to EGEN's indemnification obligations under the Asset Purchase Agreement. These shares were issued on June 16, 2017.

After its review in 2016, management concluded that there was no immediate opportunity to out-license TheraSilence. As a result of this analysis, the earnout payments were adjusted prior to 2017 and are now up to $24.4 million that may become payable, in cash, shares of our common stock or a combination thereof, at our option, upon achievement of two major milestone events as follows:

- $12.4 million will become payable upon achieving certain specified development milestones relating to an ovarian cancer study of GEN-1 (formerly known as EGEN-001) to be conducted by us or our subsidiary; and

- $12.0 million will become payable upon achieving certain specified development milestones relating to a GEN-1 glioblastoma multiforme brain cancer study to be conducted by us or our subsidiary.

The following table summarizes the fair values of these assets acquired and liabilities assumed related to the acquisition.

Property and equipment, net	$	35,000
In-process research and development		24,211,000
Other Intangible assets (Covenant not to compete)		1,591,000
Goodwill		1,976,000
Total assets:		27,813,000
Accounts payable and accrued liabilities		(235,000)
Net assets acquired	$	27,578,000

Acquired in-process research and development (IPR&D) consists of EGEN's drug technology platforms: TheraPlas and TheraSilence. The fair value of the IPR&D drug technology platforms was estimated to be $24.2 million as of the acquisition date. As of the closing of the acquisition, the IPR&D was considered indefinite lived intangible assets and will not be amortized. IPR&D is reviewed for impairment at least annually as of our third quarter ended September 30, and whenever events or changes in circumstances indicate that the carrying value of the assets might not be recoverable.

At September 30, 2017, after the Company's annual assessment of the totality of the events that could impair IPR&D, the Company determined certain IPR&D assets related to the development of its glioblastoma multiforme cancer (GBM) product candidate may be impaired. To arrive at this determination, the Company assessed the status of studies in GBM conducted by its competitors and the Company's strategic commitment of resources to its studies in primary liver cancer and ovarian cancer. The Company estimated the fair value of the IPR&D related to GBM at September 30, 2017 using the multi-period excess earnings method (MPEEM). The Company concluded that the GBM asset, valued at $9.4 million, was partially impaired and wrote down the GBM asset to $6.9 million incurring a non-cash charge of $2.5 million in the third quarter of 2017.

At December 31, 2016, the Company determined one of the IPR&D assets related to the development of its RNA delivery system being developed with collaborators using their RNA product candidates may be impaired and after an assessment, the Company concluded that this asset, valued at $1.4 million, was impaired. Therefore, the Company wrote off the value of this IPR&D asset incurring a non-cash charge of $1.4 million in the fourth quarter of 2016.

As no indicators of impairment existed during the first quarter of 2018, the Company concluded none of the other IPR&D assets were impaired at March 31, 2018.

Pursuant to the EGEN Purchase Agreement, EGEN provided certain covenants ("Covenant Not To Compete") to the Company whereby EGEN agreed, during the period ending on the seventh anniversary of the closing date of the acquisition on June 20, 2014, not to enter into any business, directly or indirectly, which competes with the business of the Company nor will it contact, solicit or approach any of the employees of the Company for purposes of offering employment. The Covenant Not To Compete which was valued at approximately $1.6 million at the date of the EGEN acquisition has a definitive life and is amortized on a straight-line basis over its life of 7 years. The Company recognized amortization expense of $56,829 in each of the three months ended March 31, 2018 and 2017. The fair value of the Covenant Not to Compete was $738,779 net of $852,435 accumulated amortization as of March 31, 2018 and $795,608 net of $795,606 accumulated amortization as of December 31, 2017

The purchase price exceeded the estimated fair value of the net assets acquired by approximately $2.0 million which was recorded as Goodwill. Goodwill represents the difference between the total purchase price for the net assets purchased from EGEN and the aggregate fair values of tangible and intangible assets acquired, less liabilities assumed. Goodwill is reviewed for impairment at least annually as of our third quarter ended September 30 or sooner if we believe indicators of impairment exist. As of September 30, 2017, we concluded that the Company's fair value exceeded its carrying value therefore "it is not more likely than not" that the Goodwill was impaired.

Note 9. Accrued Liabilities

Other accrued liabilities at March 31, 2018 and December 31, 2017 include the following:

	Year Ended December 31,	
	2018	**2017**
Amounts due to contract research organizations and other contractual agreements	$ 837,955	$ 665,373
Accrued payroll and related benefits	550,143	1,258,265
Accrued professional fees	308,748	264,668
Other	20,021	94,521
Total	$ 1,716,867	$ 2,282,827

Note 10. Note Payable

In November 2013, the Company entered into a loan agreement with Hercules Technology Growth Capital, Inc. (Hercules) which permits up to $20 million in capital to be distributed in multiple tranches (the Hercules Credit Agreement). The Company drew the first tranche of $5 million upon closing of the Hercules Credit Agreement in November 2013 and used approximately $4 million of the proceeds to repay the outstanding obligations under its loan agreement with Oxford Finance LLC and Horizon Technology Finance Corporation as discussed further below. On June 10, 2014, the Company closed the second $5 million tranche under the Hercules Credit Agreement. The proceeds were used to fund the $3.0 million upfront cash payment associated with Celsion's acquisition of EGEN, as well as the Company's transaction costs associated with the EGEN acquisition. Upon the closing of the second tranche, the Company had drawn down a total of $10 million under the Hercules Credit Agreement.

The obligations under the Hercules Credit Agreement are in the form of secured indebtedness bearing interest at a calculated prime-based variable rate (11.25% per annum since inception through December 17, 2015, 11.50% from December 18, 2015 through December 15, 2016 and 11.75% since). Payments under the loan agreement were interest only for the first twelve months after loan closing, followed by a 30 -month amortization period of principal and interest through the scheduled maturity date of June 1, 2017. In connection with the Hercules Credit Agreement, the Company incurred cash expenses of $122,378 which were recorded as deferred financing fees. These deferred financing fees were amortized as interest expense using the effective interest method over the life of the loan. In addition, the Company paid loan origination fees of $230,000 which has been classified as debt discount. This amount is being amortized as interest expense using the effective interest method over the life of the loan.

As a fee associated with the Hercules Credit Agreement, the Company issued Hercules a warrant for a total of 6,963 shares of the Company's common stock (the Hercules Warrant) at a per share exercise price of $50.26, exercisable for cash or by net exercise from November 25, 2013. Upon the closing of the second tranche on June 10, 2014, this warrant became exercisable for an additional 6,963 shares of the Company's common stock. The Hercules Warrant will expire November 25, 2018. Hercules has certain rights to register the common stock underlying the Hercules Warrant pursuant to a Registration Rights Agreement with the Company dated November 25, 2013. The registration rights expire on the date when such stock may be sold under Rule 144 without restriction or upon the first-year anniversary of the registration statement for such stock, whichever is earlier. The common stock issuable pursuant to the Hercules Warrant was filed pursuant to Rule 415 under the Securities Act of 1933 on the Prospectus for Registration Statement No. 333 - 193936 and was declared effective on September 30, 2014. The Company valued the Hercules Warrants issued using the Black-Scholes option pricing model and recorded a total of $476,261 as a direct deduction from the debt liability consistent with the presentation of a debt discount and are being amortized as interest expense using the effective interest method over the life of the loan. Also, in connection with each of the $5.0 million tranches, the Company was required to pay an end of term charge equal to 3.5% of each original loan amount at time of maturity. Therefore, these amounts totaling $350,000 were amortized as interest expense using the effective interest method over the life of the loan. For the three-month period ended March 31, 2017 the Company incurred $44,655 in interest expense and amortized $17,685 as interest expense for deferred fees, debt discount and end of term charges in connection with the Hercules Credit Agreement.
The loan balance and end of term charges on the Hercules Credit Agreement was paid in full in June 2017.

Note 11. Stockholders' Equity

In September 2015, the Company filed with the Securities and Exchange Commission (the SEC) a $75 million shelf registration statement on Form S-3 (the 2015 Shelf Registration Statement) (File No. 333-206789) that allows the Company to issue any combination of common stock, preferred stock or warrants to purchase common stock or preferred stock. This shelf registration was declared effective on September 25, 2015.

At the 2016 Annual Meeting of Stockholders of the Company in June 2016, the Company's stockholders approved an increase in the number of the authorized shares of the Company's common stock from 75,000,000 shares to 112,500,000 shares. The number of the authorized shares of preferred stock remains at 100,000 shares. The aggregate number of shares of all classes of stock that the Company may issue, after giving effect to such amendment as approved by the stockholders, will be 112,600,000 shares.

Reverse Stock Split

On May 26, 2017, the Company effected a 14-for-1 reverse stock split of its common stock which was made effective for trading purposes as of the commencement of trading on May 30, 2017. As of that date, each 14 shares of issued and outstanding common stock and equivalents was consolidated into one share of common stock. All shares have been restated to reflect the effects of the 14-for-1 reverse stock split. In addition, at the market open on May 30, 2017, the Company's common stock started trading under a new CUSIP number 15117N503 although the Company's ticker symbol, CLSN, remained unchanged.

The reverse stock split was previously approved by the Company's stockholders at the 2017 Annual Meeting held on May 16, 2017, and the Company subsequently filed a Certificate of Amendment to its Certificate of Incorporation to effect the stock consolidation. The primary reasons for the reverse stock split and the amendment are:

- To increase the market price of the Company's common stock making it more attractive to a broader range of institutional and other investors, and
- To provide the Company with additional capital resources and flexibility sufficient to execute its business plans including the establishment of strategic relationships with other companies and to ensure its ability to raise additional capital as necessary.

Immediately prior to the reverse stock split, the Company had 56,982,418 shares of common stock outstanding which consolidated into 4,070,172 shares of the Company's common stock. No fractional shares were issued in connection with the reverse stock split. Holders of fractional shares have been paid out in cash for the fractional portion with the Company's overall exposure for such payouts consisting of a nominal amount. The number of outstanding options and warrants were adjusted accordingly, with outstanding options being reduced from approximately 2.4 million to approximately 0.2 million and outstanding warrants being reduced from approximately 33.5 million to approximately 2.4 million.

October 2017 *Underwritten Offering*

On October 27, 2017, the Company entered into an underwriting agreement (the "Underwriting Agreement") with Oppenheimer & Co. Inc. (the "Underwriter"), relating to the issuance and sale (the "Offering") of 2,640,000 shares (the "Shares") of the Company's common stock, $0.01 par value per share (the "Common Stock"), and warrants to purchase an aggregate of 1,320,000 shares of Common Stock. Each share of Common Stock is being sold together with 0.5 warrants (the "Investor Warrants"), each whole Investor Warrant being exercisable for one share of Common Stock, at an offering price of $2.50 per share and related Investor Warrants.

Pursuant to the terms of the Underwriting Agreement, the Underwriter agreed to purchase the Shares and related Investor Warrants from the Company at a price of $2.325 per share and related Investor Warrants. Each Investor Warrant is exercisable six months from the date of issuance. The Investor Warrants have an exercise price of $3.00 per whole share, and expire five years from the date first exercisable.

The Company received $6.6 million of gross proceeds from the sale of the Shares and Investor Warrant. This Offering was made pursuant to the Company's effective shelf registration statement on Form S-3 (File No. 333-206789) filed with the Securities and Exchange Commission on September 4, 2015, and declared effective on September 25, 2015, including the base prospectus dated September 25, 2017 included therein and the related prospectus supplement. The Company also issued to the Underwriter warrants to purchase up to 66,000 shares of the Company's common stock, such issuance being exempt from registration pursuant to Section 4(a)(2) of the Securities Act. Each Underwriter warrant is exercisable six months from the date of issuance, have an exercise price of $2.87 per whole share, and expire five years from the date first exercisable.

July 6, 2017 *Common Stock Offering*

On July 6, 2017, the Company entered into a securities purchase agreement with several investors, pursuant to which the Company agreed to issue and sell, in a registered direct offering, an aggregate of 2,050,000 shares of common stock of the Company at an offering price of $2.07 per share for gross proceeds of $4,243,500 before the deduction of the placement agent fee and offering expenses. In addition, the Company sold Pre-Funded Series CCC Warrants to purchase 385,000 shares of common stock (and the shares of common stock issuable upon exercise of the Pre-Funded Series CCC Warrants), in lieu of shares of common stock to the extent that the purchase of common stock would cause the beneficial ownership of the Purchaser, together with its affiliates and certain related parties, to exceed 9.99% of our common stock. The Pre-Funded Series CCC Warrants were sold at an offering price of $2.06 per share for gross proceeds of $793,100, are immediately exercisable for $0.01 per share of common stock and do not have an expiration date. In a concurrent private placement, the Company agreed to issue to each investor, for each share of common stock and pre-funded warrant purchased in the offering, a Series AAA Warrant and Series BBB Warrant, each to purchase one share of common stock. The Series AAA Warrants are initially exercisable six months following issuance, and terminate five and one-half years following issuance. The Series AAA Warrants have an exercise price of $2.07 per share and are exercisable to purchase an aggregate of 2,435,000 shares of common stock. The Series BBB Warrants are immediately exercisable following issuance, and terminate twelve months following issuance. The Series BBB Warrants have an exercise price of $4.75 per share and are exercisable to purchase an aggregate of 2,435,000 shares of common stock. Subject to limited exceptions, a holder of a Series AAA and Series BBB Warrant will not have the right to exercise any portion of its warrants if the holder, together with its affiliates, would beneficially own in excess of 9.99% of the number of shares of common stock outstanding immediately after giving effect to such exercise. During the fourth quarter of 2017, all 385,000 of the Series CCC Pre-Funded warrants were exercised in full.

On October 4, 2017, the Company entered into letter agreements (the “Exercise Agreements”) with the holders of the Series AAA and Series BBB Warrants issued in the July 6, 2017 Common Stock Offering (the “Exercising Holders”). The Exercise Agreements amended the Series AAA Warrants to permit their immediate exercise. Prior to the execution of the Exercise Agreements, the Series AAA Warrants were not exercisable until January 11, 2018. Pursuant to the Exercise Agreements, the Exercising Holders and the Company agreed that the Exercising Holders would exercise all of their Existing Warrants with respect to 4,665,000 shares of Common Stock underlying such Existing Warrants. The Series AAA Warrants and Series BBB Warrants were exercised at a price of $2.07 per share and $4.75 per share, respectively, which were their respective original exercise prices. The Company received approximately $16.6 million in gross proceeds from the sale of these warrants.

The Exercise Agreements also provide for the issuance of 1,166,250 Series DDD Warrants, each to purchase one share of Common Stock (the “Series DDD Warrants”). The Series DDD Warrants have an exercise price $6.20, are exercisable one year following issuance and terminate six months after they are initially exercisable. The Series DDD Warrants and the shares of Common Stock issuable upon the exercise of the Series DDD Warrants were offered pursuant to the exemption provided in Section 4(a)(2) under the Securities Act or Rule 506(b) promulgated thereunder. Pursuant to the Exercise Agreements, the Series DDD Warrants shall be substantially in the form of the Existing Warrants and the Company will be required to register for resale the shares of Common Stock underlying the Series DDD Warrants.

February 14, 2017 *Public Offering*

On February 14, 2017, the Company entered into a securities purchase agreement whereby it sold, in a public offering (the February 14, 2017 Public Offering), an aggregate of 1,384,704 shares of common stock of the Company at an offering price of $3.22 per share. In addition, the Company sold Series AA Warrants (the Series AA Warrants) to purchase up to 1,177,790 shares of common stock and Pre-Funded Series BB Warrants (the Pre-Funded Series BB Warrants) to purchase up to 185,713 shares of common stock. The Series AA Warrants have an exercise price of $3.22 per share, have a five-year life and are immediately exercisable. The Pre-Funded Series BB Warrants were offered at $3.08 per share, were immediately exercisable for $0.14 per share of common stock, do not have an expiration date and were issued in lieu of shares of common stock to the extent that the purchase of common stock would cause the beneficial ownership of the purchaser of such shares, together with its affiliates and certain related parties, to exceed 9.99% of our common stock. The Company received approximately $5.0 million in gross proceeds before the deduction of the placement agent fees and offering expenses (excluding any proceeds from the exercise of the warrants) in the February 14, 2017 Public Offering.

In connection with the February 14, 2017 Public Offering, the Company filed with the Securities and Exchange Commission a registration statement on Form S-1 (Registration No. 333-215321) on December 23, 2016, as amended by Pre-Effective Amendment No. 1 filed with the Commission on January 20, 2017, as further amended by Pre-Effective Amendment No. 2 filed with the Commission on February 13, 2017, as further amended by Pre-Effective Amendment No. 3 filed with the Commission on February 13, 2017 and as further amended by Pre-Effective Amendment No. 4 filed with the Commission on February 14, 2017 for the registration of the securities issued and sold under the Securities Act of 1933, as amended.

As of December 31, 2017, all 185,713 of the Series BB Pre-Funded warrants were exercised in full. During 2017, we received approximately $2.4 million from the exercise of Series AA Warrants to purchase 747,254 shares of common stock.

Reduced Exercise Price of Warrants

On February 22, 2013, the Company entered into a securities purchase agreement with certain investors pursuant to which the Company agreed, among other things, to issue warrants (the "2013 Warrants") to purchase up to 95,811 shares of our common stock at an exercise price of $74.34 per share to such investors in a registered direct offering. On January 15, 2014, the Company entered into a securities purchase agreement with certain investors pursuant to which the Company agreed, among other things, to issue warrants (the "2014 Warrants") to purchase up to 64,348 shares of our common stock at an exercise price of $57.40 per share to such investors in a registered direct offering. On June 9, 2017, the Company entered into warrant exercise agreements (the "Exercise Agreements") with certain holders of the 2013 Warrants, the 2014 Warrants and the June 2016 Warrants (the "Exercising Holders"), which Exercising Holders own, in the aggregate, warrants exercisable for 790,410 shares of our common stock. Pursuant to the Exercise Agreements, the Exercising Holders and the Company agreed that the Exercising Holders would exercise their 2013 Warrants, the 2014 Warrants and the June 2016 Warrants with respect to 790,410 shares of our common stock underlying such warrants for a reduced exercise price equal to $2.70 per share. The Company received aggregate gross proceeds of approximately $2.1 million from the exercise of the 2013 Warrants, the 2014 Warrants and the June 2016 Warrants by the Exercising Holders.

The reduced exercise price of the 2013 Warrants, the 2014 Warrants and the June 2016 Series C Warrants increased the fair value of the warrants by approximately $0.2 million. This increase in fair value is recorded as a deemed dividend in additional paid in capital due to the retained deficit and it increased the net loss available to common shareholders on the consolidate statement of operations.

On May 27, 2015 entered into a securities purchase agreement with certain investors pursuant to which the Company agreed, among other things, to issue warrants (the "2015 Warrants") to purchase up to 139,284 shares of the Company's common stock at an exercise price of $36.40 per share, to such investors in a registered direct offering. Between June 22, 2017 through June 26, 2017, the Company and holders of the 2015 Warrants and the December 2016 Warrants (the Exercising Investors) entered into agreements whereby the Company agreed that the Exercising investors would exercise their 2015 Warrants and the June 2016 Warrants with respect to 506,627 shares of our common stock underlying such warrants for a reduced exercise price equal to $1.65 per share. The Company received aggregate gross proceeds of approximately $0.8 million from the exercise of the 2015 Warrants and the June 2016 Warrants by the Exercising Investors.

The reduced exercise price of the 2015 Warrants increased the fair value of the warrants by approximately $0.1 million. This increase in fair value is recorded as a deemed dividend in additional paid in capital due to the retained deficit and it increased the net loss available to common shareholders on the consolidate statement of operations.

Common Stock Warrants

As of March 31, 2018, and December 31, 2017, the Company had outstanding warrants to purchase 3,058,402 shares of common stock with a weighted average exercise price of $5.29. These warrants had weighted average remaining contractual terms of 3.3 years as of March 31, 2018.

Controlled Equity Offering

On February 1, 2013, the Company entered into a Controlled Equity Offering SM Sales Agreement (the "ATM Agreement") with Cantor Fitzgerald & Co., as sales agent ("Cantor"), pursuant to which Celsion may offer and sell, from time to time, through Cantor, shares of our common stock having an aggregate offering price of up to $25.0 million (the "ATM Shares") pursuant to the Company's previously filed and effective Registration Statement on Form S-3. Under the ATM Agreement, Cantor may sell ATM Shares by any method deemed to be an "at-the-market" offering as defined in Rule 415 promulgated under the Securities Act of 1933, as amended, including sales made directly on The NASDAQ Capital Market, on any other existing trading market for our common stock or to or through a market maker. From February 1, 2013 through March 31, 2018, the Company sold and issued an aggregate of 1,784,396 shares of common stock under the ATM Agreement, receiving approximately $12.8 million in gross proceeds.

The Company is not obligated to sell any ATM Shares under the ATM Agreement. Subject to the terms and conditions of the ATM Agreement, Cantor will use commercially reasonable efforts, consistent with its normal trading and sales practices and applicable state and federal law, rules and regulations and the rules of The NASDAQ Capital Market, to sell ATM Shares from time to time based upon the Company's instructions, including any price, time or size limits or other customary parameters or conditions the Company may impose. In addition, pursuant to the terms and conditions of the ATM Agreement and subject to the instructions of the Company, Cantor may sell ATM Shares by any other method permitted by law, including in privately negotiated transactions.

The ATM Agreement will terminate upon the earlier of (i) the sale of ATM Shares under the ATM Agreement having an aggregate offering price of $25 million and (ii) the termination of the ATM Agreement by Cantor or the Company. The ATM Agreement may be terminated by Cantor or the Company at any time upon 10 days' notice to the other party, or by Cantor at any time in certain circumstances, including the occurrence of a material adverse change in the Company. The Company pays Cantor a commission of 3.0% of the aggregate gross proceeds from each sale of ATM Shares and has agreed to provide Cantor with customary indemnification and contribution rights. The Company also reimbursed Cantor for legal fees and disbursements of $50,000 in connection with entering into the ATM Agreement.

On October 2, 2015 and again on February 6, 2018, we filed prospectus supplements to the base prospectus that forms a part of the 2015 Shelf Registration Statement, pursuant to which we may offer and sell up to $17.5 million of shares collectively of common stock from time to time under the ATM Agreement. In January 2018 and thus far in 2018, we have sold 457,070 shares of common stock for net proceeds of $1.3 million under the ATM. As of the date of this filing, we have approximately $12.2 million remaining under the ATM.

Note 12. Stock-Based Compensation

The Company has long-term compensation plans that permit the granting of equity based-awards in the form of stock options, restricted stock, restricted stock units, stock appreciation rights, phantom stock, and performance awards. Generally, the terms of these plans require that the exercise price of the options may not be less than the fair market value of Celsion's common stock on the date the options are granted. Options granted generally vest over various time frames or upon milestone accomplishments. The Company's options generally expire ten years from the date of the grant.

The Celsion Corporation 2007 Stock Incentive Plan (the 2007 Plan), as adopted and amended, permits the granting of 688,531 shares of stock as equity awards in the form of incentive stock options, nonqualified stock options, restricted stock, restricted stock units, stock appreciation rights, phantom stock, and performance awards, or in any combination of the foregoing. Prior to the adoption of the 2007 Plan, the Company adopted two stock plans for directors, officers and employees (one in 2001 and another in 2004) under which 21,164 shares collectively were reserved for future issuance under both of these plans. As these plans have been superseded by the 2007 Plan, any options previously granted which expired, were forfeited, or canceled under these plans were rolled into the 2007 Plan.

The Company has issued stock awards to employees, directors and vendors out of the stock option plans. Options are generally granted with strike prices equal to the market value on the date of the grant.

Incentive stock options may be granted to purchase shares of common stock at a price not less than 100% of the fair market value of the underlying shares on the date of grant, provided that the exercise price of any incentive stock option granted to an eligible employee owning more than 10% of the outstanding stock must be at least 110% of the such fair market value on the date of grant. Only officers and key employees may receive incentive stock options; all other qualified participants may receive non-qualified stock options.

Option awards vest upon terms determined by the Board of Directors. Restricted stock awards, performance stock awards and stock options are subject to accelerated vesting in the event of a change of control. The Company issues new shares to satisfy its obligations from the exercise of options.

As of March 31, 2018, there were a total of 705,893 shares reserved, which were comprised of 597,241 equity awards granted and 102,652 equity awards available for future issuance.

Total compensation cost charged related to employee stock options and restricted stock awards amounted to $169,508 and $117,466 for the three-month periods ended March 31, 2018 and 2017, respectively. As of March 31, 2018, there was $0.4 million of total unrecognized compensation cost related to non-vested stock-based compensation arrangements. That cost is expected to be recognized over a weighted-average period of 0.9 years. The weighted average grant-date fair values of the stock option awards granted during three-month periods ended March 31, 2018 was $2.27. No stock option awards or restricted stock grants were granted during the three-month period ended March 31, 2017.

A summary of stock option awards and restricted stock grants for the three months ended March 31, 2018 is presented below:

	Stock Options		Restricted Stock Awards		Weighted Average Contractual Terms of Equity Awards (in years)
Equity Awards	**Options Outstanding**	**Weighted Average Exercise Price**	**Non-vested Restricted Stock Outstanding**	**Weighted Average Grant Date Fair Value**	
Equity awards outstanding at January 1, 2018	703,442	$ 10.34	–	$ –	
Equity awards granted	7,500	$ 2.52	6,000	$ 2.64	
Vested and issued	–	$ –	(6,000)	$ 2.64	
Equity awards forfeited, cancelled or expired	(113,701)	$ 40.23	–	$ –	
Equity awards outstanding at March 31, 2018	597,241	$ 4.48	–	$ –	9.1
Aggregate intrinsic value of outstanding awards at March 31, 2018	$ 2,750		$ –		
Equity awards exercisable at March 31, 2018	320,877	$ 5.79			9.0
Aggregate intrinsic value of awards exercisable at March 31, 2018	$ –				

The fair values of stock options granted were estimated at the date of grant using the Black-Scholes option pricing model. The Black-Scholes model was originally developed for use in estimating the fair value of traded options, which have different characteristics from Celsion's stock options. The model is also sensitive to changes in assumptions, which can materially affect the fair value estimate. The Company used the following assumptions for determining the fair value of options granted under the Black-Scholes option pricing model:

	Three months ended March 31, 2018
Risk-free interest rate	2.82%
Expected volatility	99.9%
Expected life (in years)	10
Expected dividend yield	0.0%

Expected volatilities utilized in the model are based on historical volatility of the Company's stock price. The risk-free interest rate is derived from values assigned to U.S. Treasury bonds with terms that approximate the expected option lives in effect at the time of grant. Starting in 2017, the Company elected to account for any forfeitures when they occur. The expiration of each option granted in fiscal year 2018 was used as the expected life.

Note 13. Earn-out Milestone Liability

The total aggregate purchase price for the EGEN Acquisition included potential future Earn-out Payments contingent upon achievement of certain milestones. The difference between the aggregate $30.4 million in future Earn-out Payments and the $13.9 million included in the fair value of the acquisition consideration at June 20, 2014 was based on the Company's risk-adjusted assessment of each milestone (10% to 67%) and utilizing a discount rate based on the estimated time to achieve the milestone (1.5 to 2.5 years). The earn-out milestone liability will be fair valued at the end of each quarter and any change in their value will be recognized in the financial statements.

As of March 31, 2018, and December 31, 2017, the Company fair valued these milestones at $12.8 million and $12.5 million, respectively, and recognized a non-cash charge of $270,195 during the three months ended March 31, 2018 as a result of the change in the fair value of these milestones from December 31, 2015. As of March 31, 2017, and December 31, 2016, the Company fair valued these milestones at $13.5 million and $13.2 million, respectively, and recognized a non-cash charge of $283,751 during the three months ended March 31, 2017 as a result of the change in the fair value of these milestones from December 31, 2016.

The following is a summary of the changes in the earn-out milestone liability for 2018:

Balance at January 1, 2018	$	12,538,525
Non-cash charge from the adjustment for the change in fair value included in net loss		270,195
Balance at March 31, 2018	$	12,808,720

The following is a schedule of the Company’s risk-adjustment assessment of each milestone:

Date	Risk-adjustment Assessment of each Milestone	Discount Rate	Estimated Time to Achieve (in years)
March 31, 2018	35% to 80%	9%	1.08 to 1.25
December 31, 2017	35% to 80%	9%	1.33 to 1.50
March 31, 2017	50% to 80%	9%	1.75 to 2.25
December 31, 2016	50% to 80%	9%	2.00 to 2.50

Note 14. Contingent Liabilities and Commitments

In July 2011, the Company executed a lease (the “Lease”) with Brandywine Operating Partnership, L.P. (Brandywine), a Delaware limited partnership for a 10,870 square foot premises located in Lawrenceville, New Jersey. In October 2011, the Company relocated its offices to Lawrenceville, New Jersey from Columbia, Maryland. The lease has a term of 66 months and provides for 6 months of rent free, with the first monthly rent payment of approximately $23,000 due and paid in April 2012. Also, as required by the Lease, the Company provided Brandywine with an irrevocable and unconditional standby letter of credit for $250,000, which the Company secured with an escrow deposit at its banking institution of this same amount. The standby letter of credit was reduced by $50,000 on each of the 19th, 31st and 43rd months from the initial term, and the remaining $100,000 amount was reduced when the Lease term expired in April 2017. In late 2015, Lenox Drive Office Park LLC, purchased the real estate and office building and assumed the lease. This lease was set to expire on April 30, 2017. In April 2017, the Company and the landlord amended the Lease effective May 1, 2017. The Lease amendment extended the term of the agreement for an additional 64 months, reduced the premises to 7,565 square feet, reduced the monthly rent and provided four months free rent. The monthly rent will range from approximately $18,900 in the first year to approximately $20,500 in the final year of the amendment. The Company also has a one-time option to cancel the lease as of the 24th month after the commencement date of the Lease amendment.

In connection with the EGEN Asset Purchase Agreement in June 2014, the Company assumed the existing lease with another landlord for an 11,500 square foot premises located in Huntsville Alabama. This lease expired at the end of January 2018. In January 2018, the Company and this landlord entered into a new 60-month lease which reduced the premises to 9,049 square feet with rent payments of approximately $18,100 per month.

Note 15. Technology Development and Licensing Agreements

On May 7, 2012, the Company entered into a long-term commercial supply agreement with Zhejiang Hisun Pharmaceutical Co. Ltd. (Hisun) for the production of ThermoDox® in the China territory. In accordance with the terms of the agreement, Hisun will be responsible for providing all of the technical and regulatory support services, including the costs of all technical transfer, registration and bioequivalence studies, technical transfer costs, Celsion consultative support costs and the purchase of any necessary equipment and additional facility costs necessary to support capacity requirements for the manufacture of ThermoDox®. Celsion will repay Hisun for the aggregate amount of these development costs and fees commencing on the successful completion of three registration batches of ThermoDox®. Hisun is also obligated to certain performance requirements under the agreement. The agreement will initially be limited to a percentage of the production requirements of ThermoDox® in the China territory with Hisun retaining an option for additional global supply after local regulatory approval in the China territory. In addition, Hisun will collaborate with Celsion around the regulatory approval activities for ThermoDox® with the China State Food and Drug Administration (CHINA FDA). During the first quarter of 2015, Hisun completed the successful manufacture of three registration batches of ThermoDox®.

On January 18, 2013, we entered into a technology development contract with Hisun, pursuant to which Hisun paid us a non-refundable research and development fee of $5 million to support our development of ThermoDox® in mainland China, Hong Kong and Macau (the China territory). Following our announcement on January 31, 2013 that the HEAT study failed to meet its primary endpoint, Celsion and Hisun have agreed that the Technology Development Contract entered into on January 18, 2013 will remain in effect while the parties continue to collaborate and are evaluating the next steps in relation to ThermoDox®, which include the sub-group analysis of patients in the Phase III HEAT Study for the hepatocellular carcinoma clinical indication and other activities to further the development of ThermoDox® for the Greater China market. The $5.0 million received as a non-refundable payment from Hisun in the first quarter 2013 has been recorded to deferred revenue and will continue to be amortized over the 10-year term of the agreement, until such time as the parties find a mutually acceptable path forward on the development of ThermoDox® based on findings of the ongoing post-study analysis of the HEAT Study data.

On July 19, 2013, the Company and Hisun entered into a Memorandum of Understanding to pursue ongoing collaborations for the continued clinical development of ThermoDox® as well as the technology transfer relating to the commercial manufacture of ThermoDox® for the China territory. This expanded collaboration includes development of the next generation liposomal formulation with the goal of creating safer, more efficacious versions of marketed cancer chemotherapeutics.

Among the key provisions of the Celsion-Hisun Memorandum of Understanding are:

- Hisun will provide the Company with non-dilutive financing and the investment necessary to complete the technology transfer of its proprietary manufacturing process and the production of registration batches for the China territory;

- Hisun will collaborate with the Company around the clinical and regulatory approval activities for ThermoDox® as well as other liposomal formations with the CHINA FDA; and

- Hisun will be granted a right of first offer for a commercial license to ThermoDox® for the sale and distribution of ThermoDox® in the China territory.

On August 8, 2016, we signed a Technology Transfer, Manufacturing and Commercial Supply Agreement (“GEN-1 Agreement”) with Hisun to pursue an expanded partnership for the technology transfer relating to the clinical and commercial manufacture and supply of GEN-1, Celsion’s proprietary gene mediated, IL-12 immunotherapy, for the greater China territory, with the option to expand into other countries in the rest of the world after all necessary regulatory approvals are in effect. The GEN-1 Agreement will help to support supply for both ongoing and planned clinical studies in the U.S., and for potential future studies of GEN-1 in China. GEN-1 is currently being evaluated by Celsion in first line ovarian cancer patients.

Key provisions of the GEN-1 Agreement are as follows:

- the GEN-1 Agreement has targeted unit costs for clinical supplies of GEN-1 that are substantially competitive with the Company’s current suppliers;

- once approved, the cost structure for GEN-1 will support rapid market adoption and significant gross margins across global markets;

- Celsion will provide Hisun a certain percentage of China’s commercial unit demand, and separately of global commercial unit demand, subject to regulatory approval;

- Hisun and Celsion will commence technology transfer activities relating to the manufacture of GEN-1, including all studies required by CFDA for site approval; and

- Hisun will collaborate with Celsion around the regulatory approval activities for GEN-1 with the CFDA. A local China partner affords Celsion access to accelerated CFDA review and potential regulatory exclusivity for the approved indication.

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS.

Forward-Looking Statements

Statements and terms such as "expect", "anticipate", "estimate", "plan", "believe" and words of similar import regarding our expectations as to the development and effectiveness of our technologies, the potential demand for our products, and other aspects of our present and future business operations, constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Although we believe that our expectations are based on reasonable assumptions within the bounds of our knowledge of our industry, business and operations, we cannot guarantee that actual results will not differ materially from our expectations. In evaluating such forward-looking statements, readers should specifically consider the various factors contained in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2017 filed with the Securities and Exchange Commission (SEC) on March 27, 2018, which factors include, without limitation, plans and objectives of management for future operations or programs or proposed new products or services; changes in the course of research and development activities and in clinical trials; possible changes in cost and timing of development and testing; possible changes in capital structure, financial condition, working capital needs and other financial items; changes in approaches to medical treatment; clinical trial analysis and future plans relating thereto; our ability to realize the full extent of the anticipated benefits of our acquisition of substantially all of the assets of EGEN, Inc., including achieving operational cost savings and synergies in light of any delays we may encounter in the integration process and additional unforeseen expenses; introduction of new products by others; possible licenses or acquisitions of other technologies, assets or businesses; and possible actions by customers, suppliers, partners, competitors and regulatory authorities. These and other risks and uncertainties could cause actual results to differ materially from those indicated by forward-looking statements.

The discussion of risks and uncertainties set forth in this Quarterly Report on Form 10-Q and in our most recent Annual Report on Form 10-K, as well as in other filings with the SEC, is not a complete or exhaustive list of all risks facing the Company at any particular point in time. We operate in a highly competitive, highly regulated and rapidly changing environment and our business is constantly evolving. Therefore, it is likely that new risks will emerge, and that the nature and elements of existing risks will change, over time. It is not possible for management to predict all such risk factors or changes therein, or to assess either the impact of all such risk factors on our business or the extent to which any individual risk factor, combination of factors, or new or altered factors, may cause results to differ materially from those contained in any forward-looking statement. We disclaim any obligation to revise or update any forward-looking statement that may be made from time to time by us or on our behalf.

Strategic and Clinical Overview

Celsion is a fully-integrated development stage oncology drug company focused on advancing a portfolio of innovative cancer treatments, including directed chemotherapies, DNA-mediated immunotherapy and RNA based therapies. Our lead product candidate is ThermoDox®, a proprietary heat-activated liposomal encapsulation of doxorubicin, currently in a Phase III clinical trial for the treatment of primary liver cancer (the OPTIMA Study). Second in our pipeline is GEN-1, a DNA-mediated immunotherapy for the localized treatment of ovarian and brain cancers. We have two platform technologies providing the basis for the future development of a range of therapeutics for difficult-to-treat forms of cancer including: Lysolipid Thermally Sensitive Liposomes, a heat sensitive liposomal based dosage form that targets disease with known therapeutics in the presence of mild heat and TheraPlas, a novel nucleic acid-based treatment for local transfection of therapeutic plasmids. With these technologies we are working to develop and commercialize more efficient, effective and targeted oncology therapies that maximize efficacy while minimizing side-effects common to cancer treatments.

ThermoDox®

ThermoDox® is being evaluated in a Phase III clinical trial for primary liver cancer, which we call the OPTIMA Study, which was initiated in 2014 and a Phase II clinical trial for recurrent chest wall breast cancer. ThermoDox® is a liposomal encapsulation of doxorubicin, an approved and frequently used oncology drug for the treatment of a wide range of cancers. Localized heat at hyperthermia temperatures (greater than 40° Celsius) releases the encapsulated doxorubicin from the liposome enabling high concentrations of doxorubicin to be deposited preferentially in and around the targeted tumor.

The OPTIMA Study. The OPTIMA Study represents an evaluation of ThermoDox® in combination with a first line therapy, radio frequency ablation (RFA), for newly diagnosed, intermediate stage HCC patients. HCC incidence globally is approximately 850,000 new cases per year and is the third largest cancer indication globally. Approximately 30% of newly diagnosed patients can be addressed with RFA alone.

On February 24, 2014, we announced that the United States Food and Drug Administration (the "FDA"), after its customary 30-day review period, provided clearance for the OPTIMA Study, which is a pivotal, double-blind, placebo-controlled Phase III trial of ThermoDox®, in combination with standardized RFA, for the treatment of primary liver cancer. The trial design of the OPTIMA Study is based on the comprehensive analysis of data from an earlier clinical trial called the HEAT Study, which is described below. The OPTIMA Study is supported by a hypothesis developed from an overall survival analysis of a large subgroup of patients from the HEAT Study.

We initiated the OPTIMA Study in the first half of 2014. The OPTIMA Study was designed with extensive input from globally recognized hepatocellular carcinoma ("HCC") researchers and expert clinicians and after receiving formal written consultation from the FDA. The OPTIMA Study is expected to enroll up to 550 patients globally at up to 70 sites in the United States, Canada, Europe Union, China and other countries in the Asia-Pacific region, and will evaluate ThermoDox® in combination with standardized RFA, which will require a minimum of 45 minutes across all investigators and clinical sites for treating lesions three to seven centimeters, versus standardized RFA alone. The primary endpoint for this clinical trial is overall survival ("OS"), and the secondary endpoints are progression free survival and safety. The statistical plan calls for two interim efficacy analyses by an independent Data Monitoring Committee (DMC).

On December 16, 2015, we announced that we had received the clinical trial application approval from the China Food and Drug Administration (the "CFDA") to conduct the OPTIMA Study in China. This clinical trial application approval will allow Celsion to enroll patients at up to 20 clinical sites in China. On April 26, 2016, we announced that the first patient in China had been enrolled in the OPTIMA Study. Results from the OPTIMA Study, if successful, will provide the basis for a global registration filing and marketing approval.

On April 9, 2018, the Company announced that the independent Data Monitoring Committee (DMC) for the Company's OPTIMA Study completed its last regularly scheduled review of the patients enrolled in the trial and has unanimously recommended that the OPTIMA Study continue according to protocol to its final data readout. The DMC's recommendation was based on the Committee's assessment of safety and data integrity of the first 75% of patients randomized in the trial as of February 5, 2018. The DMC reviewed study data at regular intervals, with the primary responsibilities of ensuring the safety of all patients enrolled in the study, the quality of the data collected, and the continued scientific validity of the study design. As part of its review of the first 413 patients, the DMC monitored a quality matrix relating to the total clinical data set, confirming the timely collection of data, that all data are current as well as other data collection and quality criteria.

Post-hoc data analysis from the Company's earlier Phase III HEAT Study suggest that ThermoDox® may substantially improve OS, when compared to the control group, in patients if their lesions undergo a 45 minute RFA procedure standardized for a lesion greater than 3 cm in diameter. Data from nine OS sweeps have been conducted since the top line progression free survival ("PFS") data from the HEAT Study were announced in January 2013, with each data set demonstrating substantial improvement in clinical benefit over the control group with statistical significance. On August 15, 2016, the Company announced updated results from its final retrospective OS analysis of the data from the HEAT Study. These results demonstrated that in a large, well bounded, subgroup of patients with a single lesion (n=285, 41% of the HEAT Study patients), treatment with a combination of ThermoDox® and optimized RFA provided an average 54% risk improvement in OS compared to optimized RFA alone. The Hazard Ratio ("HR") at this analysis is 0.65 (95% CI 0.45 - 0.94) with a p-value of 0.02. Median OS for the ThermoDox® group has been reached which translates into a two year survival benefit over the optimized RFA group (projected to be greater than 80 months for the ThermoDox® plus optimized RFA group compared to less than 60 months projection for the optimized RFA only group).

Additional findings from this most recent analysis specific to the Chinese patient cohort of 223 patients are summarized below:

- In the population of 154 patients with a single lesion who received optimized RFA treatment for 45 minutes or more showed a 53% risk improvement in OS (HR = 0.66) when treated with ThermoDox® plus optimized RFA.

- These data continue to support and further strengthen ThermoDox®'s potential to significantly improve OS compared to an RFA control in patients with lesions that undergo optimized RFA treatment for 45 minutes or more. The clinical benefit seen in the intent-to-treat Chinese patient cohort further confirms the importance of RFA heating time as 72% of patients in this large patient cohort in China received an optimized RFA treatment.

While this information should be viewed with caution since it is based on a retrospective analysis of a subgroup, we also conducted additional analyses that further strengthen the evidence for the HEAT Study sub-group. We commissioned an independent computational model at the University of South Carolina Medical School. The results indicate that longer RFA heating times correlate with significant increases in doxorubicin concentration around the RFA treated tissue. In addition, we conducted a prospective preclinical study in 22 pigs using two different manufacturers of RFA and human equivalent doses of ThermoDox® that clearly support the relationship between increased heating duration and doxorubicin concentrations.

On November 29, 2016, the Company announced the results of an independent analysis conducted by the National Institutes of Health (the "NIH") from the HEAT Study which reaffirmed the correlation between increased RFA burn time per tumor volume and improvements in overall survival. The NIH analysis, which sought to evaluate the correlation between RFA burn time per tumor volume (min/ml) and clinical outcome, concluded that increased burn time per tumor volume significantly improved overall survival in patients treated with RFA plus ThermoDox® compared to patients treated with RFA alone. For all patients with single lesions treated with RFA plus ThermoDox®:

- One-unit increase in RFA duration per tumor volume improved overall survival by 20% (p=0.017; n=227);
- More significant differences in subgroup of patients with RFA burn times per tumor volume greater than 2.5 minutes per ml;
- Cox multiple covariate analysis showed overall survival to be significant (p=0.038; Hazard Ratio = 0.85); and
- Burn time per tumor volume did not have a significant effect on overall survival in single lesion patients treated with RFA only.

The HEAT Study. On January 31, 2013, the Company announced that the HEAT Study, ThermoDox® in combination with RFA, did not meet the primary endpoint, PFS, of a Phase III clinical trial enrolling 701 patients with primary liver cancer. This determination was made after conferring with the HEAT Study independent DMC, that the HEAT Study did not meet the goal of demonstrating a clinically meaningful improvement in progression free survival. In the trial, ThermoDox® was well-tolerated with no unexpected serious adverse events. Following the announcement of the HEAT Study results, we continued to follow patients for OS, the secondary endpoint of the HEAT Study. We have conducted a comprehensive analysis of the data from the HEAT Study to assess the future strategic value and development strategy for ThermoDox®.

The DIGNITY Study. On December 14, 2015, we announced final data from our ongoing DIGNITY study, which is an open-label, dose-escalating Phase II trial of ThermoDox® in patients with recurrent chest wall breast cancer. The DIGNITY Study was designed to establish a safe therapeutic dose in Phase I, and to demonstrate local control in Phase II, including complete and partial responses, and stable disease as its primary endpoint. The DIGNITY Study was also designed to evaluate kinetics in ThermoDox® produced from more than one manufacturing site. Of the 29 patients enrolled and treated, 21 patients were eligible for evaluation of efficacy. Approximately 62% of evaluable patients experienced a local response, including six complete responses and seven partial responses.

Acquisition of EGEN Assets

On June 20, 2014, we completed the acquisition of substantially all of the assets of EGEN, Inc., an Alabama corporation, which has changed its company name to EGWU, Inc. after the closing of the acquisition ("EGEN"), pursuant to an asset purchase agreement dated as of June 6, 2014, by and between EGEN and Celsion (the "Asset Purchase Agreement"). We acquired all of EGEN's right, title and interest in and to substantially all of the assets of EGEN, including cash and cash equivalents, patents, trademarks and other intellectual property rights, clinical data, certain contracts, licenses and permits, equipment, furniture, office equipment, furnishings, supplies and other tangible personal property. In addition, CLSN Laboratories assumed certain specified liabilities of EGEN, including the liabilities arising out of the acquired contracts and other assets relating to periods after the closing date. The total purchase price for the asset acquisition is up to $44.4 million, including potential future earnout payments of up to $30.4 million contingent upon achievement of certain earnout milestones set forth in the Asset Purchase Agreement. At the closing, we paid approximately $3.0 million in cash after the expense adjustment and issued 193,728 shares of our common stock to EGEN. The shares of common stock were issued in a private transaction exempt from registration under the Securities Act, pursuant to Section 4(2) thereof. In addition, the Company held back 47,862 shares of common stock issuable to EGEN pending satisfactory resolution of any post-closing adjustments of expenses and EGEN's indemnification obligations under the EGEN Purchase Agreement (Holdback Shares). These shares were issued on June 16, 2017.

After its review in 2016, management concluded that there was no immediate opportunity to out-license TheraSilence. As a result of this analysis, the earnout payments were adjusted prior to 2017 and are now up to $24.4 million that may become payable, in cash, shares of our common stock or a combination thereof, at our option, upon achievement of two major milestone events as follows:

- $12.4 million will become payable upon achieving certain specified development milestones relating to an ovarian cancer study of GEN-1 (formerly known as EGEN-001) to be conducted by us or our subsidiary; and

- $12.0 million will become payable upon achieving certain specified development milestones relating to a GEN-1 glioblastoma multiforme brain cancer study to be conducted by us or our subsidiary.

Our obligations to make the earnout payments will terminate on the seventh anniversary of the closing date. In the acquisition, we purchased GEN-1, a DNA-based immunotherapy for the localized treatment of ovarian and brain cancers, and two platform technologies for the development of treatments for those suffering with difficult-to-treat forms of cancer, novel nucleic acid-based immunotherapies and other anti-cancer DNA or RNA therapies, including TheraPlas and TheraSilence.

GEN-1

GEN-1 is a DNA-based immunotherapeutic product for the localized treatment of ovarian and brain cancers by intraperitoneally administering an Interleukin-12 (“IL-12”) plasmid formulated with our proprietary TheraPlas delivery system. In this DNA-based approach, the immunotherapy is combined with a standard chemotherapy drug, which can potentially achieve better clinical outcomes than with chemotherapy alone. We believe that increases in IL-12 concentrations at tumor sites for several days after a single administration could create a potent immune environment against tumor activity and that a direct killing of the tumor with concomitant use of cytotoxic chemotherapy could result in a more robust and durable antitumor response than chemotherapy alone. We believe the rationale for local therapy with GEN-1 are based on the following:

- Loco-regional production of the potent cytokine IL-12 avoids toxicities and poor pharmacokinetics associated with systemic delivery of recombinant IL-12;

- Persistent local delivery of IL-12 lasts up to one week and dosing can be repeated; and

- Ideal for long-term maintenance therapy.

GEN-I OVATION Study. In February 2015, we announced that the FDA accepted, without objection, the Phase I dose-escalation clinical trial of GEN-1 in combination with the standard of care in neo-adjuvant ovarian cancer (the OVATION Study). On September 30, 2015, we announced enrollment of the first patient in the OVATION Study. The OVATION Study is designed to (i) to identify a safe, tolerable and potentially therapeutically active dose of GEN-1 by recruiting and maximizing an immune response and (ii) to enroll three to six patients per dose level and will evaluate safety and efficacy and attempt to define an optimal dose for a follow-on Phase I/II study. In addition, the OVATION Study establishes a unique opportunity to assess how cytokine-based compounds such as GEN-1, directly affect ovarian cancer cells and the tumor microenvironment in newly diagnosed patients. The study is designed to characterize the nature of the immune response triggered by GEN-1 at various levels of the patients' immune system, including:

- Infiltration of cancer fighting T-cell lymphocytes into primary tumor and tumor microenvironment including peritoneal cavity, which is the primary site of metastasis of ovarian cancer;

- Changes in local and systemic levels of immuno-stimulatory and immunosuppressive cytokines associated with tumor suppression and growth, respectively; and

- Expression profile of a comprehensive panel of immune related genes in pre-treatment and GEN-1-treated tumor tissue.

We initiated the OVATION Study at four clinical sites at the University of Alabama at Birmingham, Oklahoma University Medical Center, Washington University in St. Louis and the Medical College of Wisconsin. During 2016 and 2017, we announced data from the first fourteen patients in the OVATION Study, who completed treatment.

On October 3, 2017, we announced final clinical and translational research data from the OVATION Study, a Phase Ib dose escalating clinical trial combining GEN-1 with the standard of care for the treatment of newly-diagnosed patients with advanced Stage III/IV ovarian cancer who will undergo neoadjuvant chemotherapy followed by interval debulking surgery.

Key translational research findings from all evaluable patients are consistent with the earlier reports from partial analysis of the data and are summarized below:

- The intraperitoneal treatment of GEN-1 in conjunction with neoadjuvant chemotherapy resulted in dose dependent increases in IL-12 and Interferon-gamma (IFN-g) levels that were predominantly in the peritoneal fluid compartment with little to no changes observed in the patients' systemic circulation. These and other post-treatment changes including decreases in VEGF levels in peritoneal fluid are consistent with an IL-12 based immune mechanism;

- Consistent with the previous partial reports, the effects observed in the IHC analysis were pronounced decreases in the density of immunosuppressive T-cell signals (Foxp3, PD-1, PDL-1, IDO-1) and increases in CD8+ cells in the tumor microenvironment;

- The ratio of CD8+ cells to immunosuppressive cells was increased in approximately 75% of patients suggesting an overall shift in the tumor microenvironment from immunosuppressive to pro-immune stimulatory following treatment with GEN-1. An increase in CD8+ to immunosuppressive T-cell populations is a leading indicator and believed to be a good predictor of improved overall survival; and

- Analysis of peritoneal fluid by cell sorting, not reported before, shows treatment-related decrease in the percentage of immunosuppressive T-cell (Foxp3+), which is consistent with the reduction of Foxp3+ T-cells in the primary tumor tissue, and a shift in tumor naïve CD8+ cell population to more efficient tumor killing memory effector CD8+ cells.

The Company also reported positive clinical data from the first fourteen patients who have completed treatment in the OVATION Study. GEN-1 plus standard chemotherapy produced positive clinical results, with no dose limiting toxicities and positive dose dependent efficacy signals which correlate well with positive surgical outcomes as summarized below:

- Of the fourteen patients treated in the entire study, two patients demonstrated a complete response, ten patients demonstrated a partial response and two patients demonstrated stable disease, as measured by RECIST criteria. This translates to a 100% disease control rate ("DCR") and an 86% objective response rate ("ORR"). Of the five patients treated in the highest dose cohort, there was a 100% objective response rate with one complete response and four partial responses;

- Fourteen patients had successful resections of their tumors, with nine patients (64%) having an R0 resection, which indicates a microscopically margin-negative resection in which no gross or microscopic tumor remains in the tumor bed. Seven out of eight (87%) patients in the highest two dose cohorts experienced a R0 surgical resection. All five patients treated at the highest dose cohort experienced a R0 surgical resection;

- All patients experienced a clinically significant decrease in their CA-125 protein levels as of their most recent study visit. CA-125 is used to monitor certain cancers during and after treatment. CA-125 is present in greater concentrations in ovarian cancer cells than in other cells; and

- Of the 13 patients who received GEN-1 treatment in all four dose escalating cohorts, only five patients' cancers have progressed as of March 31, 2018. Median PFS for all 13 patients in the OVATION Study is 21.4 months as of March 15, 2018 and counting. This compares favorably to the historical median progression-free survival of 12 months for newly diagnosed patients with Stage III and IV ovarian cancer that undergo neoadjuvant chemotherapy followed by interval debulking surgery.

GEN-1 OVATION II Study. The Company held an Advisory Board Meeting on September 27, 2017 with the clinical investigators and scientific experts including those from Roswell Park Cancer Institute, Vanderbilt University Medical School, and M.D. Anderson Cancer Center to review and finalize clinical, translational research and safety data from the Phase IB OVATION Study in order to determine the next steps forward for our GEN-1 immunotherapy program.

On November 13, 2017, the Company filed its Phase I/II clinical trial protocol with the U.S. Food and Drug Administration for GEN-1 for the localized treatment of ovarian cancer. The protocol is designed with a single dose escalation phase to 100 mg/m² to identify a safe and tolerable dose of GEN-1 while maximizing an immune response. The 12 patient Phase I portion of the study will be followed by a continuation at the selected dose in up to 118 patient randomized Phase II study. GEN-1 has demonstrated positive safety and efficacy data in the recently completed dose escalation Phase IB trial in combination with neoadjuvant chemotherapy.

The study protocol was unanimously supported by an expert medical advisory board and lead investigators from the Phase IB OVATION Study and is summarized below:

- Open label, 1:1 randomized design;
- Enrollment up to 130 patients with Stage III/IV ovarian cancer patients at ten U.S. centers; and
- Primary endpoint of improvement in progression-free survival (PFS) comparing GEN-1 with neoadjuvant chemotherapy versus neoadjuvant chemotherapy alone.

TheraPlas Technology Platform. TheraPlas is a technology platform for the delivery of DNA and messenger RNA ("mRNA") therapeutics via synthetic non-viral carriers and is capable of providing cell transfection for double-stranded DNA plasmids and large therapeutic RNA segments such as mRNA. There are two components of the TheraPlas system, a plasmid DNA or mRNA payload encoding a therapeutic protein and a delivery system. The delivery system is designed to protect the DNA/RNA from degradation and promote trafficking into cells and through intracellular compartments. We designed the delivery system of TheraPlas by chemically modifying the low molecular weight polymer to improve its gene transfer activity without increasing toxicity. We believe TheraPlas is a viable alternative to current approaches to gene delivery due to several distinguishing characteristics, including enhanced molecular versatility that allows for complex modifications to improve activity and safety.

Technology Development and Licensing Agreements. Our current efforts and resources are applied on the development and commercialization of cancer drugs including tumor-targeting chemotherapy treatments using focused heat energy in combination with heat-activated drug delivery systems, immunotherapies and RNA-based therapies.

On August 8, 2016, we signed a Technology Transfer, Manufacturing and Commercial Supply Agreement (the "GEN-1 Agreement") with Zhejiang Hisun Pharmaceutical Co. Ltd. (Hisun) to pursue an expanded partnership for the technology transfer relating to the clinical and commercial manufacture and supply of GEN-1, Celsion's proprietary gene mediated, IL-12 immunotherapy, for the greater China territory, with the option to expand into other countries in the rest of the world after all necessary regulatory approvals are obtained. The GEN-1 Agreement will help to support supply for both ongoing and planned clinical studies in the United States, and for potential future studies of GEN-1 in China. GEN-1 is currently being evaluated by Celsion in first line ovarian cancer patients.

In June 2012, Celsion and Hisun signed a long-term commercial supply agreement for the production of ThermoDox®. Hisun is one the largest manufacturers of chemotherapy agents globally, including doxorubicin. In July 2013, the ThermoDox® collaboration was expanded to focus on next generation liposomal formulation development with the goal of creating safer, more efficacious versions of marketed cancer chemotherapeutics. During 2015, Hisun successfully completed the manufacture of three registration batches for ThermoDox® and has obtained regulatory approvals to supply ThermoDox® to participating clinical trial sites in all of the countries of South East Asia, Europe and North America, as well as to the European Union countries allowing for early access to ThermoDox®. The future manufacturing of clinical and commercial supplies by Hisun will result in a cost structure allowing Celsion to profitably access all global markets, including third world countries, and help accelerate the Company's product development program in China for ThermoDox® in primary liver cancer and other approved indications.

Business Plan

As a clinical stage biopharmaceutical company, our business and our ability to execute our strategy to achieve our corporate goals are subject to numerous risks and uncertainties. Material risks and uncertainties relating to our business and our industry are described in "Part II, Item 1A. Risk Factors" in this Quarterly Report on Form 10-Q.

Since inception, the Company has incurred substantial operating losses, principally from expenses associated with the Company's research and development programs, clinical trials conducted in connection with the Company's product candidates, and applications and submissions to the Food and Drug Administration. We have not generated significant revenue and have incurred significant net losses in each year since our inception. We have incurred approximately $266 million of cumulated net losses. As of March 31, 2018, we had approximately $20.8 million in cash, investment securities and interest receivable. We have substantial future capital requirements to continue our research and development activities and advance our product candidates through various development stages. The Company believes these expenditures are essential for the commercialization of its technologies.

The Company expects its operating losses to continue for the foreseeable future as it continues its product development efforts, and when it undertakes marketing and sales activities. The Company's ability to achieve profitability is dependent upon its ability to obtain governmental approvals, produce, and market and sell its new product candidates. There can be no assurance that the Company will be able to commercialize its technology successfully or that profitability will ever be achieved. The operating results of the Company have fluctuated significantly in the past. We have substantial future capital requirements associated with our continued research and development activities and to advance our product candidates through various stages of development. The Company believes these expenditures are essential for the commercialization of its technologies.

The actual amount of funds the Company will need to operate is subject to many factors, some of which are beyond the Company's control. These factors include the following:

- the progress of research activities;
- the number and scope of research programs;
- the progress of preclinical and clinical development activities;
- the progress of the development efforts of parties with whom the Company has entered into research and development agreements;
- the costs associated with additional clinical trials of product candidates;
- the ability to maintain current research and development licensing arrangements and to establish new research and development and licensing arrangements;
- the ability to achieve milestones under licensing arrangements;
- the costs involved in prosecuting and enforcing patent claims and other intellectual property rights; and
- the costs and timing of regulatory approvals.

The Company has based its estimate on assumptions that may prove to be wrong. The Company may need to obtain additional funds sooner or in greater amounts than it currently anticipates. Potential sources of financing include strategic relationships, public or private sales of the Company's shares or debt and other sources. If the Company raises funds by selling additional shares of common stock or other securities convertible into common stock, the ownership interest of existing stockholders may be diluted.

With the $20.8 million in cash, investment securities and interest receivable at March 31, 2018, the Company believes it has sufficient capital resources to fund its operations into the third quarter of 2019. The Company will be required to obtain additional funding in order to continue the development of its current product candidates within the anticipated time periods, if at all, and to continue to fund operations. As more fully discussed in Note 11, the Company has $12.2 million available for future sale under a controlled equity offering facility it has with Cantor Fitzgerald & Co. as of March 31, 2018.

Financing Overview

Equity and Debt Financings

During 2017 and thus far in 2018, we issued a total of 15.4 million shares of common stock; in the following equity transactions for an aggregate $43.9 million in gross proceeds.

- The Company received gross proceeds of $22.0 million from the exercise of warrants to purchase approximately 7.6 million shares of common stock in 2017.

- On October 27, 2017, the Company entered into an underwriting agreement (the "Underwriting Agreement") with Oppenheimer & Co. Inc. (the "Underwriter"), relating to the issuance and sale (the "October 2007 Offering") of 2,640,000 shares of common stock of the Company and warrants to purchase an aggregate of 1,320,000 shares of common stock of the Company. Each share of common stock was sold together with 0.5 warrants (the "Investor Warrants"), each whole Investor Warrant being exercisable for one share of common stock, at a offering price of $2.50 per share and related Investor Warrants. Pursuant to the terms of the Underwriting Agreement, the Underwriter has agreed to purchase the shares and related Investor Warrants from the Company at a price of $2.325 per share and related Investor Warrant. Each Investor Warrant is exercisable six months from the date of issuance. The Investor Warrants have an exercise price of $3.00 per whole share, and expire five years from the date first exercisable. The Company received $6.6 million of gross proceeds from the sale of the Shares and Investor Warrant. The October 2017 Offering closed on October 31, 2017.

- On July 6, 2017, the Company entered into a securities purchase agreement with several investors, pursuant to which the Company agreed to issue and sell, in a registered direct offering, an aggregate of 2,050,000 shares of common stock of the Company at an offering price of $2.07 per share for gross proceeds of $4.2 million before the deduction of the placement agent fee and offering expenses. In addition, the Company sold Pre-Funded Series CCC Warrants to purchase 385,000 shares of common stock (and the shares of common stock issuable upon exercise of the Pre-Funded Series CCC Warrants), in lieu of shares of common stock to the extent that the purchase of common stock would cause the beneficial ownership of the Purchaser, together with its affiliates and certain related parties, to exceed 9.99% of our common stock. The Pre-Funded Series CCC Warrants were sold at an offering price of $2.06 per share for gross proceeds of $0.8 million, are immediately exercisable for $0.01 per share of common stock and do not have an expiration date. As of August 11, 2017, the Prefunded Series CCC Warrants were fully exercised. In a concurrent private placement, the Company agreed to issue to each investor, for each share of common stock and pre-funded warrant purchased in the offering, a Series AAA Warrant and Series BBB Warrant, each to purchase one share of common stock. The Series AAA Warrants are initially exercisable six months following issuance, and terminate five and one-half years following issuance. The Series AAA Warrants have an exercise price of $2.07 per share and are exercisable to purchase an aggregate of 2,435,000 shares of common stock. The Series BBB Warrants are immediately exercisable following issuance, and terminate twelve months following issuance. The Series BBB Warrants have an exercise price of $4.75 per share and are exercisable to purchase an aggregate of 2,435,000 shares of common stock. Subject to limited exceptions, a holder of a Series AAA and Series BBB Warrant will not have the right to exercise any portion of its warrants if the holder, together with its affiliates, would beneficially own in excess of 9.99% of the number of shares of common stock outstanding immediately after giving effect to such exercise.

- On February 14, 2017, the Company entered into a securities purchase agreement whereby it sold, in a public offering (the February 14, 2017 Public Offering), an aggregate of 1,384,705 shares of common stock of the Company at an offering price of $3.22 per share. In addition, the Company sold Series AA Warrants (the Series AA Warrants) to purchase up to 1,177,790 shares of common stock and Pre-Funded Series BB Warrants (the Pre-Funded Series BB Warrants) to purchase up to 185,713 shares of common stock. The Series AA Warrants have an exercise price of $3.22 per share, have a five-year life and are immediately exercisable. The Pre-Funded Series BB Warrants were offered at $3.08 per share, are immediately exercisable for $0.14 per share of common stock, do not have an expiration date and were issued in lieu of shares of common stock to the extent that the purchase of common stock would cause the beneficial ownership of the purchaser of such shares, together with its affiliates and certain related parties, to exceed 9.99% of our common stock. The Company received approximately $5.0 million in gross proceeds before the deduction of the placement agent fees and offering expenses (excluding any proceeds from the exercise of the warrants) in the February 14, 2017 Public Offering. During the first quarter of 2017, all 185,713 of the Series BB Pre-Funded warrants were exercised in full.

- We are a party to a Controlled Equity Offering^{SM} Sales Agreement (ATM) dated as of February 1, 2013 with Cantor Fitzgerald & Co., pursuant to which we may sell additional shares of our common stock having an aggregate offering price of up to $25 million through "at-the-market" equity offerings from time to time. From February 1, 2013 through December 31, 2016, the Company sold and issued an aggregate of 105,681 shares of common stock under the ATM, receiving approximately $7.4 million in net proceeds. During 2017, the Company sold 1,221,348 shares of common stock under the ATM, receiving approximately $3.9 million in net proceeds. Thus far in 2018, the Company sold 457,070 shares of common stock under the ATM, receiving approximately $1.2 million in net proceeds. On October 2, 2015 and again on February 6, 2018, we filed prospectus supplements to the base prospectus that forms a part of the 2015 Shelf Registration Statement, pursuant to which we may offer and sell up to $17.5 million of shares collectively of common stock from time to time under the ATM Agreement. We had $12.2 million available for sale under the ATM Agreement as of March 31, 2018.

On June 20, 2014, we completed the acquisition of substantially all the assets of EGEN, Inc. At the closing, we paid approximately $3.0 million in cash and issued 193,728 shares of its common stock to EGEN. In addition, 47,862 shares of common stock were issuable to EGEN pending satisfactory resolution of any post-closing adjustments of expenses and EGEN's indemnification obligations under the EGEN Purchase Agreement. These shares were issued on June 16, 2017.

In November 2013, the Company entered into a loan agreement with Hercules Technology Growth Capital, Inc. (Hercules) which permits up to $20 million in capital to be distributed in multiple tranches (the Hercules Credit Agreement). The Company drew the first tranche of $5 million upon closing of the Hercules Credit Agreement in November 2013 and used approximately $4 million of the proceeds to repay the outstanding obligations under its loan agreement with Oxford Finance LLC and Horizon Technology Finance Corporation as discussed further below. On June 10, 2014, the Company closed the second $5 million tranche under the Hercules Credit Agreement. The proceeds were used to fund the $3.0 million upfront cash payment associated with Celsion's acquisition of EGEN, as well as the Company's transaction costs associated with the EGEN acquisition. Upon the closing of this second tranche, the Company has drawn down a total of $10 million under the Hercules Credit Agreement. The obligations under the Hercules Credit Agreement are in the form of secured indebtedness bearing interest at a calculated prime-based variable rate (11.25% per annum since inception through December 17, 2015, 11.50% from December 18, 2015 through December 15, 2016 and 11.75% since). Payments under the loan agreement were interest only for the first twelve months after loan closing, followed by a 30-month amortization period of principal and interest through June 1, 2017, at which time this loan was paid in full.

Significant Accounting Policies

Our significant accounting policies are more fully described in Note 1 to our consolidated financial statements included in our 2017 Annual Report on Form 10-K for the year ended December 31, 2017 filed with the SEC on March 27, 2018.

In May 2014, the FASB issued Accounting Standards Update (ASU) No. 2014-09 "Revenue from Contracts with Customers (Topic 606)," which supersedes all existing revenue recognition requirements, including most industry-specific guidance. The new standard requires a company to recognize revenue when it transfers goods or services to customers in an amount that reflects the consideration that the company expects to receive for those goods or services. ASU 2014 - 09 was originally going to be effective on January 1, 2017; however, the FASB issued ASU 2015-14, "Revenue from Contracts with Customers (Topic 606) - Deferral of the Effective Date," which deferred the effective date of ASU 2014-09 by one year to January 1, 2018. In March 2016, the FASB issued ASU No. 2016 - 8, "Revenue from Contracts with Customers (Topic 606): Principal versus Agent Considerations. The amendments in this ASU do not change the core principle of ASU No. 2014 - 09 but the amendments clarify the implementation guidance on reporting revenue gross versus net. The effective date for the amendments in this ASU is the same as the effective date of ASU No. 2014-09. In April 2016, the FASB issued ASU No. 2016-10, "Revenue from Contracts with Customers (Identifying Performance Obligations and Licensing)," to clarify the implementation guidance on identifying performance obligations and licensing (collectively "the new revenue standards"). The new revenue standards allow for either "full retrospective" adoption, meaning the standard is applied to all periods presented, or "modified retrospective" adoption, meaning the standard is applied only to the most current period presented in the financial statements. The new revenue standard became effective for us on January 1, 2018. Under the new revenue standards, we recognize revenue following a five-step model prescribed under ASU No. 2014-09;(i) identify contract(s) with a customer;(ii) identify the performance obligations in the contract;(iii) determine the transaction price;(iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenues when (or as) we satisfy the performance obligation. As further described in Note 15, the Company currently has only one contract subject to the new revenue standards. After performance of the five-step model discussed above, the Company concluded the adoption of the new revenue standards as of January 1, 2018 did not change our revenue recognition policy nor does it have an effect on our financial statements using either the full retrospective or the modified retrospective adoption methods.

Please refer to Note 2 of the Financial Statements contained in this Form 10-K. Also refer to **Item IA, Risk Factors**, including, but not limited to, *"We will need to raise substantial additional capital to fund our planned future operations, and we may be unable to secure such capital without dilutive financing transactions. If we are not able to raise additional capital, we may not be able to complete the development, testing and commercialization of our product candidates."*

As a clinical stage biopharmaceutical company, our business and our ability to execute our strategy to achieve our corporate goals are subject to numerous risks and uncertainties. Material risks and uncertainties relating to our business and our industry are described in "Item 1A. Risk Factors" under "Part II: Other Information" included herein.

FINANCIAL REVIEW FOR THE THREE MONTHS ENDED MARCH 31, 2018 AND 2017

Results of Operations

For the three months ended March 31, 2018, our net loss was $4.5 million compared to a net loss of $5.2 million for the same period of 2017. With the $20.8 million in cash and investments on hand at March 31, 2018, the Company believes it has sufficient capital resources to fund its operations well into the third quarter of 2019.

	Three Months Ended March 31,			
	(In thousands)		Change Increase (Decrease)	
	2018	2017		%
Licensing Revenue:	$ 125	$ 125	$ –	–%
Operating Expenses:				
Clinical Research	1,884	2,634	(750)	(28.5)%
Chemistry, Manufacturing and Controls	857	841	16	1.9%
Research and development	2,741	3,475	(734)	(21.1)%
General and administrative	1,665	1,468	197	13.4%
Total operating expenses	4,406	4,943	(537)	(10.9)%
Loss from operations	$ (4,281)	$ (4,818)	$ 537	11.1%

Comparison of the Three Months ended March 31, 2018 and 2017

Licensing Revenue

In January 2013, we entered into a technology development contract with Hisun, pursuant to which Hisun paid us a non-refundable technology transfer fee of $5.0 million to support our development of ThermoDox® in the China territory. The $5.0 million received as a non-refundable payment from Hisun in the

first quarter 2013 has been recorded to deferred revenue and will be amortized over the ten-year term of the agreement; therefore, we recorded deferred revenue of $125,000 in each of the first quarters of 2018 and 2017.

Research and Development Expenses

Research and development (R&D) expenses decreased by $0.7 million to $2.7 million in the first quarter of 2018 from $3.5 million in the same period of 2017. Costs associated with the OPTIMA Study decreased by $0.3 million to $1.3 million in the first quarter of 2018 compared to $1.6 million in the same period of 2017. Other clinical costs decreased by $0.4 million to $0.5 million in the first quarter of 2018 compared to $0.9 million in the same period of 2017. Costs associated with the OVATION Studies remained relatively unchanged at $0.1 million in each of the first quarters of 2018 and 2017. Preclinical and regulatory costs were insignificant in each of the first quarters of 2018 and 2017. Costs associated with the production and distribution of ThermoDox® to support the OPTIMA Study remained unchanged at $0.3 million in each of the first quarters of 2018 and 2017. R&D costs associated with the development of GEN-1 to support the OVATION Studies increased by $0.1 million to $0.6 million in the first quarter of 2018 compared to $0.5 million in the same period of 2017. The Company announced the completion of enrollment of all cohorts of the OVATION I Study in July 2017 and reported final clinical and translational research data in October 2017 and expects to initiate enrollment in the Phase I/II OVATION II Study in the second quarter of 2018.

General and Administrative Expenses

General and administrative (G&A) expenses increased to $1.7 million in the first quarter of 2018 compared to $1.5 million in the same period of 2017. This increase is mostly attributable to an increase in professional fees of approximately $0.1 million and an increase compensation expense which includes $0.1 million in non-cash stock compensation expense in the first quarter of 2018 compared to the same period of 2017.

Change in Earn-out Milestone Liability

The total aggregate purchase price for the acquisition of assets from EGEN included potential future earn-out payments contingent upon achievement of certain milestones. The difference between the aggregate $30.4 million in future earn-out payments and the $13.9 million included in the fair value of the acquisition consideration at June 20, 2014 was based on the Company's risk-adjusted assessment of each milestone and utilizing a discount rate based on the estimated time to achieve the milestone. These milestone payments are fair valued at the end of each quarter and any change in their value will be recognized in the condensed consolidated financial statements. As of March 31, 2018, the Company fair valued these milestones at $12.8 million and recognized a non-cash charge of $0.3 million in the first quarter of 2018 as a result of the change in the fair value of these milestones from $12.5 million at December 31, 2017. At March 31, 2017, the Company fair valued these milestones at $13.5 million and recognized a non-cash charge of $0.3 million in the first quarter of 2017 as a result of the change in the fair value of these milestones from $13.2 million at December 31, 2016.

Investment income and interest expense

The Company realized $0.1 million of interest income from its short-term investments during the first quarter of 2018. Investment income was negligible in first quarter of 2017.

In connection with its debt facilities, the Company incurred $0.1 million in interest expense in the first quarter of 2017. The loan balance and end of term charges on its debt facilities were paid in full in June 2017. The Company did not have any interest expense in the first quarter of 2018.

Financial Condition, Liquidity and Capital Resources

Since inception we have incurred significant losses and negative cash flows from operations. We have financed our operations primarily through the net proceeds from the sales of equity, credit facilities and amounts received under our product licensing agreement with Yakult and our technology development agreement with Hisun. The process of developing and commercializing ThermoDox®, GEN-1 and other product candidates and technologies requires significant research and development work and clinical trial studies, as well as significant manufacturing and process development efforts. We expect these activities, together with our general and administrative expenses to result in significant operating losses for the foreseeable future. Our expenses have significantly and regularly exceeded our revenue, and we had an accumulated deficit of $266 million at March 31, 2018.

At March 31, 2018 we had total current assets of $20.9 million (including cash, cash equivalents and short-term investments and related interest receivable on short-term investments of $20.8 million) and current liabilities of $5.6 million, resulting in net working capital of $15.3 million. At December 31, 2017 we had total current assets of $24.3 million (including cash, cash equivalents and short-term investments and related interest receivable on short-term investments of $24.2 million) and current liabilities of $6.2 million, resulting in net working capital of $18.1 million.

We have substantial future capital requirements to continue our research and development activities and advance our product candidates through various development stages. The Company believes these expenditures are essential for the commercialization of its technologies.

Net cash used in operating activities for the first three months of 2018 was $4.7 million. Our 2018 net loss of $4.7 million for the three-month period ended March 31, 2018 included (i) $0.1 million in non-cash stock-based compensation expense and (ii) $0.3 million in a non-cash charge based on the change in the earn-out milestone liability. The $4.7 million net cash used in operating activities was mostly funded from cash and cash equivalents.

Net cash provided by financing activities was $1.2 million during the three-month period ended March 31, 2018 from the sale of our common stock through our ATM Facility.

We expect to seek additional capital through further public or private equity offerings, debt financing, additional strategic alliance and licensing arrangements, collaborative arrangements, or some combination of these financing alternatives. If we raise additional funds through the issuance of equity securities, the percentage ownership of our stockholders could be significantly diluted and the newly issued equity securities may have rights, preferences, or privileges senior to those of the holders of our common stock. If we raise funds through the issuance of debt securities, those securities may have rights, preferences, and privileges senior to those of our common stock. If we seek strategic alliances, licenses, or other alternative arrangements, such as arrangements with collaborative partners or others, we may need to relinquish rights to certain of our existing or future technologies, product candidates, or products we would otherwise seek to develop or commercialize on our own, or to license the rights to our technologies, product candidates, or products on terms that are not favorable to us. The overall status of the economic climate could also result in the terms of any equity offering, debt financing, or alliance, license, or other arrangement being even less favorable to us and our stockholders than if the overall economic climate were stronger. We also will continue to look for government sponsored research collaborations and grants to help offset future anticipated losses from operations and, to a lesser extent, interest income.

If adequate funds are not available through either the capital markets, strategic alliances, or collaborators, we may be required to delay or, reduce the scope of, or terminate our research, development, clinical programs, manufacturing, or commercialization efforts, or effect additional changes to our facilities or personnel, or obtain funds through other arrangements that may require us to relinquish some of our assets or rights to certain of our existing or future technologies, product candidates, or products on terms not favorable to us.

Off-Balance Sheet Arrangements and Contractual Obligations

We have no off-balance sheet financing arrangements. In July 2011, we entered into a lease with Brandywine Operating Partnership, L.P., a Delaware limited partnership for a 10,870 square foot premises located in Lawrenceville, New Jersey in connection with the relocation of our offices from Columbia, Maryland. In late 2015, Lenox Drive Office Park LLC, purchased the real estate and office building and assumed the lease. Under the current terms of the lease, which was amended effective May 1, 2017 and is set to expire on September 1, 2022, we reduced the size of the premises to 7,565 square feet and are paying a monthly rent that ranges from approximately $18,900 in the first year to approximately $20,500 in the final year of the amendment. We also have a one-time option to cancel the lease as of the 24th month after the commencement date of the amendment. In connection with the Asset Purchase Agreement, in June 2014, we assumed the existing lease with another landlord for an 11,500 square foot premises located in Huntsville, Alabama. In January 2018, we entered into a new 60-month lease agreement for 9,049 square feet with rent payments of approximately $18,100 per month. Other than this lease amendment, there were no material changes during the three months ended March 31, 2018 to our operating leases, which are disclosed in the contractual commitments table in our Annual Report on Form 10-K for the fiscal year ended December 31, 2017 filed on March 27, 2018 with the Securities and Exchange Commission.

Item 3. QUANTITATIVE AND QUALITATIVE DISCLOSURE ABOUT MARKET RISK

The primary objective of our investment activities is to preserve our capital until it is required to fund operations while at the same time maximizing the income we receive from our investments without significantly increasing risk. Our cash flow and earnings are subject to fluctuations due to changes in interest rates in our investment portfolio. We maintain a portfolio of various issuers, types, and maturities. These securities are classified as available-for-sale and, consequently, are recorded on the condensed consolidated balance sheet at fair value with unrealized gains or losses reported as a component of accumulated other comprehensive loss included in stockholders' equity.

Item 4. CONTROLS AND PROCEDURES

We have carried out an evaluation, under the supervision and with the participation of management, including our principal executive officer and principal financial officer, of the effectiveness of the design and operation of our disclosure controls and procedures, as that term is defined in Rule 13a-15(e) under the Securities Exchange Act of 1934, as amended. Based on that evaluation, our principal executive officer and principal financial officer have concluded that, as of March 31, 2018, which is the end of the period covered by this report, our disclosure controls and procedures are effective at the reasonable assurance level in alerting them in a timely manner to material information required to be included in our periodic reports with the Securities and Exchange Commission.

There were no changes in our internal controls over financial reporting identified in connection with the evaluation required by paragraph (d) of Rule 13a-15 of the Securities Exchange Act of 1934, as amended, that occurred during the three months ended March 31, 2018 that have materially affected, or are reasonably likely to materially affect, our internal controls over financial reporting.

Our management, including our chief executive officer and chief financial officer, does not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent all error and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within the company have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple errors or mistakes. 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. The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Over time, controls may become inadequate because of changes in conditions, or the degree of compliance with the policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

PART II: OTHER INFORMATION

Item 1. Legal Proceedings

None.

Item 1A. Risk Factors

The following is a summary of the risk factors, uncertainties and assumptions that we believe are most relevant to our business. These are factors that, individually or in the aggregate, we think could cause our actual results to differ significantly from expected or historical results and our forward-looking statements. We note these factors for investors as permitted by Section 21E of the Securities Exchange Act of 1934, as amended and Section 27A of the Securities Act of 1933, as amended. Additional risks that we currently believe are immaterial may also impair our business operations. Investors should carefully consider the risks described below before making an investment decision, and understand that it is not possible to predict or identify all such factors. Consequently, investors should not consider the following to be a complete discussion of all potential risks or uncertainties that may impact our business. Moreover, we operate in a competitive and rapidly changing environment. New factors emerge from time to time and it is not possible to predict the impact of all of these factors on our business, financial condition or results of operations. We undertake no obligation to publicly update forward-looking statements, whether as a result of new information, future events, or otherwise. The description provided in this Item 1A includes any material changes to and supersedes the description of the risk factors associated with our business previously disclosed in Item 1A of our Annual Report on Form 10-K for the fiscal year ended December 31, 2017 filed on March 27, 2018 with the Securities and Exchange Commission (SEC). In assessing these risks, investors should also refer to the other information contained or incorporated by reference in this Quarterly Report and our other filings made from time to time with the SEC.

RISKS RELATED TO OUR BUSINESS

We have a history of significant losses from operations and expect to continue to incur significant losses for the foreseeable future.

Since our inception, our expenses have substantially exceeded our revenue, resulting in continuing losses and an accumulated deficit of $266 million at March 31, 2018. For the years ended December 31, 2016 and 2017, and for the three months ended March 31, 2018, we incurred a net loss of $22.1 million, $20.4 million and $4.5 million, respectively. We currently have no product revenue and do not expect to generate any product revenue for the foreseeable future. Because we are committed to continuing our product research, development, clinical trial and commercialization programs, we will continue to incur significant operating losses unless and until we complete the development of ThermoDox®, GEN-1 and other new product candidates and these product candidates have been clinically tested, approved by the United States Food and Drug Administration (FDA) and successfully marketed. The amount of future losses is uncertain. Our ability to achieve profitability, if ever, will depend on, among other things, us or our collaborators successfully developing product candidates, obtaining regulatory approvals to market and commercialize product candidates, manufacturing any approved products on commercially reasonable terms, establishing a sales and marketing organization or suitable third party alternatives for any approved product and raising sufficient funds to finance business activities. If we or our collaborators are unable to develop and commercialize one or more of our product candidates or if sales revenue from any product candidate that receives approval is insufficient, we will not achieve profitability, which could have a material adverse effect on our business, financial condition, results of operations and prospects.

Drug development is an inherently uncertain process with a high risk of failure at every stage of development. Our lead drug candidate failed to meets its primary endpoint in the Phase III HEAT Study.

On January 31, 2013, we announced that our lead product ThermoDox® in combination with radiofrequency ablation (RFA) failed to meet the primary endpoint of the Phase III clinical trial for primary liver cancer, known as the HEAT Study. We have not completed our final analysis of the data and do not know the extent to which, if any, the failure of ThermoDox® to meet its primary endpoint in the Phase III trial could impact our other ongoing studies of ThermoDox® including a pivotal, double-blind, placebo-controlled Phase III trial of ThermoDox® in combination with RFA in primary liver cancer, known as the OPTIMA Study, which we launched in the first half of 2014. The trial design of the OPTIMA Study is based on the overall survival data from the post-hoc analysis of results from the HEAT Study. ThermoDox® is also being evaluated in a Phase II clinical trial for recurrent chest wall breast cancer and other preclinical studies. In addition, we have initiated a Phase I dose-escalation clinical trial of GEN-1 in combination with the standard of care in neo-adjuvant ovarian cancer, known as the OVATION Study, and plan to expand our ovarian cancer development program to include a Phase I dose escalating trial evaluating GEN-1 , and plan to expand our ovarian cancer development program to include a Phase I/II dose escalating trial evaluating GEN-1, known as the OVATION II Study, in ovarian cancer patients.

Preclinical testing and clinical trials are long, expensive and highly uncertain processes and failure can unexpectedly occur at any stage of clinical development, as evidenced by the failure of ThermoDox® to meet its primary endpoint in the HEAT Study. Drug development is inherently risky and clinical trials take us several years to complete. The start or end of a clinical trial is often delayed or halted due to changing regulatory requirements, manufacturing challenges, required clinical trial administrative actions, slower than anticipated patient enrollment, changing standards of care, availability or prevalence of use of a comparator drug or required prior therapy, clinical outcomes including insufficient efficacy, safety concerns, or our own financial constraints. The results from preclinical testing or early clinical trials of a product candidate may not predict the results that will be obtained in later phase clinical trials of the product candidate. We, the FDA or other applicable regulatory authorities may suspend clinical trials of a product candidate at any time for various reasons, including a belief that subjects participating in such trials are being exposed to unacceptable health risks or adverse side effects. We may not have the financial resources to continue development of, or to enter into collaborations for, a product candidate if we experience any problems or other unforeseen events that delay or prevent regulatory approval of, or our ability to commercialize, product candidates. The failure of one or more of our drug candidates or development programs could have a material adverse effect on our business, financial condition and results of operations.

We will need to raise additional capital to fund our planned future operations, and we may be unable to secure such capital without dilutive financing transactions. If we are not able to raise additional capital, we may not be able to complete the development, testing and commercialization of our product candidates.

We have not generated significant revenue and have incurred significant net losses in each year since our inception. Since our inception, our expenses have substantially exceeded our revenue, resulting in continuing losses and an accumulated deficit of $266 million at March 31, 2018. For the years ended December 31, 2016 and 2017 and the three months ended March 31, 2018, we incurred a net loss of $22.1 million, $20.4 million and $4.5 million, respectively. As of March 31, 2018, we had approximately $20.8 million in cash and short-term investments including interest receivable.

We have substantial future capital requirements to continue our research and development activities and advance our product candidates through various development stages. For example, ThermoDox® is being evaluated in a Phase III clinical trial in combination with RFA for the treatment of primary liver cancer and other preclinical studies. We completed a Phase I dose-escalation clinical trial of GEN-1 in combination with the standard of care in neo-adjuvant ovarian cancer in the third quarter of 2017 and plan to expand our clinical development program for GEN-1 in ovarian cancer in 2018.

To complete the development and commercialization of our product candidates, we will need to raise substantial amounts of additional capital to fund our operations. Our future capital requirements will depend upon numerous unpredictable factors, including, without limitation, the cost, timing, progress and outcomes of clinical studies and regulatory reviews of our proprietary drug candidates, our efforts to implement new collaborations, licenses and strategic transactions, general and administrative expenses, capital expenditures and other unforeseen uses of cash. We do not have any committed sources of financing and cannot assure you that alternate funding will be available in a timely manner, on acceptable terms or at all. We may need to pursue dilutive equity financings, such as the issuance of shares of common stock, convertible debt or other convertible or exercisable securities. Such dilutive equity financings could dilute the percentage ownership of our current common stockholders and could significantly lower the market value of our common stock. In addition, a financing could result in the issuance of new securities that may have rights, preferences or privileges senior to those of our existing stockholders.

If we are unable to obtain additional capital on a timely basis or on acceptable terms, we may be required to delay, reduce or terminate our research and development programs and preclinical studies or clinical trials, if any, limit strategic opportunities or undergo corporate restructuring activities. We also could be required to seek funds through arrangements with collaborators or others that may require us to relinquish rights to some of our technologies, product candidates or potential markets or that could impose onerous financial or other terms. Furthermore, if we cannot fund our ongoing development and other operating requirements, particularly those associated with our obligations to conduct clinical trials under our licensing agreements, we will be in breach of these licensing agreements and could therefore lose our license rights, which could have material adverse effects on our business.

If we do not obtain or maintain FDA and foreign regulatory approvals for our drug candidates on a timely basis, or at all, or if the terms of any approval impose significant restrictions or limitations on use, we will be unable to sell those products and our business, results of operations and financial condition will be negatively affected.

To obtain regulatory approvals from the FDA and foreign regulatory agencies, we must conduct clinical trials demonstrating that our products are safe and effective. We may need to amend ongoing trials or the FDA and/or foreign regulatory agencies may require us to perform additional trials beyond those we planned. The testing and approval process requires substantial time, effort and resources, and generally takes a number of years to complete. The time to complete testing and obtaining approvals is uncertain, and the FDA and foreign regulatory agencies have substantial discretion, at any phase of development, to terminate clinical studies, require additional clinical studies or other testing, delay or withhold approval, and mandate product withdrawals, including recalls. In addition, our drug candidates may have undesirable side effects or other unexpected characteristics that could cause us or regulatory authorities to interrupt, delay or halt clinical trials and could result in a more restricted label or the delay or denial of regulatory approval by regulatory authorities.

Even if we receive regulatory approval of a product, the approval may limit the indicated uses for which the drug may be marketed. The failure to obtain timely regulatory approval of product candidates, the imposition of marketing limitations, or a product withdrawal would negatively impact our business, results of operations and financial condition. Even if we receive approval, we will be subject to ongoing regulatory obligations and continued regulatory review, which may result in significant additional expense and subject us to restrictions, withdrawal from the market, or penalties if we fail to comply with applicable regulatory requirements or if we experience unanticipated problems with our product candidates, when and if approved. Finally, even if we obtain FDA approval of any of our product candidates, we may never obtain approval or commercialize such products outside of the United States, given that we may be subject to additional or different regulatory burdens in other markets. This could limit our ability to realize their full market potential.

Our industry is highly regulated by the FDA and comparable foreign regulatory agencies. We must comply with extensive, strictly enforced regulatory requirements to develop, obtain, and maintain marketing approval for any of our product candidates.

Securing FDA or comparable foreign regulatory approval requires the submission of extensive preclinical and clinical data and supporting information for each therapeutic indication to establish the product candidate's safety and efficacy for its intended use. It takes years to complete the testing of a new drug or biological product and development delays and/or failure can occur at any stage of testing. Any of our present and future clinical trials may be delayed, halted, not authorized, or approval of any of our products may be delayed or may not be obtained due to any of the following:

- any preclinical test or clinical trial may fail to produce safety and efficacy results satisfactory to the FDA or comparable foreign regulatory authorities;
- preclinical and clinical data can be interpreted in different ways, which could delay, limit or prevent marketing approval;
- negative or inconclusive results from a preclinical test or clinical trial or adverse events during a clinical trial could cause a preclinical study or clinical trial to be repeated or a development program to be terminated, even if other studies relating to the development program are ongoing or have been completed and were successful;
- the FDA or comparable foreign regulatory authorities can place a clinical hold on a trial if, among other reasons, it finds that subjects enrolled in the trial are or would be exposed to an unreasonable and significant risk of illness or injury;
- the facilities that we utilize, or the processes or facilities of third party vendors, including without limitation the contract manufacturers who will be manufacturing drug substance and drug product for us or any potential collaborators, may not satisfactorily complete inspections by the FDA or comparable foreign regulatory authorities; and
- we may encounter delays or rejections based on changes in FDA policies or the policies of comparable foreign regulatory authorities during the period in which we develop a product candidate or the period required for review of any final marketing approval before we are able to market any product candidate.

In addition, information generated during the clinical trial process is susceptible to varying interpretations that could delay, limit, or prevent marketing approval at any stage of the approval process. Moreover, early positive preclinical or clinical trial results may not be replicated in later clinical trials. As more product candidates within a particular class of drugs proceed through clinical development to regulatory review and approval, the amount and type of clinical data that may be required by regulatory authorities may increase or change. Failure to demonstrate adequately the quality, safety, and efficacy of any of our product candidates would delay or prevent marketing approval of the applicable product candidate. We cannot assure you that if clinical trials are completed, either we or our potential collaborators will submit applications for required authorizations to manufacture or market potential products or that any such application will be reviewed and approved by appropriate regulatory authorities in a timely manner, if at all.

New gene-based products for therapeutic applications are subject to extensive regulation by the FDA and comparable agencies in other countries. The precise regulatory requirements with which we will have to comply, now and in the future, are uncertain due to the novelty of the gene-based products we are developing.

The regulatory approval process for novel product candidates such as ours can be significantly more expensive and take longer than for other, better known or more extensively studied product candidates. Limited data exist regarding the safety and efficacy of DNA-based therapeutics compared with conventional therapeutics, and government regulation of DNA-based therapeutics is evolving. Regulatory requirements governing gene and cell therapy products have changed frequently and may continue to change in the future. The FDA has established the Office of Cellular, Tissue and Gene Therapies within its Center for Biologics Evaluation and Research (CBER), to consolidate the review of gene therapy and related products, and has established the Cellular, Tissue and Gene Therapies Advisory Committee to advise CBER in its review. It is difficult to determine how long it will take or how much it will cost to obtain regulatory approvals for our product candidates in either the U.S. or the European Union or how long it will take to commercialize our product candidates.

Adverse events or the perception of adverse events in the field of gene therapy generally, or with respect to our product candidates specifically, may have a particularly negative impact on public perception of gene therapy and result in greater governmental regulation, including future bans or stricter standards imposed on gene-based therapy clinical trials, stricter labeling requirements and other regulatory delays in the testing or approval of our potential products. For example, if we were to engage an NIH-funded institution to conduct a clinical trial, we may be subject to review by the NIH Office of Biotechnology Activities' Recombinant DNA Advisory Committee (the RAC). If undertaken, RAC can delay the initiation of a clinical trial, even if the FDA has reviewed the trial design and details and approved its initiation. Conversely, the FDA can put an investigational new drug (IND) application on a clinical hold even if the RAC has provided a favorable review or an exemption from in-depth, public review. Such committee and advisory group reviews and any new guidelines they promulgate may lengthen the regulatory review process, require us to perform additional studies, increase our development costs, lead to changes in regulatory positions and interpretations, delay or prevent approval and commercialization of our product candidates or lead to significant post-approval limitations or restrictions. Any increased scrutiny could delay or increase the costs of our product development efforts or clinical trials.

Even if our products receive regulatory approval, they may still face future development and regulatory difficulties. Government regulators may impose significant restrictions on a product's indicated uses or marketing or impose ongoing requirements for potentially costly post-approval studies. This governmental oversight may be particularly strict with respect to gene-based therapies.

Serious adverse events, undesirable side effects or other unexpected properties of our product candidates may be identified during development or after approval, which could lead to the discontinuation of our clinical development programs, refusal by regulatory authorities to approve our product candidates or, if discovered following marketing approval, revocation of marketing authorizations or limitations on the use of our product candidates thereby limiting the commercial potential of such product candidate.

As we continue our development of our product candidates and initiate clinical trials of our additional product candidates, serious adverse events, undesirable side effects or unexpected characteristics may emerge causing us to abandon these product candidates or limit their development to more narrow uses or subpopulations in which the serious adverse events, undesirable side effects or other characteristics are less prevalent, less severe or more acceptable from a risk-benefit perspective.

Even if our product candidates initially show promise in these early clinical trials, the side effects of drugs are frequently only detectable after they are tested in large, Phase III clinical trials or, in some cases, after they are made available to patients on a commercial scale after approval. Sometimes, it can be difficult to determine if the serious adverse or unexpected side effects were caused by the product candidate or another factor, especially in oncology subjects who may suffer from other medical conditions and be taking other medications. If serious adverse or unexpected side effects are identified during development and are determined to be attributed to our product candidate, we may be required to develop a Risk Evaluation and Mitigation Strategy (REMS) to mitigate those serious safety risks, which could impose significant distribution and use restrictions on our products.

In addition, drug-related side effects could also affect subject recruitment or the ability of enrolled subjects to complete the trial, result in potential product liability claims, reputational harm, withdrawal of approvals, a requirement to include additional warnings on the label or to create a medication guide outlining the risks of such side effects for distribution to patients. It can also result in patient harm, liability lawsuits, and reputational harm. Any of these occurrences could prevent us from achieving or maintaining market acceptance and may harm our business, financial condition and prospects significantly.

We do not expect to generate revenue for the foreseeable future.

We have devoted our resources to developing a new generation of products and will not be able to market these products until we have completed clinical trials and obtain all necessary governmental approvals. Our lead product candidate, ThermoDox® and the product candidates we purchased in our acquisition of EGEN, Inc., including GEN-1, are still in various stages of development and trials and cannot be marketed until we have completed clinical testing and obtained necessary governmental approval. Following our announcement on January 31, 2013 that the HEAT Study failed to meet its primary endpoint of progression free survival, we continued to follow the patients enrolled in the HEAT Study to the secondary endpoint, overall survival. Based on the overall survival data from the post-hoc analysis of results from the HEAT Study, we launched a pivotal, double-blind, placebo-controlled Phase III trial of ThermoDox® in combination with RFA in primary liver cancer, known as the OPTIMA Study, in the first half of 2014. ThermoDox® is currently also being evaluated in a Phase II clinical trial for the treatment of recurrent chest wall breast cancer, known as the DIGNITY Study, and other preclinical studies. GEN-1 is currently in an early stage of clinical development for the treatment of ovarian cancer. We conducted a Phase I dose-escalation clinical trial of GEN-1 in combination with the standard of care in neo-adjuvant ovarian cancer starting in the second half of 2015 and plan to expand our ovarian cancer development program to include a Phase I dose escalating trial evaluating GEN-1 in ovarian cancer patients and additional trials in newly diagnosed ovarian cancer patients. The delivery technology platforms, TheraPlas and TheraSilence, are in preclinical stages of development. Accordingly, our revenue sources are, and will remain, extremely limited until our product candidates are clinically tested, approved by the FDA or foreign regulatory agencies and successfully marketed. We cannot guarantee that any of our product candidates will be approved by the FDA or any foreign regulatory agency or marketed, successfully or otherwise, at any time in the foreseeable future or at all.

We may not successfully engage in future strategic transactions, which could adversely affect our ability to develop and commercialize product candidates, impact our cash position, and increase our expense and present significant distractions to our management.

In the future, we may consider strategic alternatives intended to further the development of our business, which may include acquiring businesses, technologies or products, out- or in-licensing product candidates or technologies or entering into a business combination with another company. Any strategic transaction may require us to incur non-recurring or other charges, increase our near- and long-term expenditures and pose significant integration or implementation challenges or disrupt our management or business. These transactions would entail numerous operational and financial risks, including exposure to unknown liabilities, disruption of our business and diversion of our management's time and attention in order to manage a collaboration or develop acquired products, product candidates or technologies, incurrence of substantial debt or dilutive issuances of equity securities to pay transaction consideration or costs, higher than expected collaboration, acquisition or integration costs, write-downs of assets or goodwill or impairment charges, increased amortization expenses, difficulty and cost in facilitating the collaboration or combining the operations and personnel of any acquired business, impairment of relationships with key suppliers, manufacturers or customers of any acquired business due to changes in management and ownership and the inability to retain key employees of any acquired business. Accordingly, although there can be no assurance that we will undertake or successfully complete any transactions of the nature described above, any transactions that we do complete may be subject to the foregoing or other risks and have a material adverse effect on our business, results of operations, financial condition and prospects. Conversely, any failure to enter any strategic transaction that would be beneficial to us could delay the development and potential commercialization of our product candidates and have a negative impact on the competitiveness of any product candidate that reaches market.

Strategic transactions, such as acquisitions, partnerships and collaborations, including the EGEN acquisition, involve numerous risks, including:

- the failure of markets for the products of acquired businesses, technologies or product lines to develop as expected;
- uncertainties in identifying and pursuing acquisition targets;

- the challenges in achieving strategic objectives, cost savings and other benefits expected from acquisitions;
- the risk that the financial returns on acquisitions will not support the expenditures incurred to acquire such businesses or the capital expenditures needed to develop such businesses;
- difficulties in assimilating the acquired businesses, technologies or product lines;
- the failure to successfully manage additional business locations, including the additional infrastructure and resources necessary to support and integrate such locations;
- the existence of unknown product defects related to acquired businesses, technologies or product lines that may not be identified due to the inherent limitations involved in the due diligence process of an acquisition;
- the diversion of management's attention from other business concerns;
- risks associated with entering markets or conducting operations with which we have no or limited direct prior experience;
- risks associated with assuming the legal obligations of acquired businesses, technologies or product lines;
- risks related to the effect that internal control processes of acquired businesses might have on our financial reporting and management's report on our internal control over financial reporting;
- the potential loss of key employees related to acquired businesses, technologies or product lines; and
- the incurrence of significant exit charges if products or technologies acquired in business combinations are unsuccessful.

We may never realize the perceived benefits of the EGEN acquisition or potential future transactions. We cannot assure you that we will be successful in overcoming problems encountered in connection with any transactions, and our inability to do so could significantly harm our business, results of operations and financial condition. These transactions could dilute a stockholder's investment in us and cause us to incur debt, contingent liabilities and amortization/impairment charges related to intangible assets, all of which could materially and adversely affect our business, results of operations and financial condition. In addition, our effective tax rate for future periods could be negatively impacted by the EGEN acquisition or potential future transactions.

Our business depends on license agreements with third parties to permit us to use patented technologies. The loss of any of our rights under these agreements could impair our ability to develop and market our products.

Our success will depend, in a substantial part, on our ability to maintain our rights under license agreements granting us rights to use patented technologies. For instance, we are party to license agreements with Duke University, under which we have exclusive rights to commercialize medical treatment products and procedures based on Duke's thermo-sensitive liposome technology. The Duke University license agreement contains a license fee, royalty and/or research support provisions, testing and regulatory milestones, and other performance requirements that we must meet by certain deadlines. If we breach any provisions of the license and research agreements, we may lose our ability to use the subject technology, as well as compensation for our efforts in developing or exploiting the technology. Any such loss of rights and access to technology could have a material adverse effect on our business.

Further, we cannot guarantee that any patent or other technology rights licensed to us by others will not be challenged or circumvented successfully by third parties, or that the rights granted will provide adequate protection. We may be required to alter any of our potential products or processes, or enter into a license and pay licensing fees to a third party or cease certain activities. There can be no assurance that we can obtain a license to any technology that we determine we need on reasonable terms, if at all, or that we could develop or otherwise obtain alternate technology. If a license is not available on commercially reasonable terms or at all, our business, results of operations, and financial condition could be significantly harmed and we may be prevented from developing and commercializing the product. Litigation, which could result in substantial costs, may also be necessary to enforce any patents issued to or licensed by us or to determine the scope and validity of others' claimed proprietary rights.

If any of our pending patent applications do not issue, or are deemed invalid following issuance, we may lose valuable intellectual property protection.

The patent positions of pharmaceutical and biotechnology companies, such as ours, are uncertain and involve complex legal and factual issues. We own various U.S. and international patents and have pending U.S. and international patent applications that cover various aspects of our technologies. There can be no assurance that patents that have been issued will be held valid and enforceable in a court of law through the entire patent term. Even for patents that are held valid and enforceable, the legal process associated with obtaining such a judgment is time consuming and costly. Additionally, issued patents can be subject to opposition, interferences or other proceedings that can result in the revocation of the patent or maintenance of the patent in amended form (and potentially in a form that renders the patent without commercially relevant or broad coverage). Further, our competitors may be able to circumvent and otherwise design around our patents. Even if a patent is issued and enforceable, because development and commercialization of pharmaceutical products can be subject to substantial delays, patents may expire early and provide only a short period of protection, if any, following the commercialization of products encompassed by our patents. We may have to participate in interference proceedings declared by the U.S. Patent and Trademark Office, which could result in a loss of the patent and/or substantial cost to us.

We have filed patent applications, and plan to file additional patent applications, covering various aspects of our technologies and our proprietary product candidates. There can be no assurance that the patent applications for which we apply would actually issue as patents, or do so with commercially relevant or broad coverage. The coverage claimed in a patent application can be significantly reduced before the patent is issued. The scope of our claim coverage can be critical to our ability to enter into licensing transactions with third parties and our right to receive royalties from our collaboration partnerships. Since publication of discoveries in scientific or patent literature often lags behind the date of such discoveries, we cannot be certain that we were the first inventor of inventions covered by our patents or patent applications. In addition, there is no guarantee that we will be the first to file a patent application directed to an invention.

An adverse outcome in any judicial proceeding involving intellectual property, including patents, could subject us to significant liabilities to third parties, require disputed rights to be licensed from or to third parties or require us to cease using the technology in dispute. In those instances where we seek an intellectual property license from another, we may not be able to obtain the license on a commercially reasonable basis, if at all, thereby raising concerns on our ability to freely commercialize our technologies or products.

We rely on trade secret protection and other unpatented proprietary rights for important proprietary technologies, and any loss of such rights could harm our business, results of operations and financial condition.

We rely on trade secrets and confidential information that we seek to protect, in part, by confidentiality agreements with our corporate partners, collaborators, employees and consultants. We cannot assure you that these agreements are adequate to protect our trade secrets and confidential information or will not be breached or, if breached, we will have adequate remedies. Furthermore, others may independently develop substantially equivalent confidential and proprietary information or otherwise gain access to our trade secrets or disclose such technology. Any loss of trade secret protection or other unpatented proprietary rights could harm our business, results of operations and financial condition.

Our products may infringe patent rights of others, which may require costly litigation and, if we are not successful, could cause us to pay substantial damages or limit our ability to commercialize our products.

Our commercial success depends on our ability to operate without infringing the patents and other proprietary rights of third parties. There may be third party patents that relate to our products and technology. We may unintentionally infringe upon valid patent rights of third parties. Although we currently are not involved in any material litigation involving patents, a third party patent holder may assert a claim of patent infringement against us in the future. Alternatively, we may initiate litigation against the third party patent holder to request that a court declare that we are not infringing the third party's patent and/or that the third party's patent is invalid or unenforceable. If a claim of infringement is asserted against us and is successful, and therefore we are found to infringe, we could be required to pay damages for infringement, including treble damages if it is determined that we knew or became aware of such a patent and we failed to exercise due care in determining whether or not we infringed the patent. If we have supplied infringing products to third parties or have licensed third parties to manufacture, use or market infringing products, we may be obligated to indemnify these third parties for damages they may be required to pay to the patent holder and for any losses they may sustain.

We can also be prevented from selling or commercializing any of our products that use the infringing technology in the future, unless we obtain a license from such third party. A license may not be available from such third party on commercially reasonable terms, or may not be available at all. Any modification to include a non-infringing technology may not be possible or if possible may be difficult or time-consuming to develop, and require revalidation, which could delay our ability to commercialize our products. Any infringement action asserted against us, even if we are ultimately successful in defending against such action, would likely delay the regulatory approval process of our products, harm our competitive position, be expensive and require the time and attention of our key management and technical personnel.

We rely on third parties to conduct all of our clinical trials. If these third parties are unable to carry out their contractual duties in a manner that is consistent with our expectations, comply with budgets and other financial obligations or meet expected deadlines, we may not receive certain development milestone payments or be able to obtain regulatory approval for or commercialize our product candidates in a timely or cost-effective manner.

We do not independently conduct clinical trials for our drug candidates. We rely, and expect to continue to rely, on third-party clinical investigators, clinical research organizations (CROs), clinical data management organizations and consultants to design, conduct, supervise and monitor our clinical trials.

Because we do not conduct our own clinical trials, we must rely on the efforts of others and have reduced control over aspects of these activities, including, the timing of such trials, the costs associated with such trials and the procedures that are followed for such trials. We do not expect to significantly increase our personnel in the foreseeable future and may continue to rely on third parties to conduct all of our future clinical trials. If we cannot contract with acceptable third parties on commercially reasonable terms or at all, if these third parties are unable to carry out their contractual duties or obligations in a manner that is consistent with our expectations or meet expected deadlines, if they do not carry out the trials in accordance with budgeted amounts, if the quality or accuracy of the clinical data they obtain is compromised due to their failure to adhere to our clinical protocols or for other reasons, or if they fail to maintain compliance with applicable government regulations and standards, our clinical trials may be extended, delayed or terminated or may become significantly more expensive, we may not receive development milestone payments when expected or at all, and we may not be able to obtain regulatory approval for or successfully commercialize our product candidates.

Despite our reliance on third parties to conduct our clinical trials, we are ultimately responsible for ensuring that each of our clinical trials is conducted in accordance with the general investigational plan and protocols for the trial. Moreover, the FDA requires clinical trials to be conducted in accordance with good clinical practices for conducting, recording and reporting the results of clinical trials to assure that data and reported results are credible and accurate and that the rights, integrity and confidentiality of clinical trial participants are protected. We also are required to register ongoing clinical trials and post the results of completed clinical trials on a government-sponsored database, ***ClinicalTrials.gov***, within certain timeframes. Failure to do so can result in fines, adverse publicity and civil and criminal sanctions. Our reliance on third parties that we do not control does not relieve us of these responsibilities and requirements. If we or a third party we rely on fails to meet these requirements, we may not be able to obtain, or may be delayed in obtaining, marketing authorizations for our drug candidates and will not be able to, or may be delayed in our efforts to, successfully commercialize our drug candidates. This could have a material adverse effect on our business, financial condition, results of operations and prospects.

Because we rely on third party manufacturing and supply partners, our supply of research and development, preclinical and clinical development materials may become limited or interrupted or may not be of satisfactory quantity or quality.

We rely on third party supply and manufacturing partners to supply the materials and components for, and manufacture, our research and development, preclinical and clinical trial drug supplies. We do not own manufacturing facilities or supply sources for such components and materials. There can be no assurance that our supply of research and development, preclinical and clinical development drugs and other materials will not be limited, interrupted, restricted in certain geographic regions or of satisfactory quality or continue to be available at acceptable prices. Suppliers and manufacturers must meet applicable manufacturing requirements and undergo rigorous facility and process validation tests required by FDA and foreign regulatory authorities in order to comply with regulatory standards, such as current Good Manufacturing Practices. In the event that any of our suppliers or manufacturers fails to comply with such requirements or to perform its obligations to us in relation to quality, timing or otherwise, or if our supply of components or other materials becomes limited or interrupted for other reasons, we may be forced to manufacture the materials ourselves, for which we currently do not have the capabilities or resources, or enter into an agreement with another third party, which we may not be able to do on reasonable terms, if at all.

Our business is subject to numerous and evolving state, federal and foreign regulations and we may not be able to secure the government approvals needed to develop and market our products.

Our research and development activities, pre-clinical tests and clinical trials, and ultimately the manufacturing, marketing and labeling of our products, are all subject to extensive regulation by the FDA and foreign regulatory agencies. Pre-clinical testing and clinical trial requirements and the regulatory approval process typically take years and require the expenditure of substantial resources. Additional government regulation may be established that could prevent or delay regulatory approval of our product candidates. Delays or rejections in obtaining regulatory approvals would adversely affect our ability to commercialize any product candidates and our ability to generate product revenue or royalties.

The FDA and foreign regulatory agencies require that the safety and efficacy of product candidates be supported through adequate and well-controlled clinical trials. If the results of pivotal clinical trials do not establish the safety and efficacy of our product candidates to the satisfaction of the FDA and other foreign regulatory agencies, we will not receive the approvals necessary to market such product candidates. Even if regulatory approval of a product candidate is granted, the approval may include significant limitations on the indicated uses for which the product may be marketed.

We are subject to the periodic inspection of our clinical trials, facilities, procedures and operations and/or the testing of our products by the FDA to determine whether our systems and processes, or those of our vendors and suppliers, are in compliance with FDA regulations. Following such inspections, the FDA may issue notices on Form 483 and warning letters that could cause us to modify certain activities identified during the inspection.

Failure to comply with the FDA and other governmental regulations can result in fines, unanticipated compliance expenditures, recall or seizure of products, total or partial suspension of production and/or distribution, suspension of the FDA's review of product applications, enforcement actions, injunctions and criminal prosecution. Under certain circumstances, the FDA also has the authority to revoke previously granted product approvals. Although we have internal compliance programs, if these programs do not meet regulatory agency standards or if our compliance is deemed deficient in any significant way, it could have a material adverse effect on the Company.

We are also subject to recordkeeping and reporting regulations. These regulations require, among other things, the reporting to the FDA of adverse events alleged to have been associated with the use of a product or in connection with certain product failures.

Labeling and promotional activities also are regulated by the FDA. We must also comply with record keeping requirements as well as requirements to report certain adverse events involving our products. The FDA can impose other post-marketing controls on us as well as our products including, but not limited to, restrictions on sale and use, through the approval process, regulations and otherwise.

Many states in which we do or may do business, or in which our products may be sold, if at all, impose licensing, labeling or certification requirements that are in addition to those imposed by the FDA. There can be no assurance that one or more states will not impose regulations or requirements that have a material adverse effect on our ability to sell our products.

In many of the foreign countries in which we may do business or in which our products may be sold, we will be subject to regulation by national governments and supranational agencies as well as by local agencies affecting, among other things, product standards, packaging requirements, labeling requirements, import restrictions, tariff regulations, duties and tax requirements. There can be no assurance that one or more countries or agencies will not impose regulations or requirements that could have a material adverse effect on our ability to sell our products.

We have obtained Orphan Drug Designation for ThermoDox® and may seek Orphan Drug Designation for other product candidates, but we may be unsuccessful or may be unable to maintain the benefits associated with Orphan Drug Designation, including the potential for market exclusivity.

ThermoDox® has been granted orphan drug designation for primary liver cancer in both the U.S. and Europe. As part of our business strategy, we may seek Orphan Drug Designation for other product candidates, and we may be unsuccessful. Regulatory authorities in some jurisdictions, including the United States and Europe, may designate drugs for relatively small patient populations as orphan drugs. Under the Orphan Drug Act, the FDA may designate a drug as an orphan drug if it is a drug intended to treat a rare disease or condition, which is generally defined as a patient population of fewer than 200,000 individuals annually in the United States, or a patient population greater than 200,000 in the United States where there is no reasonable expectation that the cost of developing the drug will be recovered from sales in the United States.

Even if we obtain Orphan Drug Designation for our product candidates in specific indications, we may not be the first to obtain marketing approval of these product candidates for the orphan-designated indication due to the uncertainties associated with developing pharmaceutical products. In addition, exclusive marketing rights in the United States may be limited if we seek approval for an indication broader than the orphan-designated indication or may be lost if the FDA later determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantities of the product to meet the needs of patients with the rare disease or condition. Further, even if we obtain orphan drug exclusivity for a product, that exclusivity may not effectively protect the product from competition because different drugs with different active moieties can be approved for the same condition. Even after an orphan product is approved, the FDA can subsequently approve the same drug with the same active moiety for the same condition if the FDA concludes that the later drug is safer, more effective or makes a major contribution to patient care. Orphan Drug Designation neither shortens the development time or regulatory review time of a drug nor gives the drug any advantage in the regulatory review or approval process. In addition, while we may seek Orphan Drug Designation for our product candidates, we may never receive such designations.

Fast Track designation may not actually lead to a faster development or regulatory review or approval process.

ThermoDox® has received U.S. FDA Fast Track Designation. However, we may not experience a faster development process, review, or approval compared to conventional FDA procedures. The FDA may withdraw our Fast Track designation if the FDA believes that the designation is no longer supported by data from our clinical or pivotal development program. Our Fast Track designation does not guarantee that we will qualify for or be able to take advantage of the FDA's expedited review procedures or that any application that we may submit to the FDA for regulatory approval will be accepted for filing or ultimately approved.

Legislative and regulatory changes affecting the healthcare industry could adversely affect our business.

Political, economic and regulatory influences are subjecting the healthcare industry to potential fundamental changes that could substantially affect our results of operations. There have been a number of government and private sector initiatives during the last few years to limit the growth of healthcare costs, including price regulation, competitive pricing, coverage and payment policies, comparative effectiveness of therapies, technology assessments and managed-care arrangements. For example, the Affordable Care Act, passed in 2010, enacted a number of reforms to expand access to health insurance while also reducing or constraining the growth of healthcare spending, enhancing remedies against fraud and abuse, adding new transparency requirements for healthcare industries, and imposing new taxes on fees on healthcare industry participants, among other policy reforms. Further, the 2016 Presidential and Congressional elections and subsequent developments have caused the future state of many core aspects of the current health care marketplace to be uncertain, as the new Presidential Administration and Congress have repeatedly expressed a desire to repeal all or portions of the Affordable Care Act. It is uncertain whether or when any legislative proposals will be adopted or what actions federal, state, or private payors for health care treatment and services may take in response to any healthcare reform proposals or legislation. We cannot predict the effect healthcare reforms may have on our business and we can offer no assurances that any of these reforms will not have a material adverse effect on our business. In addition, uncertainty remains regarding proposed significant reforms to the U.S. health care system.

The success of our products may be harmed if the government, private health insurers and other third-party payers do not provide sufficient coverage or reimbursement.

Our ability to commercialize our new cancer treatment systems successfully will depend in part on the extent to which reimbursement for the costs of such products and related treatments will be available from government health administration authorities, private health insurers and other third-party payors. The reimbursement status of newly approved medical products is subject to significant uncertainty. We cannot guarantee that adequate third-party insurance coverage will be available for us to establish and maintain price levels sufficient for us to realize an appropriate return on our investment in developing new therapies. Government, private health insurers and other third-party payors are increasingly attempting to contain healthcare costs by limiting both coverage and the level of reimbursement for new therapeutic products approved for marketing by the FDA. For example, Congress passed the Affordable Care Act in 2010 which enacted a number of reforms to expand access to health insurance while also reducing or constraining the growth of healthcare spending, enhancing remedies against fraud and abuse, adding new transparency requirements for healthcare industries, and imposing new taxes on fees on healthcare industry participants, among other policy reforms. Federal agencies, Congress and state legislatures have continued to show interest in implementing cost containment programs to limit the growth of health care costs, including price controls, restrictions on reimbursement and other fundamental changes to the healthcare delivery system. In addition, in recent years, Congress has enacted various laws seeking to reduce the federal debt level and contain healthcare expenditures, and the Medicare and other healthcare programs are frequently identified as potential targets for spending cuts. New government legislation or regulations related to pricing or other fundamental changes to the healthcare delivery system as well as a government or third-party payer decision not to approve pricing for, or provide adequate coverage or reimbursement of, our product candidates hold the potential to severely limit market opportunities of such products. Accordingly, even if coverage and reimbursement are provided by government, private health insurers and third-party payors for uses of our products, market acceptance of these products would be adversely affected if the reimbursement available proves to be unprofitable for health care providers.

Our products may not achieve sufficient acceptance by the medical community to sustain our business.

The commercial success of our products will depend upon their acceptance by the medical community and third-party payors as clinically useful, cost effective and safe. Any of our drug candidates or similar product candidates being investigated by our competitors may prove not to be effective in trial or in practice, cause adverse events or other undesirable side effects. Our testing and clinical practice may not confirm the safety and efficacy of our product candidates or even if further testing and clinical practice produce positive results, the medical community may not view these new forms of treatment as effective and desirable or our efforts to market our new products may fail. Market acceptance depends upon physicians and hospitals obtaining adequate reimbursement rates from third-party payors to make our products commercially viable. Any of these factors could have an adverse effect on our business, financial condition and results of operations.

The commercial potential of a drug candidate in development is difficult to predict. If the market size for a new drug is significantly smaller than we anticipate, it could significantly and negatively impact our revenue, results of operations and financial condition.

It is very difficult to predict the commercial potential of product candidates due to important factors such as safety and efficacy compared to other available treatments, including potential generic drug alternatives with similar efficacy profiles, changing standards of care, third party payor reimbursement standards, patient and physician preferences, the availability of competitive alternatives that may emerge either during the long drug development process or after commercial introduction, and the availability of generic versions of our successful product candidates following approval by government health authorities based on the expiration of regulatory exclusivity or our inability to prevent generic versions from coming to market by asserting our patents. If due to one or more of these risks the market potential for a drug candidate is lower than we anticipated, it could significantly and negatively impact the revenue potential for such drug candidate and would adversely affect our business, financial condition and results of operations.

Several of our current clinical trials are being conducted outside the United States, and the FDA may not accept data from trials conducted in foreign locations.

Several of our current clinical trials are being conducted outside the United States. Although the FDA may accept data from clinical trials conducted outside the United States, acceptance of these data is subject to certain conditions imposed by the FDA. For example, the clinical trial must be well designed and conducted and performed by qualified investigators in accordance with ethical principles. The trial population must also adequately represent the U.S. population, and the data must be applicable to the U.S. population and U.S. medical practice in ways that the FDA deems clinically meaningful. In general, the patient population for any clinical trials conducted outside of the United States must be representative of the population for whom we intend to label the product in the United States. In addition, while these clinical trials are subject to the applicable local laws, FDA acceptance of the data will be dependent upon its determination that the trials also complied with all applicable U.S. laws and regulations. We cannot assure you that the FDA will accept data from trials conducted outside of the United States. If the FDA does not accept the data from such clinical trials, it would likely result in the need for additional trials, which would be costly and time-consuming and delay or permanently halt our development of our product candidates.

We have no internal sales or marketing capability. If we are unable to create sales, marketing and distribution capabilities or enter into alliances with others possessing such capabilities to perform these functions, we will not be able to commercialize our products successfully.

We currently have no sales, marketing or distribution capabilities. We intend to market our products, if and when such products are approved for commercialization by the FDA and foreign regulatory agencies, either directly or through other strategic alliances and distribution arrangements with third parties. If we decide to market our products directly, we will need to commit significant financial and managerial resources to develop a marketing and sales force with technical expertise and with supporting distribution, administration and compliance capabilities. If we rely on third parties with such capabilities to market our products, we will need to establish and maintain partnership arrangements, and there can be no assurance that we will be able to enter into third-party marketing or distribution arrangements on acceptable terms or at all. To the extent that we do enter into such arrangements, we will be dependent on our marketing and distribution partners. In entering into third-party marketing or distribution arrangements, we expect to incur significant additional expenses and there can be no assurance that such third parties will establish adequate sales and distribution capabilities or be successful in gaining market acceptance for our products and services.

Technologies for the treatment of cancer are subject to rapid change, and the development of treatment strategies that are more effective than our technologies could render our technologies obsolete.

Various methods for treating cancer currently are, and in the future are expected to be, the subject of extensive research and development. Many possible treatments that are being researched, if successfully developed, may not require, or may supplant, the use of our technologies. The successful development and acceptance of any one or more of these alternative forms of treatment could render our technology obsolete as a cancer treatment method.

We may not be able to hire or retain key officers or employees that we need to implement our business strategy and develop our product candidates and business, including those purchased in the EGEN acquisition.

Our success depends significantly on the continued contributions of our executive officers, scientific and technical personnel and consultants, including those retained in the EGEN acquisition, and on our ability to attract additional personnel as we seek to implement our business strategy and develop our product candidates and businesses. Our operations associated with the EGEN acquisition are located in Huntsville, Alabama. Key employees may depart if we fail to successfully manage this additional business location or in relation to any uncertainties or difficulties of integration with Celsion. We cannot guarantee that we will retain key employees to the same extent that we and EGEN retained each of our own employees in the past, which could have a negative impact on our business, results of operations and financial condition. Our integration of EGEN and ability to operate in the fields we acquired from EGEN may be more difficult if we lose key employees. Additionally, during our operating history, we have assigned many essential responsibilities to a relatively small number of individuals. However, as our business and the demands on our key employees expand, we have been, and will continue to be, required to recruit additional qualified employees. The competition for such qualified personnel is intense, and the loss of services of certain key personnel or our inability to attract additional personnel to fill critical positions could adversely affect our business. Further, we do not carry "key man" insurance on any of our personnel. Therefore, loss of the services of key personnel would not be ameliorated by the receipt of the proceeds from such insurance.

Our success will depend in part on our ability to grow and diversify, which in turn will require that we manage and control our growth effectively.

Our business strategy contemplates growth and diversification. Our ability to manage growth effectively will require that we continue to expend funds to improve our operational, financial and management controls, reporting systems and procedures. In addition, we must effectively expand, train and manage our employees. We will be unable to manage our business effectively if we are unable to alleviate the strain on resources caused by growth in a timely and successful manner. There can be no assurance that we will be able to manage our growth and a failure to do so could have a material adverse effect on our business.

We face intense competition and the failure to compete effectively could adversely affect our ability to develop and market our products.

There are many companies and other institutions engaged in research and development of various technologies for cancer treatment products that seek treatment outcomes similar to those that we are pursuing. We believe that the level of interest by others in investigating the potential of possible competitive treatments and alternative technologies will continue and may increase. Potential competitors engaged in all areas of cancer treatment research in the United States and other countries include, among others, major pharmaceutical, specialized technology companies, and universities and other research institutions. Most of our current and potential competitors have substantially greater financial, technical, human and other resources, and may also have far greater experience than do we, both in pre-clinical testing and human clinical trials of new products and in obtaining FDA and other regulatory approvals. One or more of these companies or institutions could succeed in developing products or other technologies that are more effective than the products and technologies that we have been or are developing, or which would render our technology and products obsolete and non-competitive. Furthermore, if we are permitted to commence commercial sales of any of our products, we will also be competing, with respect to manufacturing efficiency and marketing, with companies having substantially greater resources and experience in these areas.

We may be subject to significant product liability claims and litigation.

Our business exposes us to potential product liability risks inherent in the testing, manufacturing and marketing of human therapeutic products. We presently have product liability insurance limited to $10 million per incident and $10 million annually. If we were to be subject to a claim in excess of this coverage or to a claim not covered by our insurance and the claim succeeded, we would be required to pay the claim with our own limited resources, which could have a severe adverse effect on our business. Whether or not we are ultimately successful in any product liability litigation, such litigation would harm the business by diverting the attention and resources of our management, consuming substantial amounts of our financial resources and by damaging our reputation. Additionally, we may not be able to maintain our product liability insurance at an acceptable cost, if at all.

Our employees, clinical trial investigators, CROs, consultants, vendors and any potential commercial partners may engage in misconduct or other improper activities, including non-compliance with regulatory standards and requirements and insider trading.

We are exposed to the risk of fraud or other misconduct by our employees, clinical trial investigators, CROs, consultants, vendors and any potential commercial partners. Misconduct by these parties could include intentional, reckless and/or negligent conduct or disclosure of unauthorized activities to us that violates: (i) FDA laws and regulations or those of comparable foreign regulatory authorities, including those laws that require the reporting of true, complete and accurate information, (ii) manufacturing standards, (iii) federal and state health and data privacy, security, fraud and abuse, government price reporting, transparency reporting requirements, and other healthcare laws and regulations in the United States and abroad, or (iv) laws that require the true, complete and accurate reporting of financial information or data. Such misconduct could also involve the improper use of information obtained in the course of clinical trials, which could result in regulatory sanctions and cause serious harm to our reputation.

Our internal computer systems, or those of our CROs or other contractors or consultants, may fail or suffer security breaches, which could result in a material disruption of our product development programs.

Despite the implementation of security measures, our internal computer systems and those of our CROs and other contractors and consultants are vulnerable to damage from computer viruses, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failures. Such events could cause interruptions of our operations. For instance, the loss of preclinical data or data from any clinical trial involving our product candidates could result in delays in our development and regulatory filing efforts and significantly increase our costs. To the extent that any disruption or security breach were to result in a loss of, or damage to, our data, or inappropriate disclosure of confidential or proprietary information, we could be subject to reputational harm, monetary fines, civil suits, civil penalties or criminal sanctions and requirements to disclose the breach, and other forms of liability and the development of our product candidates could be delayed.

RISKS RELATED TO OUR SECURITIES

The market price of our common stock has been, and may continue to be volatile and fluctuate significantly, which could result in substantial losses for investors and subject us to securities class action litigation.

The trading price for our common stock has been, and we expect it to continue to be, volatile. Our January 31, 2013 announcement that the HEAT Study failed to meet its primary endpoint has resulted in significant volatility and a steep decline in the price of our common stock, a level of decline that could result in securities litigation. The price at which our common stock trades depends upon a number of factors, including our historical and anticipated operating results, our financial situation, announcements of technological innovations or new products by us or our competitors, our ability or inability to raise the additional capital we may need and the terms on which we raise it, and general market and economic conditions. Some of these factors are beyond our control. Broad market fluctuations may lower the market price of our common stock and affect the volume of trading in our stock, regardless of our financial condition, results of operations, business or prospect. The closing price of our common stock as reported on The NASDAQ Capital Market had a high price of $27.02 and a low price of $4.20 in the 52-week period ended December 31, 2016, a high price of $7.14 and a low price of $1.28 in the 52-week period ended December 31, 2017, and a high price of $3.13 and a low price of $1.95 from January 1, 2018 through May 10, 2018. Among the factors that may cause the market price of our common stock to fluctuate are the risks described in

- results of preclinical and clinical studies of our product candidates or those of our competitors;
- regulatory or legal developments in the U.S. and other countries, especially changes in laws and regulations applicable to our product candidates;
- actions taken by regulatory agencies with respect to our product candidates, clinical studies, manufacturing process or sales and marketing terms;
- introductions and announcements of new products by us or our competitors, and the timing of these introductions or announcements;
- announcements by us or our competitors of significant acquisitions or other strategic transactions or capital commitments;

- fluctuations in our quarterly operating results or the operating results of our competitors;
- variance in our financial performance from the expectations of investors;
- changes in the estimation of the future size and growth rate of our markets;
- changes in accounting principles or changes in interpretations of existing principles, which could affect our financial results;
- failure of our products to achieve or maintain market acceptance or commercial success;
- conditions and trends in the markets we serve;
- changes in general economic, industry and market conditions;
- success of competitive products and services;
- changes in market valuations or earnings of our competitors;
- changes in our pricing policies or the pricing policies of our competitors;
- changes in legislation or regulatory policies, practices or actions;
- the commencement or outcome of litigation involving our company, our general industry or both;
- recruitment or departure of key personnel;
- changes in our capital structure, such as future issuances of securities or the incurrence of additional debt;
- actual or anticipated changes in earnings estimates or changes in stock market analyst recommendations regarding our common stock, other comparable companies or our industry generally;
- actual or expected sales of our common stock by our stockholders;
- acquisitions and financings, including the EGEN acquisition; and
- the trading volume of our common stock.

In addition, the stock markets, in general, The NASDAQ Capital Market and the market for pharmaceutical companies in particular, may experience a loss of investor confidence. Such loss of investor confidence may result in extreme price and volume fluctuations in our common stock that are unrelated or disproportionate to the operating performance of our business, financial condition or results of operations. These broad market and industry factors may materially harm the market price of our common stock and expose us to securities class action litigation. Such litigation, even if unsuccessful, could be costly to defend and divert management's attention and resources, which could further materially harm our financial condition and results of operations.

Future sales of our common stock in the public market could cause our stock price to fall.

Sales of a substantial number of shares of our common stock in the public market, or the perception that these sales might occur, could depress the market price of our common stock and could impair our ability to raise capital through the sale of additional equity securities. As of May 10, 2018, we had 17,740,035 shares of common stock outstanding, all of which shares, other than shares held by our directors and certain officers, were eligible for sale in the public market, subject in some cases to compliance with the requirements of Rule 144, including the volume limitations and manner of sale requirements. In addition, all of the shares of common stock issuable upon exercise of warrants will be freely tradable without restriction or further registration upon issuance.

Our stockholders may experience significant dilution as a result of future equity offerings or issuances and exercise of outstanding options and warrants.

In order to raise additional capital or pursue strategic transactions, we may in the future offer, issue or sell additional shares of our common stock or other securities convertible into or exchangeable for our common stock, including the issuance of common stock in relation to the achievement, if any, of milestones triggering our payment of earn-out consideration in connection with the EGEN acquisition. Our stockholders may experience significant dilution as a result of future equity offerings or issuances. Investors purchasing shares or other securities in the future could have rights superior to existing stockholders. As of May 10, 2018, we have a significant number of securities convertible into, or allowing the purchase of, our common stock, including 3,058,402 shares of common stock issuable upon exercise of warrants outstanding, 597,241 options to purchase shares of our common stock and restricted stock awards outstanding, and 102,652 shares of common stock reserved for future issuance under our stock incentive plans. Under the Controlled Equity Offering SM Sales Agreement entered into with Cantor Fitzgerald & Co. on February 1, 2013, we may offer and sell, from time to time through "at-the-market" offerings, up to an aggregate of $25 million of shares of our common stock. We had sold $12.8 million under the Sales Agreement as of March 31, 2018.

We may be unable to maintain compliance with The NASDAQ Marketplace Rules which could cause our common stock to be delisted from The NASDAQ Capital Market. This could result in the lack of a market for our common stock, cause a decrease in the value of an investment in us, and adversely affect our business, financial condition and results of operations.

Our common stock is currently listed on The NASDAQ Capital Market. To maintain the listing of our common stock on The NASDAQ Capital Market, we are required to meet certain listing requirements, including, among others, either: (i) a minimum closing bid price of $1.00 per share, a market value of publicly held shares (excluding shares held by our executive officers, directors and 10% or more stockholders) of at least $1 million and stockholders' equity of at least $2.5 million; or (ii) a minimum closing bid price of $1.00 per share, a market value of publicly held shares (excluding shares held by our executive officers, directors and 10% or more stockholders) of at least $1 million and a total market value of listed securities of at least $35 million. As of May 10, 2018, the closing sale price per share of our common stock was $2.55, the total market value of our publicly held shares of our common stock (excluding shares held by our executive officers, directors and 10% or more stockholders) was approximately $45.1 million and the total market value of our listed securities was approximately $45.3 million. There is no assurance that we will continue to meet the minimum closing price requirement and other listing requirements. As of March 31, 2018, we had stockholders' equity of approximately $23.6 million.

The adverse capital and credit market conditions could affect our liquidity.

Adverse capital and credit market conditions could affect our ability to meet liquidity needs, as well as our access to capital and cost of capital. The capital and credit markets have experienced extreme volatility and disruption in recent years. Our results of operations, financial condition, cash flows and capital position could be materially adversely affected by continued disruptions in the capital and credit markets.

Our ability to use net operating losses to offset future taxable income are subject to certain limitations.

On December 22, 2017, the President of the United States signed into law the Tax Reform Act. The Tax Reform Act significantly changes U.S. tax law by, among other things, lowering corporate income tax rates, implementing a quasi-territorial tax system, providing a one-time transition toll charge on foreign earnings, creating a new limitation on the deductibility of interest expenses and modifying the limitation on officer compensation. The Tax Reform Act permanently reduces the U.S. corporate income tax rate from a maximum of 35% to a flat 21% rate, effective January 1, 2018. We currently have significant net operating losses (NOLs) that may be used to offset future taxable income. In general, under Section 382 of the Internal Revenue Code of 1986, as amended (the Code), a corporation that undergoes an "ownership change" is subject to limitations on its ability to utilize its pre-change NOLs to offset future taxable income. During 2017, 2016 and years prior, we performed analyses to determine if there were changes in ownership, as defined by Section 382 of the Internal Revenue Code that would limit our ability to utilize certain net operating loss and tax credit carry forwards. We determined we experienced ownership, as defined by Section 382, in connection with certain common stock offerings in 2011, 2013, 2015 and 2017. As a result, the utilization of our federal tax net operating loss carry forwards generated prior to the ownership changes is limited. Future changes in our stock ownership, some of which are outside of our control, could result in an ownership change under Section 382 of the Code, which would significantly limit our ability to utilize NOLs to offset future taxable income.

We have never paid cash dividends on our common stock in the past and do not anticipate paying cash dividends on our common stock in the foreseeable future.

We have never declared or paid cash dividends on our common stock. We do not anticipate paying any cash dividends on our common stock in the foreseeable future. We currently intend to retain all available funds and any future earnings to fund the development and growth of our business. As a result, capital appreciation, if any, of our common stock will be the sole source of gain for the foreseeable future for holders of our common stock.

Anti-takeover provisions in our charter documents and Delaware law could prevent or delay a change in control.

Our certificate of incorporation and bylaws may discourage, delay or prevent a merger or acquisition that a stockholder may consider favorable by authorizing the issuance of "blank check" preferred stock. This preferred stock may be issued by our board of directors on such terms as it determines, without further stockholder approval. Therefore, our board of directors may issue such preferred stock on terms unfavorable to a potential bidder in the event that our board of directors opposes a merger or acquisition. In addition, our classified board of directors may discourage such transactions by increasing the amount of time necessary to obtain majority representation on our board of directors. Certain other provisions of our bylaws and of Delaware law may also discourage, delay or prevent a third party from acquiring or merging with us, even if such action were beneficial to some, or even a majority, of our stockholders.

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

None

Item 3. Defaults Upon Senior Securities.

None.

Item 4. Mine Safety Disclosures.

Not applicable.

Item 5. Other Information.

None.

Item 6. Exhibits.

10.1+	Lease Agreement dated January 15, 2018, by and between Celsion Corporation and HudsonAlpha Institute of Biotechnology for office and lab space located in Huntsville, Alabama.
31.1+	Certification of Chief Executive Officer pursuant to Rule 13a-14(a)/15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2+	Certification of Chief Financial Officer pursuant to Rule 13a-14(a)/15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1*	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

\+ Filed herewith.

101** The following materials from the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2018, formatted in XBRL (Extensible Business Reporting Language): (i) the unaudited Consolidated Balance Sheets, (ii) the unaudited Consolidated Statements of Operations, (iii) the unaudited Consolidated Statements of Comprehensive Loss, (iv) the unaudited Consolidated Statements of Cash Flows, (v) the unaudited Consolidated Statements of Change in Stockholders' Equity (Deficit), and (vi) Notes to Consolidated Financial Statements.

* Exhibit 32.1 is being furnished and shall not be deemed to be "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liability of that section, nor shall such exhibit be deemed to be incorporated by reference in any registration statement or other document filed under the Securities Act of 1933, as amended, or the Securities Exchange Act, except as otherwise stated in such filing.

** XBRL information is filed herewith.

SIGNATURES

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

May 11, 2018

CELSION CORPORATION

Registrant

By: /s/ Jeffrey W. Church
Jeffrey W. Church
Senior Vice President and Chief Financial Officer

By: /s/ Michael H. Tardugno
Michael H. Tardugno
Chairman, President and Chief Executive Officer

LEASE AGREEMENT

BETWEEN

HUDSONALPHA INSTITUTE FOR BIOTECHNOLOGY

AND

CELSION CORPORATION

SUITE NO. **3100**

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STATE OF ALABAMA

COUNTY OF MADISON

LEASE AGREEMENT

THIS LEASE AGREEMENT (the "Lease") is made and entered into on this the **15th** day of **January**, **2018**, by and between **HudsonAlpha Institute for Biotechnology**, an Alabama non- profit corporation ("Landlord"), and **Celsion Corporation**, a **Delaware corporation** ("Tenant").

ARTICLE 1
DEMISE

Section 1.01 Premises. Landlord does hereby rent and lease to Tenant, and Tenant hereby rents and leases from Landlord, the following described space in the building located at 601 Genome Way, Huntsville, Alabama (the "Building"): approximately **9,049** square feet of Usable Area, calculated in accordance with BOMA Standard Method For Measuring Floor Area in Office Buildings as of the date of this Lease, located on all or a portion of the **3rd** floor of the Building, known as Suite # **3100**. Landlord and Tenant acknowledge and agree that said square footage figures are accurate for all purposes used herein. The space hereby leased in the Building is hereinafter called the "Premises" and is outlined on the floor plan drawings attached hereto as **Exhibit A** and made a part hereof for all purposes. The Building is located in the biotechnology research and development campus known as The CRP Biotech Campus (the "Campus"), and this Lease and Tenant's use and occupancy of the Premises shall be subject to all of the covenants, rules and restrictions (including without limitation applicable zoning ordinances) of Cummings Research Park West and The CRP Biotech Campus.

Section 1.02 Parking Areas and Common Areas. Tenant shall have the right to use all portions of the real property adjacent to the Building that are designated from time to time by Landlord as parking areas (the "Parking Areas") and the Common Areas (as defined in **Section 4.04**) on a nonexclusive basis in common with the other tenants of the Building in accordance with **Article 4**, and with the Building Rules and Regulations attached hereto as **Exhibit C** and the Parking Rules and Regulations attached hereto as **Exhibit D**.

Section 1.03 Relocation of Tenant. Landlord shall have the right, at its sole cost and expense, to relocate Tenant to other premises within the Building, or within another building on the Campus owned by Landlord, of comparable kind and quality as the Premises as reasonably determined by Landlord. In no event shall any relocation accomplished pursuant to this Section 1.03 result in an increase in Rent or other sums payable under this Lease unless Tenant shall consent to an expansion of the Premises in connection with such relocation. Landlord shall use reasonable efforts to minimize disruption or inconvenience to Tenant during any relocation. Landlord's liability to pay for the cost of any such relocation shall be limited to the direct costs of the relocation, and not consequential or speculative costs (e.g., loss of profits incurred by Tenant during relocation).

ARTICLE 2
TERM; ACCEPTANCE AND SURRENDER OF PREMISES; HOLDOVER

Section 2.01 Lease Term. The term of this Lease shall begin on the Commencement Date (as defined below) and terminate **sixty** (**60**) months thereafter (the "Lease Term"). The Lease Term shall commence on the earlier of (a) the first business day following the date which is fifteen (15) business days after Landlord delivers to Tenant written notice stating that the Premises are ready to be occupied by Tenant, or (b) the date Tenant commences business operations in the Premises (such earlier date being referred to herein as the "Commencement Date"). The Commencement Date shall be confirmed by Tenant pursuant to the Commencement Date Agreement in the form attached hereto as **Exhibit E**, which Tenant shall execute within fifteen (15) days following delivery of possession of the Premises to Tenant as herein provided.

Section 2.02 Termination Right. If Tenant constructs (or causes the construction of) a building within the Campus, Tenant may terminate this Lease and the Lease Term prior to its expiration in order to move out of the Building and to move immediately into the newly constructed building when such building is completed and ready for occupancy by Tenant.

Section 2.03 Common Design; Tenant Improvements. Tenant acknowledges that Landlord intends that the Premises have an appearance and design that is common with the Common Areas and other tenant spaces of the Building. Accordingly, Landlord's architect has developed a common look and feel for all non-laboratory space within the Building, and Landlord will provide integrated office furniture, fixtures, equipment and color schemes for non-laboratory spaces in the Building (including within the Premises), all on an as-is, where-is basis without representation or warranty. During the Lease Term, Tenant shall have the right to use all such office furniture, fixtures and equipment located within the Premises, a photographic inventory of which is attached hereto as **Exhibit B**, as the same may be amended from time to time (collectively, the "Building FF&E") for the purpose for which such items are intended, but the Building FF&E shall remain the sole property of Landlord at all times. Tenant hereby indemnifies Landlord for any damages, claims, or any liability arising from or in connection with Tenant's use of the Building FF&E.

Section 2.04 Quiet Enjoyment. So long as Tenant is not in default hereunder, Landlord covenants and agrees that Tenant may peaceably hold and quietly enjoy the Premises subject to and upon the terms and conditions of this Lease.

Section 2.05 Surrender of Premises.

A. Tenant shall surrender and deliver up the Premises (including, without limitation, all Building FF&E) at the expiration or termination of the Lease Term, in good repair and condition, reasonable wear and tear thereof excepted.

B. "**Tenant's Personal Property**" shall mean all equipment, machinery, furniture, furnishings and other personal property now or hereafter installed or placed in or on the Premises by and at the sole expense of Tenant that can be removed without damage to the Premises or the Building. Tenant shall obtain Landlord's approval of such Tenant's Personal Property before installing or placing the same in the Premises. Tenant shall remove all of Tenant's Personal Property from the Premises at the expiration or termination of the Lease and shall repair any damage to the Premises or the Building caused by such removal. All other property located within the Premises (other than alterations and additions required by Landlord to be removed by Tenant pursuant to **Section 5.03** hereof), including wall-to-wall carpet, paneling or other wall covering, and any other article attached or affixed to the floor, wall or ceiling of the Premises, shall become the property of Landlord and shall remain upon and be surrendered with the Premises as a part thereof at the termination of this Lease by lapse of time or otherwise, Tenant hereby waiving all rights to any payment or compensation therefor. Any property belonging to Tenant or any other person that is left in the Premises after the Lease Term shall be deemed to be have been abandoned; provided, however, that Tenant shall remain liable for the cost of the removal of such property.

Section 2.06 Holdover. If Tenant continues to occupy the Premises after the expiration of the Lease Term, or upon any earlier termination of this Lease, Tenant shall be deemed a tenant from month-to-month, with rent due and payable for such holdover period at the rate of one hundred fifty percent (150%) of the monthly rent in effect at the expiration (or earlier termination) of this Lease. During any such holdover period, all other terms and conditions of this Lease shall remain in full force and effect and such tenancy from month-to-month shall be cancelable by either party by giving written notice thereof at least thirty (30) days prior to the effective date of cancellation. No holdover or payment by Tenant after the expiration or termination of this Lease shall operate to extend the Lease Term or prevent Landlord from immediate recovery of possession of the Premises by summary proceedings or otherwise. Any provision in this Lease to the contrary notwithstanding, any holdover by Tenant shall constitute a default on the part of Tenant under this Lease entitling Landlord to exercise, without obligation to provide Tenant any notice or cure period, all of the remedies available to Landlord in the event of a Tenant default, and Tenant shall be liable for all damages, including consequential damages, that Landlord suffers as a result of the holdover.

ARTICLE 3
RENT

Section 3.01 Rent. For purposes of this Lease, each successive period of twelve (12) months during the Lease Term commencing on the Commencement Date shall be a "Lease Year". As consideration of and for this Lease and the Premises, commencing on the Commencement Date, Tenant shall pay to Landlord an initial net annual rental equal to the sum of $**24.00** per square foot with respect to **9,049** square feet of Tenant's Premises located at Suite # **3100** as reflected on **Exhibit A** (collectively, the "Rent") for the first Lease Year. Rent will be adjusted on the first day of each successive Lease Year thereafter (each such date an "Adjustment Date") to reflect the increase, if any, in the cost of living from the month and year in which the Commencement Date occurs; provided, however, that Rent for any Lease Year shall not increase by more than 2% over the Rent in effect for the immediately preceding Lease Year. In no event shall the annual rent due after the Adjustment Date ever be a sum which is less than the annual rent due before the Adjustment Date. The annual rent due as a result of an increase in the cost of living shall be calculated in accordance with the calculation set forth in this Section 3.01. The basis for computing the cost of living shall be the unadjusted Consumer Price Index for all Urban Consumers, All Items (1982-84 = 100) published by the Bureau of Labor Statistics of the United States Department of Labor ("Index"). The Index for the month and year in which the Commencement Date occurs shall be the "Base Index Number". The Index for the month immediately preceding the Adjustment Date shall be the "Current Index Number". The annual Rent for each Lease Year commencing with the second Lease Year shall be the greater of (i) the annual Rent then in effect immediately prior to the Adjustment Date, and (ii) the product obtained from multiplying the amount of annual rent in effect prior to the applicable Adjustment Date by the fraction whose numerator is equal to the Current Index Number and whose denominator is equal to the Base Index Number.

Adjusted Annual Rent = Annual Rent Prior to Adjustment Date x $\frac{\text{Current Index Number}}{\text{Base Index Number}}$

If the aforesaid Index is not in existence at the time the determination is to be made, the parties shall use such equivalent price index as is published by a successor government agency in lieu of the Index; or if no such price index is published, then the parties shall use a mutually acceptable equivalent price index as is published by a non-governmental agency.

Section 3.02 Payments of Rent. Rent shall be due and payable in equal monthly installments, in advance, without notice, demand, setoff or deduction, on or before the first (1st) day of each calendar month during the Lease Term. Tenant shall pay the Rent to Landlord by delivering or mailing (postage prepaid) the Rent to Landlord at the following address:

HudsonAlpha Institute for Biotechnology
601 Genome Way
Huntsville, AL 35806

or to such other address or in such other manner as Landlord may, from time to time, specify by written notice to Tenant (including without limitation via Automated Clearing House (ACH) payment to a financial institution designated by Landlord). Any payment which is less than the amount of Rent then due shall constitute a payment made on account thereof, the parties hereby agreeing that Landlord's acceptance of such payment shall not alter or impair Landlord's right to be paid all or any amounts then or thereafter due and shall not prevent Tenant from being in default or Landlord from exercising all its remedies hereunder. Rent shall be prorated for any partial month that this Lease is in effect.

ARTICLE 4
USE OF PREMISES; COMPLIANCE WITH LAWS

Section 4.01 Permitted Use. Tenant agrees that Landlord is leasing the Premises to Tenant based on the representation by Tenant that the use of Premises by Tenant shall be in the field of biotechnology, including research, office, laboratory, sales, service, training and production. Tenant agrees that it shall only use the Premises in connection with such use in the field of biotechnology and shall not use the Premises for any non-biotechnology uses, except as permitted by Landlord in writing in its sole and absolute discretion.

Section 4.02 Covenants of Tenant Regarding Use. In connection with its use of the Premises, Tenant agrees to do the following:

A. Tenant shall use the Premises and conduct its business thereon in a safe, careful, reputable and lawful manner. Tenant shall be responsible for compliance with the Americans With Disabilities Act of 1990 (42 U.S.C. § 1201 et seq.), as amended and supplemented from time to time, and any other laws regarding accessibility, with respect to Tenant's use of the Premises.

B. Tenant (i) shall not use, or permit any other person to use, the Premises for any (a) unlawful purpose or act and (b) any use other than the permitted use set forth in **Section 4.01**; (ii) shall comply with and obey all laws, regulations and orders of any governmental authority or agency; (iii) shall not commit or permit any waste or damage to the Premises; (iv) shall comply with all reasonable directions of the Landlord, including without limitation, all the Building Rules and Regulations attached hereto as **Exhibit C**, all the Parking Rules and Regulations attached hereto as **Exhibit D** and all Laboratory Rules and Regulations applicable to all laboratory spaces within the Building attached here to as **Exhibit G**, as the same may be modified from time to time by Landlord on reasonable notice to Tenant; and (v) shall not do or permit anything to be done in or about the Premises that constitutes a nuisance or in any way obstructs or interferes with the rights of other tenants or occupants of the Building or their invitees, or injure or annoy such tenants, occupants or their invitees. Landlord shall not be responsible to Tenant for the nonperformance by any other tenant or occupant of the Building of any of the Building Rules and Regulations, but agrees to take reasonable measures to assure such other tenant's compliance.

C. Tenant shall, at its sole cost and expense, procure or obtain any and all necessary permits, licenses, or other authorizations required for lawful and proper use, occupation and management of the Premises.

D. Tenant shall not overload the floors of the Premises beyond their designed weight-bearing capacity, which Landlord has determined to be 80 PSF for all corridor floor space and 100 PSF for all office and laboratory floor space, including an allowance for partition load. Landlord reserves the right to direct the positioning of all heavy equipment, furniture and fixtures that Tenant desires to place in the Premises so as to distribute properly the weight thereof, and to require the removal of any equipment or furniture that exceeds the weight limit specified herein.

E. Tenant shall not use the Premises, or allow the Premises to be used, for any purpose or in any manner that would, in Landlord's opinion, invalidate any policy of insurance now or hereafter carried on the Building and/or the Campus or increase the rate of premiums payable on any such insurance policy. Should Tenant fail to comply with this covenant, Landlord may, at its option, require Tenant to stop engaging in such activity or to reimburse Landlord as additional rent for any increase in premiums charged during the Lease Term on the insurance carried by Landlord on the Premises and attributable to the use being made of the Premises by Tenant.

F. Tenant shall not inscribe, paint, affix or display any signs, advertisements or notices on the interior or exterior of the Building or on or about the Parking Areas and Common Areas or within the Premises which are visible from outside the Premises, except for such tenant identification information as Landlord permits to be included or shown on the directory board in the main lobby and on or adjacent to the access door or doors to the Premises, or such other signs Landlord may consent to in writing.

G. Landlord may, but shall not be obligated to, at Landlord's sole expense, submit the Building to be certified under the U.S. Green Building Council's LEEDv3-Existing Buildings: Operations and Maintenance standard. Tenant shall not incur any out-of-pocket costs in connection with such certification, but Tenant agrees to comply with the reasonable Building practices, procedures, rules and regulations of Landlord as necessary to achieve and maintain such certification.

Section 4.03 Landlord's Rights Regarding Use. In addition to the rights specified elsewhere in this Lease, Landlord shall have the following rights regarding the use of the Premises, the Parking Areas or the Common Areas by Tenant, its employees, agents, customers and invitees, each of which may be exercised without notice or liability to Tenant:

A. Landlord shall install such signs, advertisements or notices or tenant identification information on the directory board and tenant access doors, as it shall deem necessary or proper.

B. Landlord shall approve or disapprove, prior to installation, all types of drapes; shades and other window coverings used in the Premises, and may control all internal lighting that may be visible from outside the Premises

C. Landlord shall approve or disapprove all sign painting and lettering used on the Premises and the Building, including the suppliers thereof.

D. Landlord may control the Parking Areas and the Common Areas in such manner as it deems necessary or proper, including by way of illustration and not limitation: requiring all persons entering or leaving the Building to identify themselves and their business in the Building; excluding or expelling any peddler, solicitor or loud or unruly person from the Building; and closing or limiting access to the Building or any part thereof, including entrances, corridors, doors and elevators, during times of special events sponsored by Landlord, emergency repairs or after regular business hours.

E. Landlord reserves the right, subject to Tenant's right to quiet enjoyment of the Premises, to modify the size, location, arrangement, finish and other features of the Common Areas and the Parking Areas of the Building, and to alter, modify, or add onto the Building (other than the Premises) and the Parking Areas.

Section 4.04 Definition of Common Areas. The term "**Common Areas**", as used in this Lease, refers to the areas of the Building and the Campus that are designed for use in common by all tenants of the Building and their respective employees, agents, customers, invitees and others, and includes, by way of illustration and not limitation (i) entrances and exits, lobbies, hallways and stairwells, elevators, restrooms and snack bars or other vending areas located outside the premises leased to tenants, (ii) sidewalks, driveways, the Parking Areas and landscaped areas, (iii) temporary guest quarters located outside the premises leased to tenants, (iv) the cafeteria, the library, the gym/workout area, and (v) other areas as may be designated by Landlord from time to time as part of the Common Areas of the Building. During the Lease Term, Tenant shall have the non-exclusive right, in common with others, to the use of the Common Areas, subject to such nondiscriminatory rules and regulations as may be adopted from time to time by Landlord including those set forth on **Exhibit C** and **Exhibit D** of this Lease.

Section 4.05 Access to and Inspection of Premises. Landlord, its employees and agents and any mortgagee of the Building shall have the right to enter any part of the Premises during normal business hours for the purposes of examining or inspecting the same, showing the same to prospective purchasers, mortgagees or tenants and making such repairs, alterations or improvements to the Premises or the Building as Landlord may deem necessary or desirable; provided, however, in the event of an emergency, as determined in Landlord's reasonable judgment, no prior notice shall be required and entry shall not be limited to normal business hours. In addition, during the last one hundred eighty (180) days of the Lease Term, Landlord, its employees and agents shall have the right to enter any part of the Premises at reasonable times for the purposes of showing the same to prospective tenants. If representatives of Tenant shall not be present to open and permit such entry into the Premises at any time when such entry is necessary or permitted hereunder, Landlord and its employees and agents may enter the Premises by means of a master or pass key or otherwise. Landlord shall incur no liability to Tenant for such entry, nor shall such entry constitute an eviction of Tenant or a termination of this Lease, or entitle Tenant to any abatement of rent therefor.

ARTICLE 5
MAINTENANCE AND REPAIRS; ALTERATIONS; SERVICES

Section 5.01 Repair and Maintenance of the Building. Subject to Tenant's repair and maintenance obligations pursuant to **Section 5.02** below, Landlord shall repair and maintain in good working order and condition (i) the elevators, HVAC, electrical, plumbing, ventilation, sprinkler and other mechanical systems of the Building, (ii) the structural components of the Building, including without limitation, the roof, foundation, exterior walls, exterior doors and exterior windows, and (iii) the Common Areas and Parking Areas of the Building. Except as provided in **Article 8** and **Article 9** hereof, there shall be no abatement of rent and no liability of Landlord by reason of any injury to or interference with Tenant's business arising from the making of any repairs, alterations or improvements in or to any portion of the Building or the Premises or in or to any fixtures, appurtenances and equipment therein or thereon. Nothing herein shall diminish Tenant's responsibility to maintain and repair Tenant equipment, including but not limited to any special fire protection equipment, telecommunications and computer equipment, kitchen equipment, air conditioning/ventilation equipment serving and specially installed for the Premises (if any), any laboratory equipment, refrigerators or freezers or other equipment specially installed for the Tenant. Notwithstanding anything contained in the Section to the contrary, Landlord shall have no obligation to make any repairs necessitated by the negligence, willful misconduct, misuse or default of Tenant, its employees, agents, customers and invitees.

Section 5.02 Repair and Maintenance of Premises. Tenant shall, at its own cost and expense, keep in good repair all portions of the Premises, including but not limited to windows, glass and plate glass, doors, interior walls and finish work, floors and floor coverings, Building FF&E, and supplemental or special heating and air conditioning systems, and shall take good care of the Premises and its fixtures (including without limitation, Building FF&E) and permit no waste, except normal wear and tear. Tenant shall maintain and replace, at its cost and expense, all light bulbs and fixtures in the Premises that are not the Building's standard light fixtures and bulbs. Any repairs required under this Section, although paid for by Tenant, will be performed by Landlord, except with regard to laboratory areas within the Premises, in which case Tenant shall perform all maintenance and repairs to such areas, including without limitation maintenance and repairs to fume hoods, freezers, coolers, snorkels, biohazard cabinets and lab benches.

Section 5.03 Alterations. Tenant may not make any changes, additions, alterations, improvements or additions to the Premises and Building FF&E or attach or affix any articles thereto without Landlord's prior written consent, which consent may be withheld in Landlord's sole discretion for any reason or no reason. If Landlord permits any such changes or alterations, they will be at Tenant's sole cost and expense and will subject to such requirements and conditions as Landlord may impose in its sole discretion, including without limitation the following requirements: (i) that all permitted alterations, improvements and additions to the Premises shall be performed only by Landlord or by contractors approved by Landlord in accordance with plans and specifications approved by Landlord; and (ii) that Tenant, upon the expiration of this Lease, restore the Premises to the same condition as existed on the Commencement Date at Tenant's expense.

Section 5.04 Landlord Services.

A. Landlord shall use its reasonable best efforts to furnish the Premises with the following services (the "Landlord Services"):

(i) Tepid water (at the normal temperature of the supply of water to the Building) for lavatory and toilet purposes, refrigerated water for drinking purposes, and hot water, all of such water service to be supplied from the regular supply of water to the Building through fixtures installed by Landlord either in the Common Areas or the Premises, as Landlord shall determine;

(ii) Landlord shall furnish seasonable air conditioning and heating during normal business hours as determined by Landlord in its reasonable discretion. Should Tenant desire either heating or air conditioning at other times, Landlord agrees to provide same, but at Tenant's expense at such hourly rates as may be determined from time to time by Landlord, which charge Tenant shall pay promptly upon being billed therefor;

(iii) Landlord shall furnish electric current for Building standard tenant lighting and small business machinery only from electric circuits designated by Landlord for Tenant's use. Such circuits will be fed into one or more of the existing electrical panel(s) in the electrical closets located adjacent to the Premises. Tenant’s usage of said panels on any given floor shall not exceed Tenant’s pro rata share (based on rentable square footage) of the panels’ capacity. Tenant will not use any electrical equipment which in Landlord’s opinion will overload the wiring installations or interfere with the reasonable use thereof by other users in the Building. Tenant will not, without Landlord’s prior written consent in each instance, connect any items such as non-Building standard tenant lighting, vending equipment, printing or duplicating machines, computers (other than desktop word processors and personal computers), auxiliary air conditioners, laboratory equipment, and other related equipment to the Building’s electrical system, or make any alteration or addition to the system. If Tenant desires any such items, additional 208/120 volt electrical power beyond that supplied by Landlord as provided above, electric current in excess of 208/120 volts for purposes other than Building Standard tenant lighting, or other special power requirements or circuits, then Tenant may request Landlord to provide such supplemental power or circuits to the Premises, which request Landlord may grant or withhold in its reasonable discretion. If Landlord furnishes such power or circuits, Tenant shall pay Landlord the cost of the design, installation and maintenance of the facilities required to provide such additional or special electric power or circuits and the cost of all electric current so provided at such rates as may be determined from time to time by Landlord. Landlord may require separate electrical metering of such supplemental electrical power or circuits to the Premises, and Tenant shall pay, on demand, the cost of the design, installation and maintenance of such metering facilities. In the event such additional electrical power is not separately metered, Landlord may utilize agreed upon estimates to pay for such additional electric power and Tenant agrees to pay for such additional agreed upon estimates on a monthly basis, in addition to any other rent or charges hereunder. Tenant shall not have access to any electrical closets in the Building; any electrical engineering design or contract work shall be performed at Tenant’s expense by Landlord or an electrical engineer and/or electrical contractor designated by Landlord. All invoices respecting the design, installation and maintenance of the facilities requested by Tenant shall be paid within thirty (30) days of Tenant's receipt thereof. Landlord's charge to Tenant for the cost of electric current so provided shall be paid within thirty (30) days of receipt of invoice by Tenant.

(iv) Waste disposal, cleaning and janitorial service, including the supplying and installing of paper towels, toilet tissue and soap in the Common Areas on Monday through Friday of each week except legal holidays; provided, however, Tenant shall be responsible at its own cost for hazardous waste disposal, cleaning of laboratory areas within the Premises, and carpet cleaning other than routine vacuuming;

(v) Replacement of all lamps, bulbs, starters and ballasts in Building Standard lighting as required from time to time as a result of normal usage;

(vi) Cleaning and maintenance of the Parking Areas and Common Areas, including the removal of rubbish and snow;

(vii) Washing of exterior and interior windows at intervals reasonably established by Landlord;

(viii) Exterior lighting and pass-card or other security access to the Building after standard building hours; and

(ix) Automatic elevator service.

Landlord in its sole discretion may, but shall not be obligated to, provide (i) patrol service to monitor the Parking Areas and Building entrances, (ii) the following information technology services (collectively, the "IT Services"): telephone, voice, internet, local area network (LAN), virtual private network (VPN) services and other services incidental thereto, and (iii) mailroom services, including shipping and receiving.

B. Except as otherwise set forth above, the Landlord Services shall be provided during normal business hours as determined by Landlord in its reasonable discretion. Landlord shall give Tenant at least seventy-two (72) hours advance notice of any utilities which will be unavailable within the knowledge and control of Landlord.

C. Tenant understands, acknowledges and agrees that any one or more of the utilities or other building services identified in this Section 5.04 may be interrupted by reason of accident, emergency or other causes beyond Landlord's control, or may be discontinued or diminished temporarily by Landlord or other persons until certain repairs, alterations or improvements can be made; that Landlord does not represent or warrant the uninterrupted availability of such utilities or building services, and that any such interruption shall not be deemed an eviction or disturbance of Tenant's right to possession, occupancy and use of the Premises or any part thereof, or render Landlord liable to Tenant for damages by abatement of rent or otherwise, or relieve Tenant from the obligation to perform its covenants under this Lease, including the payment of rent.

Section 5.05 Additional Services. If Tenant requests any other utilities or building services in addition to those identified above, or if any of the above utility or building services are substantially greater in frequency, scope, quality or quantity than those that are normally required by other tenants in the Building as determined by Landlord, then Landlord may, but shall not be obligated to, use reasonable efforts to attempt to furnish Tenant with such additional utilities or building services. In the event Landlord is able to and does furnish such additional utilities or building services, the costs thereof shall be determined solely by Landlord, exercising its reasonable business judgment, and shall be borne by Tenant.

ARTICLE 6
MECHANICS' LIENS

If any mechanics' or other lien or order for the payment of money shall be filed against the Building or the property of which the Building is a part or any building or improvement thereon, by reason of or arising out of any labor or material furnished or alleged to have been furnished to or for, or at the request of, Tenant at the Premises, or for or by reason of any change, alteration, or addition or the cost or expense thereof or any contract relating thereto, Tenant shall cause the same to be canceled and discharged of record, by bond or otherwise as allowed by law at the expense of Tenant, within ten (10) days after written demand therefor, and shall also defend on behalf of Landlord at Tenant's sole cost and expense, any action, suit, or proceeding that may be brought thereon or for the enforcement of those liens, lien or orders, and Tenant will pay any damages and satisfy and discharge any judgment entered therein and indemnify and save harmless Landlord from any claim or damage resulting therefrom. If Tenant fails to have any such lien canceled or discharged, Landlord may, but shall not be obligated to, pay the claim upon which such lien is based so as to have such lien released of record; and, if Landlord does so, then Tenant shall pay to Landlord, as additional rent, upon demand, the amount of such claim, plus all other costs and expenses incurred in connection therewith. This Section shall survive the expiration or earlier termination of this Lease.

ARTICLE 7
PERSONAL PROPERTY AND OTHER TAXES

Tenant shall pay before delinquency any and all taxes, assessments, fees or charges, including any sales, gross income, rental, business occupation or other taxes, levied or imposed upon Tenant's business operations in the Premises and any of Tenant's Personal Property. In the event any such taxes, assessments, fees or charges are charged to the account of, or are levied or imposed upon the property of Landlord, Tenant shall reimburse Landlord for the same as additional rent.

ARTICLE 8
INSURANCE; INDEMNITY

Section 8.01 Landlord's Insurance. Landlord shall maintain liability, fire and extended coverage insurance in the Building, together with such other types of insurance coverage as are customarily maintained by owners of comparable first-class office/research and laboratory buildings in the Huntsville, Alabama metropolitan area, and such other insurance coverage as Landlord may elect in its sole discretion to carry. Tenant acknowledges that Landlord's policy of casualty insurance may include commercially reasonable deductible limits that, notwithstanding the waiver set forth in Section 8.2 below, shall be considered the sole responsibility of Tenant hereunder to the extent of Tenant's fault if Tenant or any person acting at the direction or under the control of Tenant is the cause of any loss covered by Landlord's policy of casualty insurance.

Section 8.02 Waiver of Subrogation. Each party hereby waives any and every right or cause of action for any and all loss of, or damage to, any of its property (whether or not such loss or damage is caused by the fault or negligence of the other party or anyone for whom said other party may be responsible), which loss or damage is actually covered by valid and collectible fire, extended coverage, "All Risk" or similar policies maintained by such party or required to be maintained by such party under this Lease, subject to the provisions of **Section 8.01** above and to the extent that such loss or damage is recovered under said policies. Written notice of the terms of said mutual waivers shall be given to each insurance carrier and said insurance policies shall be properly endorsed, if necessary, to prevent the invalidation of said insurance coverages by reason of said waivers.

Section 8.03 Tenant's Insurance.

A. Tenant shall carry and keep in full force and effect from and after the Commencement Date and at all times during the Lease Term commercial general liability insurance, including blanket contractual liability insurance, covering Tenant's use of the Premises, with limits of liability not less than $1,000,000 combined single limit with a $3,000,000 general aggregate limit (which general aggregate limit may be satisfied by an umbrella liability policy) for bodily injury or property damage.

B. Tenant shall carry an all-risk insurance policy covering all of Tenant's property located in the Premises (including without limitation Tenant's Personal Property) for not less than the full insurable value and replacement cost thereof without reduction for depreciation. All proceeds of such insurance shall be used solely to restore, repair or replace Tenant's property located in the Premises (including without limitation Tenant's Personal Property).

C. Tenant shall obtain such additional amounts of insurance and additional types of coverage as Landlord may reasonably request from time to time.

D. All commercial general liability and property damage insurance policies and any other insurance policies carried by Tenant shall (i) be issued by insurance companies authorized to do business in the State of Alabama, with a then current Alfred M. Best Company, Inc. (or if it no longer exists, a comparable rating service) general policy holder's rating of "A" or better and financial size category of Class XII or higher and otherwise reasonably satisfactory to Landlord; (ii) designate, as additional named insureds, Landlord, Landlord's managing agent, Landlord's mortgagee(s) and any other parties designated by Landlord; (iii) be written as a primary policy coverage and not contributing with or in excess of any coverage that Landlord may carry; (iv) provide for thirty (30) days' prior written notice to Landlord of any cancellation or other expiration of such policy; and (v) contain contractual liability coverage insuring the performance by Tenant of the indemnity provisions of this Lease. In addition, all property damage insurance policies shall either permit or contain an express waiver of any right to recovery (by subrogation or otherwise) by the insurance company against Landlord and Landlord's mortgagees. Tenant shall deliver to Landlord either a copy of each such policy of insurance or a certificate evidencing the coverages required hereunder prior to occupancy. Renewal certificates shall be provided by Tenant on an annual basis. Neither the issuance of any insurance policy required hereunder nor the minimum limits specified herein with respect to Tenant's insurance coverage shall be deemed to limit or restrict in any way Tenant's liability under this Lease.

Section 8.04 Liability of Landlord and Tenant.

A. Neither Landlord nor any of its agents or employees shall have any liability to Tenant, or to Tenant's employees, agents, contractors, subtenants, invitees or customers for any damage, injury, loss, or claims based on or arising out of any cause whatsoever, including without limitation, the following: repair to any portion of the Premises, the Building or Building FF&E; interruption in the use of the Premises or any equipment therein (including without limitation Building FF&E); any accident or damage resulting from any use or operation Landlord, Tenant, or any other person or entity of elevators, server rooms, or the heating, cooling, electrical, sewerage, or plumbing equipment or apparatus, or the laboratory equipment (including without limitation autoclaves, fume hoods, freezers and environmental chambers); any damage or loss (including without limitation loss of data from computer viruses) resulting from on in connection with Tenant's use of the IT Services; personal injury (including disease or illness), death or property damage resulting from the operation by Tenants or its employees, agents, contractors or invitees of the Premises or the business conducted therein; termination of the Lease by reason of da mage to the Premises or the Building; fire, robbery, theft, vandalism, mysterious disappearance or any other casualty; actions of any other tenant of the Building or of any person or entity; failure or inability to furnish any service specified in this Lease; any leakage in any part of the Premises or the Building, or from drains, pipes, or plumbing fixtures in the Premises or the Building. Any property placed by Tenant in or about the Premises or the Building shall be at the sole risk of Tenant, and Landlord shall not in any manner be responsible therefore. Notwithstanding the foregoing, Landlord shall not be released from liability to Tenant for and to the extent of any injury caused by Landlord's wanton or willful misconduct. In no event, however, shall Landlord have any liability to Tenant on account of any claims for the interruption of or loss to Tenant's business or for any indirect or consequential damages or losses.

B. Tenant shall reimburse Landlord for, and shall indemnify, protect, defend and hold Landlord, its employees, and agents harmless from and against all costs, damages, claims, liabilities, expenses (including attorneys' fees, disbursements and actual costs), losses, and court costs suffered by or claimed against Landlord, directly or indirectly, based on or arising out of, in whole or in part, (i) the use and occupancy of the Premises or the business conducted therein, and/or the use of the Building FF&E; (ii) any act or omission of Tenant, its agents, contractors, employees, subtenants, or invitees; or (iii) any breach of Tenant's obligations under this Lease, and not resulting from the gross negligence or willful misconduct of Landlord, its employees or agents.

C. Notwithstanding any provision to the contrary contained herein, Tenant shall look solely to the estate and property of Landlord in and to the Building in the event of any claim against Landlord arising out of or in connection with this Lease, the relationship of Landlord and Tenant, or Tenant's use of the Premises, and Tenant agrees that the liability of Landlord arising out of or in connection with the Lease, the relationship of Landlord and Tenant, or Tenant's use of the Premises, shall be limited to such estate and property of Landlord in and to the Building. No properties or assets of Landlord other than the estate and property of Landlord in and to the Building shall be subject to levy, execution or other enforcement procedures for the satisfaction of any judgment (or other judicial process) or for the satisfaction of any other remedy of Tenant arising out of or in connection with this Lease, the relationship of Landlord and Tenant, or Tenant's use of the Premises.

ARTICLE 9
RESTORATION AFTER DAMAGE OR DESTRUCTION

If the Premises or any part thereof shall be damaged by fire or other casualty, Tenant shall give prompt written notice thereof to Landlord. In case the Building shall be so damaged by fire or other casualty that substantial alteration or reconstruction of the Building shall, in Landlord's sole opinion, be required (whether or not the Premises shall have been damaged by such fire or other casualty) or in the event any mortgagee under a mortgage covering the Building should require that the insurance proceeds payable as a result of said fire or other casualty be used to retire the mortgage debt, Landlord may, at its option, terminate this Lease and the Lease Term and estate hereby granted by notifying Tenant in writing of such termination within sixty (60) days after the date of such damage, in which event the rent hereunder shall be abated as of the date of such damage. If Landlord does not thus elect to terminate this Lease, Landlord shall within sixty (60) days after the date of such damage commence to repair and restore the Building and shall proceed with reasonable diligence to restore the Building (except that Landlord shall not be responsible for delays outside its control) to substantially the same condition in which it existed immediately prior to the happening of the casualty, except that Landlord shall not be required to rebuild, repair or replace any part of Tenant's furniture or furnishings or of fixtures and equipment removable by Tenant under the provisions of this Lease. Landlord shall not be liable for any inconvenience or annoyance to Tenant or injury to the business of Tenant resulting in any way from such damage or the disregard of the repair thereof, unless resulting from Landlord's gross negligence or willful misconduct, except that, Landlord shall allow Tenant a diminution of rent (in proportion to the diminution in the usable area of the Premises) during the time and to the extent the Premises are unfit for occupancy. Landlord may relocate Tenant in accordance with **Section 1.03** either permanently or temporarily in order to accommodate restoration work performed by Landlord. In the event Landlord fails to complete the restoration within one hundred eighty (180) days from the date of the casualty or such longer period as is reasonably necessary for Landlord to complete the repair using reasonable diligence, Tenant may, at its option, terminate this Lease by giving Landlord written notice of such termination, whereupon this Lease shall terminate. If the Premises or any other portion of the Building be damaged by fire or other casualty resulting from the fault or negligence of Tenant or any of Tenant's agents, employees or invitees, Tenant shall not have the termination right set forth in the preceding sentience, the rent hereunder shall not be diminished during the repair of such damage.

ARTICLE 10
CONDEMNATION

If the whole or any part of the Premises shall be taken for public or quasi-public use by a governmental or other authority having the power of eminent domain or shall be conveyed to such authority in lieu of such taking, and if such taking or conveyance shall cause the remaining part of the Premises to be untenantable and inadequate for use by Tenant for the purpose for which they were leased, then Tenant may, at its option, terminate this Lease; provided, however, that such termination shall be ineffective if Landlord elects to relocate Tenant in accordance with **Section 1.03** hereof, and notice of such election is delivered to Tenant within thirty (30) days' after Landlord's receipt of Tenant's termination notice. If a part of the Premises shall be taken or conveyed but the remaining part is tenantable and adequate for Tenant's use, then, subject to Landlord's relocation right set forth in **Section 1.03**, this Lease shall be terminated as to the part taken or conveyed as of the date Tenant surrenders possession. In such event, Landlord shall make such repairs, alterations and improvements as may be necessary to render the part not taken or conveyed tenantable; and the rent shall be reduced in proportion to the part of the Premises so taken or conveyed. Landlord may relocate Tenant in accordance with **Section 1.03** either permanently or temporarily in order to accommodate restoration work performed by Landlord. All compensation awarded for such taking or conveyance shall be the property of Landlord without any deduction therefrom for any present or future estate of Tenant, and Tenant hereby assigns to Landlord all its right, title and interest in and to any such award.

ARTICLE 11
ASSIGNMENT; SUBLETTING

Tenant may not assign this Lease or sublet the Premises or any part thereof without the prior written consent of Landlord, which consent may be granted or withheld in Landlord's sole discretion; and any attempted assignment or subletting without such consent shall be invalid. Any sale, transfer or conveyance of a majority ownership interest in Tenant shall be deemed an assignment of this Lease for which Landlord's prior written consent shall be required pursuant to this Article 11. At least thirty (30) days prior to the proposed effective date of such assignment or sublease, Tenant shall provide Landlord a signed original of the assignment or sublease document. Tenant shall also provide, at Landlord's request, any information on the proposed assignee or subtenant that Landlord may require to make a determination of the quality of such proposed assignee or subtenant. In the event of a permitted assignment or subletting, Tenant shall nevertheless at all times remain fully responsible and liable for the payment of rent and the performance and observance of all of Tenant's other obligations under the terms, conditions and covenants of this Lease except as may be otherwise provided for herein. No assignment or subletting of the Premises or any part thereof shall be binding upon Landlord unless such assignee or subtenant shall deliver to Landlord an instrument (in recordable form, if requested) containing an agreement of assumption of all of Tenant's obligations under this Lease. Upon the occurrence of an Event of Default hereunder, if all or any part of the Premises are then assigned or sublet, Landlord, in addition to any other remedies provided by this Lease or by law, may, at its option, collect directly from the assignee or subtenant all rent becoming due to Landlord by reason of the assignment or subletting. Any collection by Landlord from the assignee or subtenant shall not be construed to constitute a waiver or release of Tenant from the further performance of its obligations under this Lease or the making of a new lease with such assignee or subtenant.

ARTICLE 12
TRANSFERS BY LANDLORD

Section 12.01 Sale and Conveyance of the Building. Landlord shall have the right to sell and convey the Campus and the Building at any time during the Lease Term, subject only to the rights of Tenant hereunder; and such sale and conveyance shall operate to release Landlord from liability hereunder after the date of such conveyance.

Section 12.02 Subordination. Landlord shall have the right to subordinate this Lease to any mortgage presently existing or hereafter placed upon the Building and/or the Campus by so declaring in such mortgage, and the recording of any such mortgage shall make it prior and superior to this Lease regardless of the date of execution or recording of either document; provided that, following Tenant's request, Landlord shall cause the holder of such mortgage or trustee to execute and deliver to Tenant for its execution a subordination, nondisturbance and attornment agreement which provides, among other things, that so long as no default has occurred and is continuing beyond the period of time allowed for the remedy thereof under the terms of this Lease, the holder of the mortgage shall not disturb Tenant's leasehold interest or possession of the Premises in accordance with the terms hereof. Within ten (10) days of Landlord's delivery thereof to Tenant, Tenant shall execute and deliver to Landlord, without cost, the subordination, nondisturbance and attornment agreement in such form as reasonably may be deemed necessary or desirable by Landlord or its mortgagee to confirm the subordination of this Lease. Within ten (10) days of Landlord's written request therefor, Tenant also shall deliver to Landlord an Estoppel Certificate in the form attached hereto as **Exhibit F**. Tenant shall, in the event any proceedings are brought for the foreclosure of any such mortgage, attorn to the purchaser upon any such foreclosure and recognize such purchaser as the landlord under this Lease. Landlord shall not be required to provide an estoppel certificate to Tenant.

ARTICLE 13
LANDLORD'S LIEN; WAIVER OF LIEN

Section 13.01 Lien. To secure the payment of all Rent due and to become due hereunder, and the faithful performance of all of the other covenants of this Lease required by Tenant to be performed, Tenant hereby grants to Landlord an express contractual lien on, and security interest in and to, all property, chattels or merchandise owned by Tenant which may be placed in the Lease Premises (except such part of such property as may be exchanged, replaced or sold from time to time in the ordinary course of Tenant's operations), and all proceeds therefrom, and also upon all proceeds of any insurance which may accrue to Tenant by reason of damage to or destruction of any such property. All exemption laws are hereby waived by Tenant. Upon the occurrence of an Event of Default by Tenant, Landlord may, in addition to any other remedies provided herein, enter upon the Premises and take possession of any and all such goods, wares, equipment, fixtures, furniture, improvements and other personal property owned by Tenant and situated on the Premises, without liability for trespass or conversion and sell the same at public or private sale, with or without having such property at the sale, after giving Tenant reasonable notice of the time and place of any public sale or of the time after which any private sale is to be made, at which sale Landlord or its assigns may purchase the same unless otherwise prohibited by law. Unless otherwise provided by law, and without intending to exclude any other manner given or other wise required by law, the Tenant shall pay any deficiency forthwith. Upon request by Landlord, Tenant agrees to execute and deliver to Landlord a financing statement in form sufficient to perfect the security interest of Landlord in the aforementioned property and proceeds thereof under the provisions of the Uniform Commercial Code in force in the State of Alabama.

Section 13.02 Waiver of Lien. Notwithstanding the foregoing, in the event the holder of a security interest or other similar interest or lender to Tenant, or other security holder so requests, Landlord shall execute a waiver of any statutory and the contractual landlord's lien set forth above in **Section 13.01** as to any personal property owned or purchased by Tenant or Tenant's permitted assignees or subtenants and not permanently affixed to the Premises. In the event Tenant or Tenant's permitted assignees or subtenants shall enter into a *bona fide* lease agreement with any lessor whereby such lessor shall lease to Tenant or Tenant's permitted assignees or subtenants any tangible personal property to be placed upon or used upon the Premises, or Tenant or Tenant's permitted assignees or subtenants finances any equipment before or after placement on the Premises, and if such lessor or financing institution requests, Landlord shall execute a waiver of its statutory and contractual landlord's lien with respect to each such tangible personal property, furniture, fixtures, or equipment, such waiver to provide that with respect to any such tangible personal property for which a waiver is issued, the party removing such tangible personal property (if removable) must repair and restore the Building or other improvements to its original state.

ARTICLE 14
EVENTS OF DEFAULT; REMEDIES

Section 14.01 Defaults by Tenant. The occurrence of any one or more of the following events shall be an "Event of Default" under and breach of this Lease by Tenant:

A. Tenant shall fail to pay any monthly installment of Rent within ten (10) days of when due; or Tenant shall fail to pay any other amounts due Landlord from Tenant as additional rent or otherwise within ten (10) days after Landlord's delivery of written notice to Tenant that such payment is due or past due.

B. Tenant shall fail to perform or observe any term, condition, covenant or obligation required to be performed or observed by it under this Lease (other than those referenced in **subsection 14.01(A)** hereof) for a period of thirty (30) days after notice thereof from Landlord.

C. Tenant shall vacate, abandon or fail to occupy the Premises or any substantial portion thereof for a period of not less than thirty (30) consecutive days following the Commencement Date.

D. Tenant shall interfere with any other tenant's use of such tenant's leased premises or the Common Areas of the Building.

E. A trustee or receiver shall be appointed to take possession of substantially all of Tenant's assets in, on or about the Premises or of Tenant's interest in this Lease (and Tenant does not regain possession within sixty (60) days after such appointment); Tenant shall make an assignment for the benefit of creditors; or substantially all of Tenant's assets in, on or about the Premises or Tenant's interest in this Lease shall be attached or levied under execution (and Tenant does not discharge the same within sixty (60) days thereafter).

F. A petition in bankruptcy, insolvency, or for reorganization or arrangement shall be filed by or against Tenant pursuant to any federal or state statute (and, with respect to any such petition filed against it, Tenant fails to secure a stay or discharge thereof within sixty (60) days after the filing of the same).

Section 14.02 Remedies of Landlord. Upon the occurrence of any Event of Default set forth in **Section 14.01**, Landlord shall have the following rights and remedies, in addition to those allowed by law, any one or more of which may be exercised at Landlord's option without further notice to or demand upon Tenant:

A. Landlord may re-enter the Premises and cure any Event of Default of Tenant, in which event Tenant shall reimburse Landlord as additional rent for any costs and expenses that Landlord may incur to cure such default; and Landlord shall not be liable to Tenant for any loss or damage that Tenant may sustain by reason of Landlord's action unless caused by reckless or willful misconduct on the part of Landlord.

B. Landlord may terminate this Lease as of the date of such Event of Default, in which event: (i) neither Tenant nor any person claiming under or through Tenant shall thereafter be entitled to possession of the Premises, and Tenant shall immediately thereafter surrender the Premises to Landlord; (ii) Landlord may re-enter the Premises and dispossess Tenant or any other occupants of the Premises by force, summary proceedings, ejectment or otherwise, and may remove their effects, without prejudice to any other remedy that Landlord may have for possession or arrearages in rent or other sums due hereunder; and (iii) notwithstanding the termination of this Lease, Landlord may declare all rent that would have been due under this Lease for the balance of the term to be immediately due and payable, whereupon Tenant shall be obligated to pay the same to Landlord, together with all loss or damage that Landlord may sustain by reason of such termination, it being expressly understood and agreed that the liabilities and remedies specified in this Subsection (B) of Section 14.02 shall survive the termination of this Lease and that all amounts referred to herein shall not be discounted to present value.

C. Landlord may, without terminating this Lease, re-enter the Premises and re-let all or any part of the Premises for a term different from that which otherwise would have constituted the balance of the Lease Term and for rent and on terms and conditions different from those contained herein, whereupon Tenant shall be obligated to pay to Landlord as liquidated damages the difference between the rent provided for herein and that provided for in any lease covering a subsequent re-letting of the Premises, for the period that otherwise would have constituted the balance of the Lease Term, together with all of Landlord's reasonable costs and expenses for preparing the Premises for re-letting, including all repairs, tenant finish improvements, brokers' and attorneys' fees, and all loss or damage that Landlord may sustain by reason of such re-entry and re-letting. Landlord shall use reasonable efforts to mitigate its damages by reletting the Premises on commercially reasonable terms; provided, however, that such shall not require Landlord to relet the Premises on the same terms and conditions as set forth herein.

D. Landlord may sue for injunctive relief or to recover damages for any loss resulting from the breach.

E. In the event that Tenant fails to pay within ten (10) days of the date due and payable any monthly rental installment of Rent, Tenant shall pay to Landlord, to the fullest extent permitted by applicable law, a late charge of four percent (4%) of the amount due and unpaid in order to compensate Landlord for the costs and expenses of administering, handling and processing late payments.

F. In the event Tenant fails to pay within thirty (30) days after the same is due and payable any monthly rental installment of Rent, or any other sum or charge required to be paid by Tenant to Landlord as additional rent, such unpaid amount shall bear interest from the due date thereof to the date of payment at the annual percentage rate of interest (the "Delinquency Interest Rate") equal to three percentage points (3%) in excess of the "Prime Rate" from time to time published in the Money Rates section of The Wall Street Journal, which rate as published on the last publication day in any month shall be deemed to be the appropriate reference rate for the entire next succeeding calendar month; provided, however, that in no event shall the Delinquency Interest Rate exceed the maximum contract rate of interest from time to time allowed to be charged under applicable law. Should The Wall Street Journal cease the publication of its Prime Rate, the Landlord shall have the right to designate a comparable reference rate.

Section 14.03 Default by Landlord and Remedies of Tenant. It shall be a default under and breach of this Lease by Landlord if it shall fail to perform or observe any term, condition, covenant or obligation required to be performed or observed by it under this Lease for a period of thirty (30) days after notice thereof from Tenant; provided, however, that if the term, condition, covenant or obligation to be performed by Landlord is of such nature that the same cannot reasonably be performed within such thirty (30) day period, such default shall be deemed to have been cured if Landlord commences such performance within said thirty (30) day period and thereafter diligently undertakes to complete the same. So long as the Premises remain suitable for Tenant's proposed use, Tenant shall not be entitled to terminate this Lease as a result of any such default.

Section 14.04 Non-Waiver of Defaults. The failure or delay by either party hereto to exercise or enforce at any time any of the rights or remedies or other provisions of this Lease shall not be construed to be a waiver thereof, nor affect the validity of any part of this Lease or the right of either party thereafter to exercise or enforce each and every such right or remedy or other provision. No waiver of any default and/or breach of this Lease shall be deemed to be a waiver of any other default and/or breach. The receipt by Landlord of less than the full rent due shall not be construed to be other than a payment on account of rent then due, nor shall any statement on Tenant's check or any letter accompanying Tenant's check be deemed an accord and satisfaction, and Landlord may accept such payment without prejudice to Landlord's right to recover the balance of the rent due or to pursue any other remedies provided in this Lease. No act or omission by Landlord or its employees or agents during the Lease Term shall be deemed an acceptance of a surrender of the Premises, and no agreement to accept such a surrender shall be valid unless in writing and signed by Landlord.

Section 14.05 Attorneys' Fees. In the event Tenant defaults in the performance or observance of any of the terms, conditions, covenants or obligations contained in this Lease and the Landlord employs attorneys to enforce all or any part of this Lease, collect any rent due or to become due or recover possession of the Premises, Tenant agrees to reimburse the Landlord for the attorneys' fees incurred thereby once a default is determined to have occurred, whether by judgment or otherwise.

ARTICLE 15
ENVIRONMENTAL REPRESENTATIONS,
COVENANTS AND INDEMNITIES

Section 15.01 Hazardous Materials.

A. Tenant shall comply with all rules, laws, orders, ordinances, directions, regulations and requirements pertaining to air and water quality, Hazardous Materials (as hereinafter defined), waste disposal, air emissions and other environmental matters.

B. Any Hazardous Materials brought upon, kept or used in or about the Premises by Tenant, its agents, employees, contractors or invitees shall be used, kept and stored in a manner that complies with all laws regulating such Hazardous Materials (including without limitation the maintenance of an MSDS log). No Hazardous Materials shall be brought upon, kept or used in or about the Premises unless such Hazardous Materials are necessary or useful to Tenant's business as specified in **Section 4.01**.

C. Tenant shall indemnify, defend and hold Landlord harmless from any and all claims, judgments, damages, penalties, fines, costs, liabilities or losses (including, without limitation, diminution in value of the Campus, the Building or the Premises, damages for the loss or restriction on use of rentable or usable space, damages arising from any adverse impact on marketing of space in the Building, and sums paid in settlement of claims, attorneys' fees, consultant fees and expert fees) that arise during or after the Lease Term in connection with contamination of the Campus, the Building or the Premises by Hazardous Materials as a result of Tenant's use or activities, or the activities of Tenant's invitees, employees, agents or contractors. This indemnification of Landlord by Tenant includes, without limitation, costs incurred in connection with any investigation of site conditions or any clean-up, remedial, removal or restoration work required by any federal, state or local governmental agency or political subdivision. Without limiting the foregoing, if the presence of any Hazardous Material on or about Campus, the Building or the Premises caused or permitted by Tenant, its invitees, employees, agents, contractors or invitees results in any contamination of the Campus, the Building or the Premises, Tenant shall promptly take all actions at its sole expense as are necessary to return the Campus, the Building or the Premises to the condition existing prior to the presence of any such Hazardous Materials; provided that Landlord's approval of such actions shall first be obtained, which approval shall not be unreasonably withheld. The foregoing indemnity and covenants shall survive the expiration or earlier termination of this Lease.

D. As used herein, the term "Hazardous Materials" means any hazardous or toxic substances, materials or wastes, including, but not limited, to those substances, materials or wastes listed in the United States Department of Transportation Hazardous Materials Table (49 CFR 172.101) or designated by the United States Environmental Protection Agency as hazardous substances (40 CFR Part 302) or hazardous waste (40 CFR Part 261), petroleum products, asbestos and such other substances, materials and wastes that are or become regulated under any applicable state, federal or local law, rule, regulation or ordinance.

E. Any toxins, viruses, bacteria, re-agents, select agents, pathogens and similar biological agents that are infectious, dangerous or hazardous to human health, animal health or plant health (particularly agricultural interests) or that are regulated by the State of Alabama, or the United States, including without limitation the Department of Health and Human Services, the Centers for Disease Control and Prevention, the Food and Drug Administration or the Department of Defense, (collectively, "Biologicals") may not be brought upon, kept, stored, used, generated, cultured, cultivated, propagated or grown in or about the Premises, the Building or the Campus by Tenant, its agents, employees, contractors or invitees without the prior written consent of Landlord, which may be withheld or conditioned in Landlord's sole and absolute discretion. All such permitted Biologicals shall be used, kept, stored, generated, cultured, cultivated, propagated or grown in a manner that complies with all laws, rules and regulations regulating such items. Tenant shall comply with all rules, laws, orders, ordinances, directions, regulations and requirements pertaining to such Biologicals, including without limitation, the Department of Health and Human Services Select Agent Program. Without limiting the foregoing, Tenant shall comply at all times with the Laboratory Rules and Regulations applicable to all laboratory spaces within the Building, which are attached here to as Exhibit G, as the same may be modified from time to time by Landlord on reasonable notice to Tenant.

F. Tenant shall indemnify, defend and hold Landlord harmless from any and all claims, judgments, damages, penalties, fines, costs, liabilities or losses (including, without limitation, diminution in value of the Campus, the Building or the Premises, damages for the loss or restriction on use of rentable or usable space, damages arising from any adverse impact on marketing of space in the Building and the Campus, and sums paid in settlement of claims, attorneys' fees, consultant fees and expert fees) that arise during or after the Lease Term in connection with the release of any such Biologicals and/or contamination of the Campus, the Building the Premises or any other property, including the property of third parties by Biologicals as a result of Tenant's use or activities, or the activities of Tenant's invitees, employees, agents or contractors. This indemnification of Landlord by Tenant includes, without limitation, costs incurred in connection with any investigation of site conditions or any clean-up, remedial, quarantine, removal or restoration work required by any federal, state or local governmental agency, political subdivision or court of law. Without limiting the foregoing, if the presence of any Biologicals on or about Campus, the Building or the Premises caused or permitted by Tenant, its invitees, employees, agents, contractors or invitees results in any contamination of the Campus, the Building or the Premises, Tenant shall promptly take all actions at its sole expense as are necessary to return the Campus, the Building or the Premises to the condition existing prior to the presence of any such Biologicals; provided that Landlord's approval of such actions shall first be obtained, which approval shall not be unreasonably withheld. The foregoing indemnity and covenants shall survive the expiration or earlier termination of this Lease.

ARTICLE 16
NOTICES

All notices to the parties shall be addressed to them at the respective addresses set forth below, or to such other address, of which either of them, as the case may be, shall notify the other in the manner stated in this Article for giving notice. The notice shall be effective (a) on the third (3rd) day after mailing, if sent by certified mail, return receipt requested, first class postage prepaid; or (b) upon delivery (or refusal of delivery or return as unfound), if sent by hand delivery or by overnight courier; in all events addressed as follows (or as a party may give notice of in accordance with this Article):

if to Landlord: HudsonAlpha Institute for Biotechnology 601 Genome Way
Huntsville, Alabama 35806
Attention: **Pete Yanul, Chief Financial Officer**

if to Tenant: **Celsion Corporation**
601 Genome Way, Suite # 3100
Huntsville, AL 35806
Attention: **Khursheed Anwer, Executive Vice President**

ARTICLE 17
MISCELLANEOUS PROVISIONS

Section 17.01 Condition of Premises. Tenant acknowledges that neither Landlord nor any agent of Landlord has made any representation or warranty with respect to the Premises, the Building, the Building FF&E or any Building services for the conduct of Tenant's business except as provided in this Lease.

Section 17.02 Insolvency or Bankruptcy. In no event shall this Lease be assigned or assignable by operation of law, and in no event shall this Lease be an asset of Tenant in any receivership, bankruptcy, insolvency or reorganization proceeding.

Section 17.03 Choice of Law. This Lease shall be governed by and construed pursuant to the laws of the State of Alabama.

Section 17.04 Successors and Assigns. Except as otherwise provided in this Lease, all of the covenants, conditions and provisions of this Lease shall be binding upon and shall inure to the benefit of the parties hereto and their respective heirs, personal representatives, and permitted successors and assigns.

Section 17.05 Name. Tenant shall not, without the written consent of Landlord, use the name of the Building or the Campus for any purpose other than as the address of the business to be conducted by Tenant in the Premises, and in no event shall Tenant acquire any rights in or to such names.

Section 17.06 Examination of Lease. Submission of this instrument for examination or signature to Tenant does not constitute a reservation of or option for lease, and it is not effective as a lease or otherwise until execution by and delivery to both Landlord and Tenant.

Section 17.07 Time. Time is of the essence of this Lease and each and all of its provisions.

Section 17.08 Defined Terms; Headings; Ambiguities. The words "Landlord" and "Tenant" as used herein shall include the plural as well as the singular. If more than one person is named as Tenant, the obligations of such persons are joint and several. The headings and titles to the articles and sections of this Lease are not a part of this Lease and shall have no effect upon the construction or interpretation of any part hereof. If any term of this Lease is deemed ambiguous by a court of competent jurisdiction, it shall not be construed for or against any party on the basis that the party did or did not draft or prepare this Lease.

Section 17.09 Prior Agreements; Amendments in Writing. This Lease, all of the exhibits attached hereto, contain all of the agreements of the parties hereto with respect to any matter covered or mentioned in this Lease, and no prior agreement, understanding or representation pertaining to any such matter shall be effective for any purpose. No provision of this Lease may be amended or agreed to except by an agreement in writing signed by the parties hereto or their respective successors in interest.

Section 17.10 Payment of and Indemnification for Leasing Commissions. Tenant hereby acknowledges, represents and warrants to Landlord that Tenant has not engaged a broker in connection with the negotiation and execution of this Lease, and that no broker or person is entitled to any leasing commission or compensation as a result of the negotiation or execution of this Lease. Tenant hereby indemnifies and holds Landlord harmless from any and all liability for the breach of any such representation and warranty on its part and shall pay any compensation to any other broker or person who may be deemed or held to be entitled thereto.

Section 17.11 Severability of Invalid Provisions. If any provision of this Lease shall be held to be invalid, void or unenforceable, the remaining provisions hereof shall not be affected or impaired, and such remaining provisions shall remain in full force and effect.

Section 17.12 Services Performed by Landlord. Any services that Landlord is required to furnish pursuant to the provisions of this Lease may, at Landlord's option, be furnished from time to time, in whole or in part, by employees of Landlord, by the managing agent of the Building, or by one or more third persons; and Landlord further reserves the right to require Tenant to enter into agreements with such third persons in form and content approved by Landlord for the furnishing of such services; provided, however, that in no event shall Landlord be relieved of its obligation to furnish such services as provided for in this Lease.

Section 17.13 Force Majeure. Landlord shall be excused for the period of any delay in the performance of any obligation hereunder when such delay is occasioned by causes beyond its control, including, but not limited to, war, invasion acts of terrorism or other hostility; work stoppages, boycotts, slowdowns or strikes; shortages of materials, equipment, labor or energy; man-made or natural casualties; natural disasters, including, but not limited to excessive heat, excessive cold, excessive rain, snow, hail, wind, ice, tornadoes, tropical storms, hurricanes and remnants thereof, floods, earthquakes, volcanoes, sinkholes or other acts of God; acts or omissions of governmental or political bodies; or civil disturbances or riots.

Section 17.14 Memorandum of Lease. Neither this Lease nor a memorandum thereof shall be recorded in the Office of the Judge of Probate of Madison County, Alabama.

Section 17.15 Confidentiality. Tenant shall at all times maintain the confidentiality of the terms and conditions of this Lease and will direct its officers, employees, agents and representatives to do the same. Tenant shall not communicate or disclose, whether directly or indirectly, the terms and conditions of this Lease to any third party (i) other than Tenant's lender(s), outside legal counsel, accountants and such other professionals whose knowledge of this Lease is required in connection with the services to be rendered to Tenant by such professionals, and (ii) except where such disclosure is required by law.

Section 17.16 Non-Solicitation. As consideration for Landlord's leasing the Premises to Tenant and placing Tenant in a position where Tenant will establish personal relationships with Landlord's employees, Tenant covenants and agrees with Landlord that, during the term of the Lease and for a period of one (1) year immediately following the effective date of the termination or expiration of the Lease, Tenant shall not directly or indirectly for Tenant or on behalf of Tenant, or through any other person, persons, firm, partnership, limited liability partnership, limited partnership, limited liability limited partnership, limited liability company, sole proprietorship, corporation, company or any other entity, attempt to solicit or hire any of Landlord's employees for any purpose whatsoever, without the written consent of Landlord, which consent may be withheld in Landlord's sole discretion.

IN WITNESS WHEREOF, Landlord and Tenant have caused these presents to be executed as of the date first above written on separate signature pages attached hereto.

HUDSONALPHA LEASE AGREEMENT

(Landlord's signature page)

LANDLORD:

HudsonAlpha Institute for Biotechnology

By: _____
Name: **Pete Yanul**
Title: **Chief Financial Officer**

STATE OF ALABAMA)
:
MADISON COUNTY)

I, the undersigned, a notary public in and for said county in said state, hereby certify that **Pete Yanul**, whose name as **Chief Financial Officer** of HudsonAlpha Institute for Biotechnology, an Alabama nonprofit corporation, is signed to the foregoing instrument, and who is known to me, acknowledged before me on this day that, being informed of the contents of said instrument, he, as such officer and with full authority, executed the same voluntarily for and as the act of said corporation.

Given under my hand and official seal this___day of___, 20___.

_____
Notary Public

[NOTARIAL SEAL] My commission expires: _____

HUDSONALPHA LEASE AGREEMENT

(Tenant's signature page)

TENANT:

Celsion Corporation

By: _____
Name: **Michael H. Tardugno**
Title: **Chairman, President and Chief Executive Officer**

STATE OF ALABAMA)
:
MADISON COUNTY)

I, the undersigned, a notary public in and for said county in said state, hereby certify that **Michael H. Tardugno**, whose name as **Chairman, President and Chief Executive Officer** of **Celsion Corporation**, a **Delaware corporation**, is signed to the foregoing instrument, and who is known to me, acknowledged before me on this day that, being informed of the contents of said instrument, he, as such officer and with full authority, executed the same voluntarily for and as the act of said **corporation**.

Given under my hand and official seal this ___day of___, 20___.

_____
Notary Public

[NOTARIAL SEAL] My commission expires: _____

EXHIBIT A - Premises Floor Plan

EXHIBIT B – Building FF&E

[DESCRIBED ON PHOTO DISC PREVIOUSLY DELIVERED TO TENANT]

EXHIBIT C – Building Rules and Regulations

1. Sidewalks and public portions of the Building, such as entrances, passages, courts, elevators, vestibules, stairways, corridors or halls, shall not be obstructed or encumbered by Tenant or used for any purpose other than ingress and egress to and from the Premises.

2. No curtains, blinds, shades, louvered openings or screens shall be attached to or hung in, or used in connection with, any window or door of the Premises, without the prior written consent of Landlord. The sashes, sash doors, skylights, windows, heating, ventilating and air conditioning vents and doors that reflect or admit light and air into the halls, passageways or other public places in the Building shall not be covered or obstructed by Tenant, nor shall any bottles, parcels or other articles be placed on the window sills.

3. No sign, advertisement, notice or other lettering shall be exhibited, inscribed, painted or affixed by Tenant on any part of the outside of the Premises or Building or on corridor walls, nor on any part of the inside of the Premises or Building that are visible from the outside of the Premises or Building, as the case may be. Signs on entrance door or doors shall conform to Building standard signs. Signs on doors shall, at Tenant's expense, be inscribed, painted or affixed by sign markers approved and provided by Landlord. Landlord may, if Tenant violates this provision, remove same without any liability, and any expense incurred in such removal shall be payable by Tenant.

4. Water closets and other plumbing fixtures shall not be used for any purpose other than for which they were constructed. No sweepings, rubbish, rags, feminine hygiene products or other substances shall be thrown therein. All damages resulting from any misuse of the fixtures by, through or under Tenant shall be borne by Tenant.

5. Tenant shall not mark, paint, drill into or in any way deface the Premises or Building. No boring, cutting or stringing of wires or laying of linoleum or other similar floor coverings shall be permitted, except with the prior written consent of the Landlord and as the Landlord may direct.

6. No bicycles, vehicles or animals (except seeing eye dogs) shall be brought into or kept in or about the Premises. No cooking shall be done or permitted by Tenant on the Premises except in conformity with law and then only in the utility kitchen, if any, as set forth in Tenant's layout, which is to be used by Tenant's employees and guests for heating beverages and light snacks. Tenant shall not cause or permit any unusual or objectionable odors to be produced upon or permeate from the Premises.

7. Tenant shall not make, or permit to be made, any disturbing noises or disturb or interfere with occupants of the Building or neighboring buildings or premises or those having business with them.

8. Neither Tenant, nor any of Tenant's agents, employees, contractors, licensees or invitees, shall at any time put up or operate fans or electrical heaters or bring or keep upon the Premises flammable, combustible or explosive fluid, or chemical substance, except in connection with the permitted use of the Premises, in which case all such fluids, chemicals, and substances shall be transported, stored, used and disposed of in compliance with all applicable laws and regulations.

9. No additional locks or bolts of any kind shall be placed upon any of the doors or windows by Tenant, nor shall any changes be made in existing locks or the mechanism thereof, without the prior written approval of Landlord and unless and until a duplicate key or access card/badge is delivered to Landlord. Tenant shall, upon termination of its tenancy, restore to Landlord all keys, access cards/badges of offices, labs, storage or other rooms and toilet rooms, either furnished to, or otherwise procured by, Tenant. Tenant shall pay to Landlord the cost of any replacement keys.

10. All moves in or out of the Premises, or the carrying in or out of any safes, freight, furniture or bulky matter of any description, must take place during the hours which Landlord determines for such activity from time to time. Only the Building freight elevator shall be used for such purposes. Tenant will ensure that movers take necessary measures required by Landlord to protect the Building (e.g., windows, carpets, walls, doors and elevator cabs) from damage. Landlord reserves the right to inspect all freight to be brought into the Building and to exclude from the Building all freight which violates these Rules or the Lease.

11. Tenant shall not place any furniture, accessories or other materials on any balconies located within or adjacent to the Premises other than furniture supplied by Landlord specifically for such purpose without having obtained Landlord's express written approval thereof in each instance.

12. Landlord shall have the right to prohibit advertising by Tenant which in Landlord's opinion tends to impair the reputation of the Building or its desirability as a building for offices. Upon written notice from Landlord, Tenant shall refrain from or discontinue such advertising.

13. Landlord reserves the right to exclude from the Building at all times other than business hours all persons who do not present a pass to the Building signed by Tenant. Tenant shall be responsible for all persons to whom it issues such a pass and shall be liable to Landlord for all acts of such persons.

14. The Premises shall not be used for lodging or sleeping without the express written consent of Landlord.

15. Landlord shall respond to Tenant service requests only after application at the management office for the Building.

16. Canvassing, soliciting and peddling in the Building are prohibited, and Tenant shall cooperate to prevent the same.

17. There shall not be used in any space, or in the public halls of the Building, either by Tenant or by its jobbers or others, in the delivery or receipt of merchandise, any hand trucks, except those equipped with rubber tires and side guards. No hand trucks, mail carts or mail bags shall be used in passenger elevators.

18. All paneling or other wood products not considered furniture shall be of fire retardant materials. Before installation of such materials, certification of the materials' fire retardant characteristics shall be submitted to Landlord, in a manner satisfactory to Landlord.

19. Tenant shall not employ any persons other than the janitors retained by Landlord (who will be provided with pass-keys into the offices, labs, or other rooms as appropriate) for the purpose of cleaning the Premises. Landlord shall not be responsible to Tenant for any loss of property from the Premises, or for any damage done to furniture or other effects of Tenant by the janitor or any of its employees.

20. No painting shall be done, nor shall any alterations be made, to any part of the Building by putting up or changing any partitions, doors or windows, nor shall there be any nailing, boring or screwing into the woodwork or walls, nor shall any connection be made to the electric wires or electric fixtures, without the consent in writing on each occasion of Landlord. No sunscreen or other films shall be applied to the interior surface of any window glass. All glass, locks and trimmings in or upon the doors and windows of the Building shall be kept whole, and when any part thereof shall be broken, the same shall be immediately replaced or repaired and put in order at Tenant's expense under the direction and to the satisfaction of Landlord, and shall be left whole and in good repair.

21. Landlord will post on the Building directories one name only for Tenant at no charge. All additional names which Tenant shall desire put upon said directories must be first consented to by Landlord, and if so approved, a charge to Tenant will be made for each additional listing as prescribed by Landlord to be paid to Landlord by Tenant.

22. Landlord reserves all vending rights, and in no event shall any vending machines be visible from the exterior of the Premises. Request for such service shall be made to Landlord.

23. Parking facilities for the Building, if any, shall be used by vehicles that may occupy a standard parking area only. The use of such parking facilities shall be limited to normal business parking and shall not be used for overnight parking.

24. Each Tenant expressly understands and agrees that Landlord expressly reserves the right to grant or deny access (to the Building or any portion thereof, including without limitation, any Tenant’s Premises) to any telecommunications, cable, wireless, internet or other service provider whatsoever, and that no Tenant shall have the right to demand or require Landlord to grant such access to any such telecommunications service provider.

25. Smoking shall not be permitted anywhere in the Building or on the Campus.

26. Landlord reserves the right to install a security access system and/or security camera(s) around the Building and Tenant agrees to comply with all reasonable rules and regulations of Landlord regarding such systems and shall not interfere with the operation of the same.

27. Landlord reserves the right to modify or delete any of the foregoing Rules and to make such other and reasonable rules and regulations as in its judgment may from time to time be needed for the safety, care and cleanliness of the Premises and the Building, and for the preservation of good order therein. Landlord shall not be responsible to any tenant for the non-observance, or violation, of any of these Rules by other tenants.

28. Weight limits are 80 PSF for all corridor floor space and 100 PSF for all office and laboratory floor space.

29. No person (other than Landlord’s third-party security personnel) shall bring upon, carry, store, discharge or otherwise use any handgun, firearm, explosive device or any other weapon of any kind or nature, on or about any building or any other part of the CRP Biotech Campus, including without limitation the parking areas; provided, however, that an employee of a tenant may store firearms in that employee’s car in the parking lot, but only if (i) that employee does so in strict compliance with Alabama Code §13A-11-90(b) and (ii) Alabama Code §13A-11-90(b) remains in effect.

EXHIBIT D - Parking Rules and Regulations

The following rules, regulations and rights (these "Rules," collectively) apply to the use of all Parking Areas:

l. Tenant and its employees, agents, contractors, and invitees may park their motor vehicles in those portions of the Parking Areas designated by Landlord from time to time as unreserved tenant parking areas (the "Unreserved Parking Areas").

2. Only Tenant and its employees, agents, invitees, and visitors of Tenant who are physically handicapped and who exhibit proper handicapped car tags may park their motor vehicles in those portions of the Parking Areas designated by Landlord from time to time as handicapped parking areas (the "Handicapped Parking Areas").

3. Parking in the Unreserved Parking Areas, the Visitor Parking Areas, and the Handicapped Parking Areas shall be on a non-exclusive, "as-available" basis.

4. No representation or warranty is made by Landlord as to the number or location of parking spaces comprising the Parking Areas, or any portion thereof.

5. Motor vehicles shall only be parked in striped parking spaces located within the Parking Areas and no motor vehicles shall be parked in any other location within the Property and/or the Campus.

6. Not more than one motor vehicle may be parked on each parking space and no motor vehicle may be parked on more than one parking space.

7. Parking Areas shall not be used for any purpose other than the parking of permitted motor vehicles thereon. No commercial activity shall be conducted from the Parking Areas. The foregoing rule shall not restrict the Landlord's right to use the Parking Areas for any purpose and for special events sponsored or hosted by Landlord from time to time.

8. No RV's, boats or trailers shall be parked in the Parking Areas. No repairs (other than emergency repairs) or washing of motor vehicles shall be permitted in the Parking Areas.

9. Tenant, its employees, agents, guests, visitors, and invitees assume full responsibility and Landlord shall have no liability for (a) all loss, damage, injury, or death caused to the person or property of third parties by reason of their use of the Parking Areas; and (b) protecting their motor vehicles against theft, vandalism, and damage and for protecting their person against injury and assault by reason of their use of the Parking Areas.

l0. Tenant shall indemnify Landlord against all loss, damage, cost, and expense (including attorney's fees) sustained by Landlord by reason of the use of the Parking Areas by Tenant, its employees, agents, guests, visitors, and invitees, or by violation of the Rules by any of said persons, other than damage caused by the negligence of Landlord, or its Agent.

ll. Tenant expressly agrees that Landlord shall have the right to tow motor vehicles of Tenant and its employees, agents, guests, and visitors which are parked in violation of these Rules, and all costs associated therewith shall be borne by Tenant.

12. A violation of these Rules shall entitle Landlord to revoke the parking privileges of the offending party, in addition to other rights and remedies available to Landlord.

Landlord reserves the right from time to time without notice to Tenant to (a) change the location or configuration of the Parking Areas, or any portion thereof; (b) change the number of parking spaces located within the Parking Areas, or any portion thereof; (c) install systems to control and monitor parking in the Parking Areas, or any portions thereof, including without limitation, a parking gate and identification card system; (d) utilize parking guards or attendants to supervise and control parking within the Parking Areas and to enforce these Rules; (e) have full access to the Parking Areas (including the right to close or alter the means of access to the Parking Areas, or portions thereof) to make repairs and alterations thereto, to prevent a taking by adverse possession or prescription or to comply with applicable legal and governmental requirements; (f) modify these Rules by posting notices thereof in the Common Areas or by other means deemed appropriate by Landlord; (g) tow motor vehicles parked in violation of these Rules; and (h) enforce these Rules by appropriate legal action.

HUDSONALPHA LEASE AGREEMENT

EXHIBIT E- Commencement Date Agreement

Agreement made this **15th** day of **January**, **2018**, between **HudsonAlpha Institute for Biotechnology** (hereinafter referred to as "Landlord"), and **Celsion Corporation** (hereinafter referred to as "Tenant").

WHEREAS, Landlord and Tenant entered into a lease dated **January 15**, **2018** (hereinafter referred to as the "Lease") for **9,049** square feet of Usable Area on the **3rd** floor of the building located at **601 Genome Way, Huntsville, AL 35806**;

NOW, THEREFORE, pursuant to the provisions of Section 2.04 of the Lease, Landlord and Tenant mutually agree to as follows:

1. The Commencement Date of the Lease Term is **February 1, 2018**. The Expiration Date of the Lease Term is **January 31, 2023**.

2. Tenant is in possession of, and has accepted, the Premises demised by the Lease, and acknowledges that all the work to be performed by Landlord in the Premises as required by the terms of the Lease has been satisfactorily completed. Tenant further certifies that all conditions of the Lease required of Landlord as of this date have been fulfilled and there are no defenses or off-sets against the enforcement of the Lease by Landlord.

IN WITNESS, WHEREOF, the parties hereto have signed and sealed this Agreement, the **15th** day of **January**, **2018**.

LANDLORD:

HudsonAlpha Institute for Biotechnology

By: _____
Name: **Pete Yanul**
Title: **Chief Financial Officer**

TENANT:

Celsion Corporation

By: _____
Name: **Michael H. Tardugno**
Title: **Chairman, President and Chief Executive Officer**

HUDSONALPHA LEASE AGREEMENT

EXHIBIT F - Estoppel Certificate

PREMISES: Suite___, _____Building

_____

Huntsville, Alabama _____

LEASE DATED: _____, 200__

LANDLORD: HudsonAlpha Institute for Biotechnology

TENANT: _____

The undersigned, the tenant under the above lease, certifies to, the mortgagee or purchaser of the above premises, that said lease is presently in full force and effect and unmodified except as indicated at the end of this certificate; that the term thereof has commenced and full rental is now accruing thereunder; that the undersigned has accepted possession of said premises and that any improvements required by the terms of said lease to be made by the Landlord have been completed to the satisfaction of the undersigned; that no rent under said lease has been paid more than thirty (30) days in advance of its due date; that the undersigned, as of this date, has no charge, lien or claim of offset under said lease or otherwise against rents or other charges due or to become due thereunder; and that there are no presently existing defaults on the part of the Landlord under the lease (except as indicated at the end of this certificate, if any).

Dated_____, 200_.

[INSERT MODIFICATIONS:

_____

_____

_____]

TENANT:

_____

By: _____

Title: _____

HUDSONALPHA LEASE AGREEMENT

EXHIBIT G – Laboratory Rules and Regulations

1. Laboratory facilities shall be used only for their intended purpose(s) as defined in your lease agreement.

2. Hazardous materials (including all reactive agents, compressed gases, combustible and flammable gases, etc.) shall be labeled, stored, handled and used in accordance with all applicable governmental regulations.

3. An inventory of hazardous materials shall be created at least annually, maintained and made available upon request.

4. Procedures involving the liberation of volatile, flammable, or toxic materials shall be performed in a fume hood.

5. Biological procedures shall be performed in a biological safety cabinet.

6. Food, drinks, and related utensils are not allowed in the laboratory.

7. Appropriate personal clothing and personal protective equipment must be worn in the laboratory.

8. Spills must be cleaned up immediately. Spills of greater than 4 liters must be reported to HudsonAlpha EH&S manager as soon as possible (facilities@hudsonalpha.com or 256-975-0862).

9. Unobstructed access to all exits, fire extinguishers, electrical panels, emergency showers, and eyewash stations must be maintained at all times.

10. If you experience an OSHA recordable incident, a copy of the completed incident investigation report must be provided to the HudsonAlpha EH&S manager as soon as possible.

11. Extension cords cannot be used in lieu of permanent wiring. If an extension cord is used, it cannot pass under doors, across aisles, be hung from the ceiling or plugged into other extension cords, or be used for more than 30 calendar days.

12. Guards on machinery or equipment must be in place during all operation(s).

13. Where required laboratories must have signs posted at the entrances identifying the hazards that are present.

14. All hazardous waste and bio-hazardous waste must be handled, stored, and disposed of properly and in accordance with applicable regulations.

15. No one under the age of 18 shall be allowed in the laboratory without required approvals and supervision. Tenants are responsible for defining their approval process.

16. Broken glass is to be put in containers marked “Broken Glass Only” after proper decontamination as necessary.

17. Compressed gas cylinders must be secured in a manner to prevent tipping over.

18. Do not use or store tobacco products or apply cosmetics in the laboratory.

19. Keep containers containing hazardous materials closed when not in use.

20. Keep laboratory clean, orderly, and floors free from trash and debris.

21. Wash hands before leaving the laboratory, even if gloves have been worn.

22. Consult the HudsonAlpha EH&S manager for any additional information.

23. Do not introduce any amount of chemicals that are defined as “not recommended” by Landlord into laboratory drains.

Exhibit 31.1

CELSION CORPORATION
CERTIFICATION

I, Michael H. Tardugno, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Celsion Corporation;

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

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

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

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

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

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

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter 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.

Celsion Corporation

May 11, 2018

By: /s/Michael H. Tardugno
Michael H. Tardugno
Chairman, President and Chief Executive Officer

Exhibit 31.2

CELSION CORPORATION
CERTIFICATION

I, Jeffrey W. Church, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Celsion Corporation;

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

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

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

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

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

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

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter 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.

Celsion Corporation

May 11, 2018

By: /s/Jeffrey W. Church
Jeffrey W. Church
Senior Vice President and Chief Financial Officer

Exhibit 32.1

CELSION CORPORATION

SECTION 1350 CERTIFICATIONS*

Pursuant to the requirement set forth in Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and Section 1350 of Chapter 63 of Title 18 of the United States Code (18 U.S.C. §1350), each of the undersigned hereby certifies that, to the best of his knowledge, (i) the Quarterly Report on Form 10-Q for the period ended March 31, 2018 of Celsion Corporation (the "Company") filed with the Securities and Exchange Commission on the date hereof fully complies with the requirements of Section 13(a) or 15(d) of the Exchange Act and (ii) the information contained in such report fairly presents, in all material respects, the financial condition and results of operations of the Company.

May 11, 2018 By: /s/Michael H. Tardugno
Michael H. Tardugno
Chairman, President and Chief Executive Officer

May 11, 2018 By: /s/Jeffrey W. Church
Jeffrey W. Church
Senior Vice President and Chief Financial Officer

* This certification accompanies the Form 10-Q to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Exchange Act (whether made before or after the date of the Form 10-Q), irrespective of any general incorporation language contained in such filing.