ATHERSYS, INC / NEW

FORM 10-Q
(Quarterly Report)

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Address	3201 CARNEGIE AVENUE
	CLEVELAND, OH, 44115-2634
Telephone	216-431-9900
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Industry	Biotechnology & Medical Research
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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 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: 001-33876

Athersys, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**20-4864095**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
3201 Carnegie Avenue, Cleveland, Ohio	**44115-2634**
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code: (216) 431-9900

Former name, former address and former fiscal year, if changed since last report: Not Applicable

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 ☒

The number of outstanding shares of the registrant's common stock, $0.001 par value, as of May 1, 2018 was 137,958,545.

ATHERSYS, INC.

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PART I. FINANCIAL INFORMATION

Item 1. Financial Statements.

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

	March 31, 2018 (Unaudited)	December 31, 2017
Assets		
Current assets:		
Cash and cash equivalents	**$ 49,673**	$ 29,316
Accounts receivable	**759**	586
Accounts receivable from Healios	**132**	153
Prepaid expenses and other	**1,020**	1,135
Contractual right to consideration from Healios	**1,538**	—
Other asset related to Healios	**5,300**	—
Total current assets	**58,422**	31,190
Equipment, net	**2,312**	2,206
Other	**200**	197
Total assets	**$ 60,934**	$ 33,593
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	**$ 8,092**	$ 4,469
Accrued compensation and related benefits	**743**	1,065
Accrued clinical trial costs	**430**	1,453
Accrued expenses	**389**	425
Accrued license fee expense	**1,665**	1,900
Deferred revenue	**250**	771
Total current liabilities	**11,569**	10,083
Advance from Healios	**1,833**	134
Stockholders' equity:		
Preferred stock, at stated value; 10,000,000 shares authorized, and no shares issued and outstanding at March 31, 2018 and December 31, 2017	**—**	—
Common stock, $0.001 par value; 300,000,000 shares authorized, and 137,958,545 and 122,077,453 shares issued and outstanding at March 31, 2018 and December 31, 2017, respectively	**138**	122
Additional paid-in capital	**406,308**	373,884
Accumulated deficit	**(358,914)**	(350,630)
Total stockholders' equity	**47,532**	23,376
Total liabilities and stockholders' equity	**$ 60,934**	$ 33,593

See accompanying notes to unaudited condensed consolidated financial statements.

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

	Three months ended March 31,	
	2018	**2017**
Revenues		
Contract revenue from Healios	**$ 348**	$ 28
Royalty and contract revenue	**401**	1,232
Grant revenue	**317**	210
Total revenues	**1,066**	1,470
Costs and expenses		
Research and development	**8,850**	5,633
General and administrative	**2,655**	2,071
Depreciation	**186**	164
Total costs and expenses	**11,691**	7,868
Gain from insurance proceeds	**363**	—
Loss from operations	**(10,262)**	(6,398)
Income from change in fair value of warrants	**—**	728
Other income, net	**107**	39
Net loss and comprehensive loss	**$ (10,155)**	$ (5,631)
Net loss per common share, basic and diluted	**$ (0.08)**	$ (0.06)
Weighted average shares outstanding, basic and diluted	**126,897,425**	102,047,062

See accompanying notes to unaudited condensed consolidated financial statements.

Athersys, Inc.
Condensed Consolidated Statements of Cash Flows
(In thousands)
(Unaudited)

	Three months ended March 31,	
	2018	**2017**
Operating activities		
Net loss	**$(10,155)**	$ (5,631)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation	**186**	164
Stock-based compensation	**813**	689
Change in fair value of warrant liabilities	**—**	(728)
Changes in operating assets and liabilities:		
Accounts receivable	**(173)**	(1,168)
Accounts receivable from Healios	**(51)**	—
Prepaid expenses and other	**127**	(231)
Accounts payable and accrued expenses	**1,992**	1,022
Advance from Healios	**1,583**	—
Deferred revenue	**—**	503
Net cash used in operating activities	**(5,678)**	(5,380)
Investing activities		
Purchases of equipment	**(292)**	(134)
Net cash used in investing activities	**(292)**	(134)
Financing activities		
Proceeds from issuance of common stock, net	**26,411**	20,877
Shares retained for withholding tax payments on stock-based awards	**(84)**	(37)
Proceeds from exercise of warrants	**—**	1,861
Net cash provided by financing activities	**26,327**	22,701
Increase in cash and cash equivalents	**20,357**	17,187
Cash and cash equivalents at beginning of the period	**29,316**	14,753
Cash and cash equivalents at end of the period	**$ 49,673**	$31,940

See accompanying notes to unaudited condensed consolidated financial statements.

Athersys, Inc.
Notes to Unaudited Condensed Consolidated Financial Statements
Three-Month Periods Ended March 31, 2018 and 2017

1. Background and Basis of Presentation

We are an international biotechnology company that is focused primarily in the field of regenerative medicine and operate in one business segment. Our operations consist of research and later-stage product development activities.

We incurred losses since our inception in 1995 and had an accumulated deficit of $359 million at March 31, 2018. We will require substantial additional capital to continue our research and development programs, including progressing our clinical product candidates to commercialization and preparing for commercial-scale manufacturing. At March 31, 2018, we had available cash and cash equivalents of $49.7 million plus, under a proposed expansion to a collaboration discussed herein, our collaborator has funded $10 million as an expansion fee into an escrow account in March 2018 that is due to be released to us by June 1, 2018. We believe that these funds, used to execute our existing operating plans, are sufficient to meet our obligations as they come due at least for a period of twelve months from the date of the issuance of these unaudited condensed consolidated financial statements. In the longer term, we will make use of available cash, but will have to continue to generate additional capital to meet our needs through new and existing collaborations and related license fees and milestones, the sale of equity securities from time to time, including through our equity purchase agreement, grant-funding opportunities, deferring certain discretionary costs and staging certain development costs, as needed.

The accompanying unaudited condensed consolidated financial statements should be read in conjunction with the audited financial statements and notes thereto included in our Annual Report on Form 10-K for the year ended December 31, 2017. The accompanying financial statements have been prepared in accordance with U.S. generally accepted accounting principles ("GAAP") for interim financial information and Article 10 of Regulation S-X. Accordingly, since they are interim statements, the accompanying financial statements do not include all of the information and notes required by GAAP for complete financial statements. The accompanying financial statements reflect all adjustments, consisting of normal recurring adjustments, that are, in the opinion of management, necessary for a fair presentation of financial position and results of operations for the interim periods presented. Interim results are not necessarily indicative of results for a full year.

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Our critical accounting policies, estimates and assumptions are described in "Management's Discussion and Analysis of Financial Condition and Results of Operations," which is included below in this Quarterly Report on Form 10-Q.

2. Recently Issued Accounting Standards

In February 2016, the Financial Accounting Standards Board ("FASB") issued ASU 2016-02, Leases (Topic 842), which requires lessees to put most leases on their balance sheets, but recognize expenses on their income statements in a manner similar to current accounting practice. Under the guidance, lessees initially recognize a lease liability for the obligation to make lease payments and a right-of-use ("ROU") asset for the right to use the underlying asset for the lease term. The lease liability is measured at the present value of the lease payments over the lease term. The ROU asset is measured at the lease liability

amount, adjusted for lease prepayments, lease incentives received and the lessee's initial direct costs. The guidance is effective for the annual and interim periods beginning after December 15, 2018, with early adoption permitted. We plan to adopt Topic 842 effective January 1, 2019 and are in the process of evaluating the impact the new guidance will have on our consolidated financial statements upon adoption. We currently have operating leases for two facilities that will need to be evaluated under this new guidance.

In May 2017, the FASB issued ASU 2017-09, Compensation – Stock Compensation (Topic 718): Scope of Modification Accounting. This ASU clarifies when to account for a change to the terms or conditions of a share-based payment award as a modification. Under the new guidance, modification accounting is required only if the fair value, the vesting conditions, or the classification of the award (as equity or liability) changes as a result of the change in terms or conditions. The ASU is effective for the annual periods beginning after December 15, 2017 and interim periods within those annual periods. Effective January 1, 2018, we adopted this standard. The adoption of this new guidance did not have a material impact on our consolidated financial statements.

3. Revenue Recognition and Adoption of New Accounting Pronouncement

Our license and collaboration agreements may contain multiple elements, including license and technology access fees, research and development funding, product supply revenue, cost-sharing, milestones and royalties. The deliverables under such an arrangement are evaluated under ASU No. 2014-09, Revenue from Contracts with Customers (Topic 606). Topic 606 requires an entity to recognize revenue in a manner that depicts the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. To achieve that core principle, we apply the five steps under Topic 606 that an entity should apply when recognizing revenue.

We adopted this guidance as of January 1, 2018, utilizing the modified retrospective transition method applied to contracts that were not complete as of January 1, 2018. We evaluated all of our collaborative agreements on a contract-by-contract basis, identifying all of the performance obligations, including those that are contingent. For our contracts with customers that contain multiple performance obligations, we account for the individual performance obligations separately when they are both capable of being distinct, whereby the customer can benefit from the service either on its own or together with other resources that are readily available from third parties or from us, and are distinct in the context of the contract, whereby the transfer of the services is separately identifiable from other promises in the contract. Under the new standard, we assessed whether licenses granted under our collaboration and license agreements are distinct in the context of the agreement from other performance obligations and functional when granted. After considering the relative selling prices of the contract elements and the allocation of revenue thereto, we recognized a cumulative effect adjustment of $1.9 million as an adjustment to the opening balance of our accumulated deficit primarily related to a contract asset since the revenue permitted to be recognized at inception was not limited to the cash proceeds received as of that time, which was a requirement of the previous guidance. We also concluded that the new guidance resulted in revisions to accounting for our arrangement with Healios K.K. ("Healios") only, since our other collaborations had no remaining performance obligations and potential contingent receipts would be constrained.

Milestone Payments

Topic 606 does not contain guidance specific to milestone payments, but rather requires potential milestone payments to be considered in accordance with the overall model of Topic 606. As a result, revenues from contingent milestone payments is recognized based on an assessment of the probability of

milestone achievement and the likelihood of a significant reversal of such milestone revenue at each reporting date. This assessment may result in recognizing milestone revenue before the milestone event has been achieved. Since the milestones in the Healios arrangement are generally related to development and commercial milestone achievement by Healios, we have not included any of the Healios milestones in the estimated transaction price of the Healios arrangement, since they would be constrained, as a significant reversal of revenue could result in future periods.

Other than for our collaboration with Healios that has remaining deliverables, we had recognized the full amount of license fees under our collaboration agreements as contract revenue under the prior guidance associated with multiple-element arrangements, since the performance periods for our multiple element arrangements have concluded. The events triggering any future contingent milestone payments from these arrangements were determined to be non-substantive and revenue is recognized in the period that the triggering event occurs, and the remaining potential commercial milestones are recognized when earned.

Grant revenue

Grant revenue, which is not within the scope of Topic 606, consists of funding under cost reimbursement programs primarily from federal and non-profit foundation sources for qualified research and development activities performed by us, and as such, are not based on estimates that are susceptible to change. Such amounts are invoiced and recorded as revenue as grant-funded activities are performed.

Royalty Revenue

We recognize royalty revenue relating to the sale by a licensee of our licensed products. Royalty revenue is recognized upon the later to occur of (i) achievement of the collaborator's underlying sales or (ii) satisfaction of any performance obligation(s) related to these sales, in each case assuming the license to our intellectual property is deemed to be the predominant item to which the sales-based royalties relate.

Deferred Revenue

Amounts received from customers or collaborators in advance of our performance of services or other deliverables is included in deferred revenue. For product supply, we typically invoice our customers a portion of the purchase order in advance, followed by invoices as product is released and available for pick-up. The amount paid in advance by the customer is applied to the last deliveries under the purchase order. Similarly, any grant proceeds received in advance of our performance under the grant is included in deferred revenue. Generally, deferred revenue is a current obligation, as opposed to non-current. During the three-month period ended March 31, 2018, we did not recognize any revenues that were deferred as of January 1, 2018.

Advance from Healios

As further described in Note 6, proceeds from Healios that relate specifically to the cost-sharing arrangement for Healios' stroke study in Japan that may result in a net reduction in the proceeds we receive from Healios upon the achievement of future milestones are recognized as non-current advances from Healios until the related milestones are achieved or such amounts are repaid to Healios at our election. During the three-month period ended March 31, 2018, no revenue was recognized that was included in the advance from Healios as of January 1, 2018.

Effect of Adoption of Topic 606

Our arrangement with Healios was the only collaboration that was impacted by the adoption of Topic 606. Notes 6 and 8 further describe our arrangement with Healios, including modifications that have resulted. We have applied the practical expedient under Topic 606 and have reflected the aggregate effect of all modifications at January 1, 2018. The components of the cumulative effect of the changes made to our consolidated January 1, 2018 balance sheet for the adoption of Topic 606 were as follows (in thousands):

	As of December 31, 2017	Adjustments Due to Topic 606	As of January 1, 2018
Assets			
Accounts receivable - Healios	$ 153	$ 30	$ 183
Contractual right to consideration from Healios	$ —	$ 1,436	$ 1,436
Liabilities			
Deferred revenue - Healios	$ (521)	$ 521	$ —
Advance from Healios	$ (134)	$ (116)	$ (250)
Equity			
Accumulated deficit	$ 350,630	$ (1,871)	$ 348,759

In accordance with the new revenue recognition requirements, the disclosure of the impact of adoption on our condensed consolidated balance sheet and statement of operations for the three months ended March 31, 2018 was as follows (in thousands, except per share data):

	As of March 31, 2018		
	As Reported	Balances without Adoption of Topic 606	Effect of Change
Assets			
Contractual right to consideration from Healios	$ 1,538	$ —	$ 1,538
Liabilities			
Deferred revenue - Healios	$ —	$ (259)	$ 259
Equity			
Accumulated deficit	$ 358,914	$ 360,711	$ (1,797)

	Three months ended March 31, 2018		
	As Reported	Balances without Adoption of Topic 606	Effect of Change
Revenues			
Contract revenues - Healios	$ 348	$ 422	$ (74)
Net loss	$ (10,155)	$ (10,081)	$ 74
Net loss per common share			
Basic and diluted	$ (0.08)	$ (0.08)	$ —

The adoption of Topic 606 had no impact on our total cash flows from operations.

Disaggregation of Revenues

We recognize license-related amounts, including upfront payments, exclusivity fees, additional disease indication fees, and development, regulatory and sales-based milestones at a point in time when earned. Similarly, product supply revenue is recognized at a point in time, while service revenue is recognized when earned over time. The following table presents our contract revenues from Healios disaggregated by recognition at a point in time and over time (in thousands).

	Three months ended March 31, 2018		
	Recognized at Point in Time	Recognized Over Time	Total
Contract Revenues - Healios			
Product supply revenue	$ 227	$ —	227
Service revenue	—	121	121
Total	**$ 227**	**$ 121**	**$348**

4. Net Loss per Share

Basic and diluted net loss per share have been computed using the weighted-average number of shares of common stock outstanding during the period. We have outstanding stock-based awards that are not used in the calculation of diluted net loss per share because to do so would be antidilutive. We have one warrant outstanding that was issued to Healios in March 2018, but Healios is not yet permitted to exercise any of the shares underlying the warrant. Refer to Note 8 for additional details. The following instruments were excluded from the calculation of diluted net loss per share because their effects would be antidilutive:

	Three months ended March 31,	
	2018	2017
Stock-based awards	**10,294,613**	10,091,837
Warrants – see Note 8	**20,000,000**	—
Total	**30,294,613**	10,091,837

5. Proceeds from Insurance

In 2016, our facility sustained flood damage representing both an unusual and infrequent event. Insurance proceeds are recorded to the extent of the losses and then, only if recovery is realized or probable. Any gains in excess of losses are recognized only when the contingencies regarding the recovery are resolved, and the amount is fixed or determinable. We recognized an insurance recovery gain of $0.4 million in the first quarter of 2018 as additional insurance proceeds were received.

6. Collaborative Arrangements and Revenue Recognition

Healios

2016 Inception of License Arrangement

In 2016, we entered into a license agreement (“Healios Agreement”) with Healios to develop and commercialize MultiStem cell therapy for ischemic stroke in Japan and to provide Healios with access to our proprietary MAPC technology for use in its “organ bud” program, initially for transplantation to treat liver disease or dysfunction. Under the Healios Agreement, Healios obtained a right to expand the scope of the collaboration to include the exclusive rights to develop and commercialize MultiStem for the treatment of certain additional indications in Japan, which include acute respiratory distress syndrome (“ARDS”), and, as addressed herein, plans for an expansion of the collaboration are underway.

Under the terms of the Healios Agreement, we received a nonrefundable, up-front cash payment of $15 million. Healios is responsible for the costs of clinical development in Japan. Athersys is providing manufacturing services to Healios, currently comprising the supply of product for its clinical trial and preparations for commercial manufacturing, and we receive payments for product supplied to Healios. We also receive financial support from Healios for services we perform to establish a contract manufacturer in Japan to produce product for Healios. The costs of the services are reimbursed by Healios at our cost.

For the ischemic stroke indication, we may also receive additional success-based development, regulatory approval and sales milestones, which are non-refundable and non-creditable towards future royalties or any other payment due from Healios. We may also receive tiered royalties on net product sales, starting in the low double-digits and increasing incrementally into the high teens, depending on net sales levels.

If Healios exercised its option to expand the collaboration to include ARDS and another indication in the orthopedic area under the Healios Agreement, we would be entitled to receive a cash payment of $10 million at the time of exercise and royalties from product sales and success-based development, regulatory approval and sales milestones, as well as payments for product supply related to the additional indications covered by the option. Under the proposed expansion plans addressed herein, at a minimum, Healios would exercise its option to include the ARDS field under the Healios Agreement, and the $10 million expansion fee was funded by Healios into an escrow account in March 2018, which is due to be released to us by June 1, 2018. For the “organ bud” product, we are entitled to receive a fractional royalty percentage on net sales of the “organ bud” products and will receive payments for manufactured product supplied to Healios under a manufacturing supply agreement. Additionally, we have a right of first negotiation for commercialization of an “organ bud” product in North America, with such right expiring on certain dates in the future.

For the Healios arrangement, we identified all material performance obligations, which included a license to our technology, product supply services, and services related to transfer technology to a contract manufacture on Healios’ behalf. In order to determine the transaction price, in addition to the upfront payment, we estimated the amount of variable consideration at the outset of the contract utilizing the expected value or most likely amount method, depending on the facts and circumstances relative to the contract. We constrain, or reduce, the estimates of variable consideration if it is probable that a significant reversal of previously recognized revenue could occur throughout the life of the contract. Both the likelihood and magnitude of a potential reversal of revenue are taken into consideration. These estimates are re-assessed each reporting period, as necessary.

Once the estimated transaction price is established, amounts are allocated to the performance obligations that have been identified. The transaction price is allocated to each separate performance obligation on a relative standalone selling price basis. We must develop assumptions that require judgment to determine the relative standalone selling price in order to account for our collaborative agreements, as these assumptions typically include probabilities of obtaining marketing approval for our product candidates, estimated timing and cost of development and commercialization, estimated future cash flows from potential product sales of our product candidates, and appropriate discount and tax rates. We do not include a financing component to our estimated transaction price at contract inception unless we estimate that the performance obligations will not be satisfied within one year.

We determined that the license in the Healios arrangement was distinct from the other performance obligations identified in the arrangement, and that the license was transferred to Healios and Healios was able to use and benefit from the license. Furthermore, the product supply services and the technology transfer services provided to Healios were also determined to be distinct. We then allocated the transaction price based on the relative value prescribed to the license compared to the overall arrangement. As a result of the analysis, we allocated to the license $17.3 million of the proceeds received and to be received in the future. For performance obligations satisfied over time, we apply an appropriate method of measuring progress each reporting period and, if necessary, adjust the estimates of performance and the related revenue recognition. For our technology transfer services provided to Healios that are satisfied over time, we recognize revenue in proportion to the contractual services provided.

We computed the effect of the adoption of Topic 606, which is included in the cumulative effect adjustment as of January 1, 2018. Overall, the conclusions under the former guidance related to performance obligations, obligations being distinct within the contract and relative standalone selling prices did not change with the adoption of the new guidance. However, the transaction price was higher under Topic 606 since revenue recognition is no longer limited to cash proceeds received, and we were able to recognize more revenue for the delivered license. This additional revenue of $1.9 million was accounted for as a decrease to our accumulated deficit at January 1, 2018 and an increase to a contract asset and to a lesser extent, a decrease to deferred revenue. The contract asset was evaluated at March 31, 2018, noting that it is properly classified as a current asset since the conditional rights to consideration are expected to be satisfied within one year.

2017 Amendment – Cost Share

In January 2017, we signed a clinical trial supply agreement for the manufacturing of investigational product for Healios for its Japan clinical study, the terms of which were consistent with the Healios Agreement. The clinical trial supply agreement was amended in July 2017 to clarify a cost-sharing arrangement associated with our supply of clinical product. The proceeds from Healios that relate specifically to the cost-sharing arrangement may result in a reduction in the proceeds we receive from Healios upon the achievement of two future milestones, and an increase to a later-stage commercial milestone. While the amendment to the supply agreement resulted in a revision to the terms associated with the product supply under the Healios Agreement, namely the cost of product supply, the revision did not affect any of the performance obligations under the overall arrangement. The cost-sharing proceeds received are recognized on the balance sheets as a non-current advance from Healios until the related milestone is achieved or such amounts are repaid to Healios at our election.

2017 Technology Transfer Services

In September 2017, we entered into a services agreement with Healios, in which Healios provides financial support to establish a contract manufacturer in Japan to produce product for Healios, and services began in the fourth quarter of 2017. We evaluated this agreement as combined with the Healios Agreement due to its connection to the license and the product supply under the Healios Agreement. The costs of the services, representing our performance obligation, are reimbursed by Healios at our cost. Given that Healios will benefit from the services as the services are performed, which is the intended purpose of the arrangement, we concluded that the services were distinct. We estimated the relative standalone value of the technology transfer services, which was included in the allocation of the transaction price for the overall Healios arrangement. The technology transfer services are recognized over time as the services are performed.

Furthermore, in September 2017, we amended the Healios Agreement to confer to Healios a limited license to manufacture MultiStem in the event that we are acquired by a third party. Such amendment was evaluated as a combined agreement along with the Healios Agreement and had no impact on the allocation of revenue to the remaining undelivered items.

2018 Planned Expansion

In March 2018, we entered into a letter of intent (as amended in April 2018, the "LOI") with Healios to significantly expand Healios' license to develop MultiStem products and enter into a Collaboration Expansion Agreement (the "Collaboration Expansion Agreement"). Under the terms of the LOI, we and Healios will work to execute the agreements necessary to expand the existing collaboration by May 31, 2018. If the Collaboration Expansion Agreement is entered into in accordance with the terms of the LOI, Healios would (i) expand its license to include ARDS (including idiopathic pulmonary fibrosis) and trauma in Japan, and use of MultiStem worldwide for organ buds for all organ diseases, (ii) obtain a worldwide exclusive license for use of MultiStem product to treat certain ophthalmological indications, (iii) obtain an exclusive option to a license to develop and commercialize MultiStem products for ischemic stroke, ARDS and trauma in China, and (iv) obtain certain other rights. In exchange, if the Collaboration Expansion Agreement is entered into as contemplated by the LOI, we would be entitled to receive payments of $35 million ($10 million of which was funded in an escrow account to be paid to us upon execution), as well as additional possible payments, including milestones and royalties. Under the Collaboration Expansion Agreement, the remaining $25 million payment obligation would be paid in instalments that cannot be terminated over time, and though the payments would be non-refundable, they could be used as credits against certain milestone payments due under the license. If the Collaboration Expansion Agreement is entered into and thereafter Healios elects to exercise its option for the license in China, Healios would pay us license fees, milestone payments and escalating royalties or profit-sharing for each indication in China.

Under the binding terms of the LOI, we and Healios entered into an escrow agreement in March 2018, and Healios funded $10 million into the escrow account, which is to be paid to us no later than June 1, 2018 as either (i) a portion of the $35 million in payments associated with the execution of the Collaboration Expansion Agreement, or (ii) if Collaboration Expansion Agreement is not executed on or before May 31, 2018, payment for expanding the scope of the existing Healios Agreement to include ARDS and certain ophthalmological indications in Japan and use of MultiStem for organ buds for all organ diseases.

Also see Note 3 regarding our revenue recognition policies and Note 8 regarding the equity investment made by Healios in the first quarter of 2018 in connection with the planned expansion of the collaboration, and the issuance of a warrant to Healios.

Other

Under our agreement with RTI to develop and commercialize biologic implants using our technology for certain orthopedic applications in the bone graft substitutes market, we are eligible to receive up to $34.5 million in remaining cash payments upon the successful achievement of certain commercial milestones, after the first commercial milestone payment of $1.0 million was received in the first quarter of 2017. No milestone revenues were received in the first quarter of 2018. In addition, we receive tiered royalties on worldwide commercial sales of implants using our technologies based on a royalty rate starting in the mid-single digits and increasing into the mid-teens, and in the fourth quarter of 2017, the royalty rate increased into the low double-digits based on RTI's achievement of a second commercial milestone. Any royalties may be subject to a reduction if third-party payments for intellectual property rights are necessary or commercially desirable to permit the manufacture or sale of the product, and no such reductions were incurred in the first quarter of 2018 or 2017.

In January 2017, we received an option fee related to an agreement with a global leader in the animal health business segment to evaluate our cell therapy technology for application in an animal health area. Under the terms of the agreement, we received the payment in exchange for an exclusive period to evaluate our cell therapy technology with an option to negotiate for a license for the development and commercialization of the technology for the animal health area. The option fee is recorded as deferred revenue at March 31, 2018 since the performance obligation of granting a license has not occurred. If the option is exercised, we will include the option fee in the overall consideration for the license arrangement, to be evaluated at that time. If the option is not exercised, the option fee will be recognized as revenue at that time since there will be no more performance obligations. The evaluation of our technology for this application is currently ongoing.

7. Stock-based Compensation

We have an incentive plan that authorized an aggregate of 20,035,000 shares of common stock for awards to employees, directors and consultants. The equity incentive plan authorizes the issuance of equity-based compensation in the form of stock options, stock appreciation rights, restricted stock, restricted stock units, performance shares and units, and other stock-based awards. As of March 31, 2018, a total of 4,487,408 shares (including 241,652 shares related to an expired incentive plan) of common stock have been issued under our equity incentive plan.

As of March 31, 2018, a total of 6,435,880 shares were available for issuance under our equity compensation plan, and stock-based awards to purchase 10,294,613 shares (including 941,249 shares related to an expired incentive plan) of common stock were outstanding. For the three-month periods ended March 31, 2018 and 2017, stock-based compensation expense was approximately $813,000 and $689,000, respectively. At March 31, 2018, total unrecognized estimated compensation cost related to unvested stock-based awards was approximately $6.5 million, which is expected to be recognized by the end of 2021 using the straight-line method.

8. Stockholders' Equity

Equity Issuance - Healios

In March 2018, Healios purchased 12,000,000 shares of our common stock (the "Shares") for $21,100,000, or approximately $1.76 per share, and a warrant ("Warrant") to purchase up to an additional 20,000,000 shares of common stock (the "Warrant Shares"). In connection with the issuance of the Shares, we and Healios entered into an Investor Rights Agreement, which governs certain rights of Healios and us relating to Healios' ownership of our common stock, including the Shares and the Warrant Shares. The Investor Rights Agreement provides for customary standstill and voting obligations, transfer restrictions and registration rights of Healios. Additionally, we agree to provide notice to Healios of certain equity issuances and to allow Healios to participate in certain issuances in order maintain its proportionate ownership of our common stock as of the time of such issuance. We further agreed under the Investor Rights Agreement that during such time as Healios beneficially owns more than 5% but less than 15.0% of our outstanding common stock, our Board of Directors (the "Board") will nominate one of Healios' nominees suitable to us to become a member of the Board, and during such time as Healios beneficially owns 15.0% or more of our outstanding common stock, our Board will nominate two of Healios' nominees suitable to us to become members of the Board, at each annual election of directors. Healios' right to nominate an individual to the Board will not commence until the Collaboration Expansion Agreement has been entered into. As a result of Healios' ownership position in us following its investment, Healios became a related party, and the transactions with Healios are separately identified within these financial statements as they are related party transactions.

The Warrant does not become effective until the expansion agreements are effective, has a term that expires in September 2020 (subject to a potential extension), includes both fixed and floating exercise price mechanisms, and is capped such that in no event will Healios own more than 19.9% of our common stock. The Warrant may be terminated by us under certain conditions, including if Healios does not make the initial payment required by the Collaboration Expansion Agreement. We evaluated the various terms of the Warrant and concluded that it is appropriately accounted for as equity at inception and $5.3 million was computed as the best estimate of the fair value of the Warrant at the time of issuance. The fair value at inception was computed using a Monte Carlo simulation model that included probability-weighted estimates of potential milestone points in time that could impact the value of the Warrant during its term. The fair value is recorded as additional paid-in capital in March 2018, with the offset included in other current assets.

Public Equity Offering

In February 2017, we completed a public offering generating net proceeds of approximately $20.9 million through the issuance of 22,772,300 shares of common stock at an offering price of $1.01 per share.

Equity Purchase Agreement

We have in place an equity purchase arrangement with Aspire Capital Fund LLC ("Aspire Capital"), which provides us the ability to sell shares to Aspire Capital from time-to-time, as appropriate. Our current arrangement with Aspire Capital that was entered into in February 2018 includes Aspire Capital's commitment to purchase up to an aggregate of $100 million of shares of common stock over a three-year period and 450,000 shares of common stock were issued as a commitment fee. We filed a registration statement for the resale of 24,700,000 shares of common stock in connection with the new equity facility. Furthermore, the prior facility that was entered into in December 2015 with Aspire Capital has approximately 2.0 million shares that remain available to us for issuance. During the quarter ended March 31, 2018, we sold 3,300,000 shares to Aspire Capital at an average price of $1.67 per share. We sold no shares to Aspire Capital in the first quarter of 2017.

License Agreement and Settlement

In October 2017, we entered into an agreement to settle longstanding intellectual property disagreements with a third party. As part of the agreement, we were granted a worldwide, non-exclusive license, with the right to sublicense, to the other party's patents and applications that were at the core of the intellectual property dispute, for use related to the treatment or prevention of disease or conditions using cells. In return, we agreed not to enforce our intellectual property rights against the party with respect to certain patent claims, nor to further challenge the patentability or validity of certain applications or patents. In connection with the license and settlement agreement, we paid $500,000 and issued 1,000,000 shares of our common stock with a fair value of $2.3 million upon execution of the agreement in 2017, and we are paying an additional $250,000 per quarter for four quarters. Additionally, we will issue 500,000 shares of common stock upon the issuance of a patent from the party's patent applications at the core of the dispute, which we deem to be probable. The contingent obligation to issue 500,000 shares of common stock, at fair value of $0.9 million and $0.9 million at March 31, 2018 and December 31, 2017, respectively, is included in accrued license fee expense on the condensed consolidated balance sheets.

9. Financial Instruments

Fair Value Measurements

We classify the inputs used to measure fair value into the following hierarchy:

Level 1	Unadjusted quoted prices in active markets for identical assets or liabilities.
Level 2	Unadjusted quoted prices in active markets for similar assets or liabilities, or unadjusted quoted prices for identical or similar assets or liabilities in markets that are not active, or inputs other than quoted prices that are observable for the asset or liability.
Level 3	Unobservable inputs for the asset or liability.

At March 31, 2018, we had no financial assets or liabilities measured at fair value on a recurring basis. At March 31, 2018, the Warrant was measured at fair value on a nonrecurring basis that represented a Level 3 equity instrument under the hierarchy. Refer to Note 8.

10. Income Taxes

We have U.S. federal net operating loss and research and development tax credit carryforwards, as well as state and city net operating loss carryforwards, which may be used to reduce future taxable income and tax liabilities. We also have foreign net operating loss and tax credit carryforwards, and the foreign net operating loss carryforwards do not expire. All of our deferred tax assets have been fully offset by a valuation allowance due to our cumulative losses.

The utilization of net operating loss and tax credit carryforwards generated prior to October 2012 is substantially limited under Section 382 of the Internal Revenue Code of 1986, as amended, as a result of our October 2012 equity offering. We generated U.S. federal net operating loss carryforwards, research and development tax credits, and state and local net operating loss carryforwards since 2012. We will update our analysis under Section 382 prior to using these attributes.

In December 2017, the U.S. federal government enacted legislation commonly referred to as the “Tax Cuts and Jobs Act” (the “TCJA”). The TCJA makes widespread changes to the IRC, including, among other items, a reduction in the federal corporate tax rate from 35% to 21%, effective January 1, 2018. The carrying value of our deferred tax assets and liabilities is also determined by the enacted U.S. corporate income tax rate. Consequently, any changes in the U.S. corporate income tax rate will impact the carrying value of our deferred tax assets and liabilities. Our deferred income tax assets, net, have provisionally decreased based on the reduction of the U.S. corporate tax rate and the valuation allowance has had a corresponding decrease. The Deemed Repatriation Transition Tax (“Transition Tax”) is a tax on previously untaxed accumulate and current earnings and profit (“E&P”) of certain of our foreign subsidiaries. To determine the amount of Transition Tax, a company must determine, in addition to other factors, the amount of post-1986 E&P of the relevant foreign subsidiaries as well as the amount of non-U.S. income tax paid on such earnings. We believe we have an overall foreign E&P deficit and, accordingly, have not recorded any provisional Transition Tax obligation. However, we are continuing to gather additional information to finalize our Transition Tax liability.

We determined that the provisional calculations will be finalized after the underlying timing differences and foreign earnings and profits are finalized with our 2017 federal tax return filing. Furthermore, we are still analyzing certain aspects of the TCJA and refining our calculations which could potentially affect the measurement of these balances or potentially give rise to new or additional deferred tax amounts. We will consider additional guidance from the U.S. Treasury Department, IRS or other standard-setting bodies. Further adjustments, if any, will be recorded by us during the measurement period in 2018, as permitted by SEC Staff Accounting Bulletin 118, Income Tax Accounting Implications of the Tax Cuts and Jobs Act. No amounts were recorded as of March 31, 2018 for these potential adjustments.

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

This discussion and analysis should be read in conjunction with our unaudited financial statements and notes thereto included in this Quarterly Report on Form 10-Q and the audited financial statements and notes thereto included in our Annual Report on Form 10-K for the year ended December 31, 2017. Operating results are not necessarily indicative of results that may occur in future periods.

Overview and Recent Developments

We are an international biotechnology company that is focused primarily in the field of regenerative medicine. Our MultiStem ® cell therapy, a patented and proprietary allogeneic stem cell product, is our lead platform product and is currently in later-stage clinical development. Our current clinical development programs are focused on treating neurological conditions, cardiovascular disease, inflammatory and immune disorders, certain pulmonary conditions and other conditions where the current standard of care is limited or inadequate for many patients, particularly in the critical care segment.

Current Programs

By applying our proprietary MultiStem cell therapy product, we established therapeutic product development programs treating neurological conditions, cardiovascular disease, inflammatory and immune disorders, and other conditions. Our programs in the clinical development stage include the following:

- Ischemic Stroke: We are actively engaged in advancing the next stage of clinical development of this program, both independently and with Healios. We are currently preparing to launch our pivotal Phase 3 clinical trial of MultiStem cell therapy for the treatment of ischemic stroke, referred to as MASTERS-2. We intend to begin the study with specific high-enrolling sites, adding additional sites over time and as clinical product supply is available. The MASTERS-2 study has received several regulatory distinctions including Special Protocol Assessment, or SPA, Fast Track designation and the Regenerative Medicine Advanced Therapy designation, which was established under the 21st Century Cures Legislation, from the U.S. Food and Drug Administration, or FDA, as well as a Final Scientific Advice positive opinion from European Medicines Agency, or EMA.

  Healios' confirmatory clinical trial, TREASURE, evaluating the safety and efficacy of administration of MultiStem cell therapy for the treatment of ischemic stroke in Japan, is ongoing and continuing its enrollment. TREASURE will be evaluated under the recently established regulatory framework for regenerative medicine therapies in Japan.

- Acute Respiratory Distress Syndrome, or ARDS: We have an ongoing Phase 1/2 clinical study for the treatment of ARDS in the United Kingdom and in the United States, and our objective is to complete this study in 2018. We were awarded a grant from Innovate UK as partial support of this clinical study, and such grant funding was concluded in the first quarter of 2018, according to its terms. We look forward to obtaining the study results.

- Acute Myocardial Infarction, or AMI: We are conducting an ongoing Phase 2 clinical study in the United States for the administration of MultiStem cell therapy to patients that have suffered an AMI, but continue to enroll below expectations despite numerous efforts to improve the enrollment rates. The study had been supported by a grant from the National Institutes of Health, which has now concluded. We will provide updates regarding the conduct and completion of the study, as appropriate.

- The University of Texas Health Science Center at Houston has announced plans recently to conduct a Phase 2 clinical trial evaluating MultiStem cell therapy for early treatment and prevention of complications after severe traumatic injury. This first-ever study of a cell therapy for treatment of a wide range of traumatic injuries will be conducted at Memorial Hermann-Texas Medical Center, one of the busiest Level 1 trauma centers in the United States. The study will receive grant support of $2.0 million from the Medical Technology Enterprise Consortium and the Memorial Hermann Foundation will provide an additional $1.5 million. We will provide the clinical product for the conduct of the trial, as well as regulatory and operational support, as our contribution to the trial. The plans for this study are in the early stage, and we will provide further updates as preparations for the trial progress.
- Hematopoietic Stem Cell Transplant / Graft-vs-Host Disease, or GvHD: Currently, this program is staged for future registration-directed development dependent on the achievement of certain business development and financial objectives and the development and success of alternative therapies for treating the underlying conditions leading to transplant. Following our completed Phase 1 clinical study of the administration of MultiStem cell therapy to patients suffering from leukemia or certain other blood-borne cancers, in which patients undergo radiation therapy and then receive a hematopoietic stem cell transplant, we were granted orphan drug designation by the FDA and the EMA for MultiStem treatment in the prevention of GvHD, and the MultiStem product was granted Fast Track designation by the FDA for prophylaxis therapy against GvHD following hematopoietic cell transplantation. Subsequently, our registration study design received a positive Scientific Advice opinion from EMA and a SPA designation from the FDA.

While development of our clinical programs for human health indications remains our priority, based on our research to date and work performed at our wholly-owned subsidiary, ReGenesys, we are also evaluating our cell therapy for use in treating diseases and conditions in the animal health area. We have demonstrated in preclinical animal health models that our cell therapy can promote tissue repair and healing that could provide meaningful benefits to animal patients, including those suffering from conditions with unmet medical need. In January 2017, we entered into an evaluation and option agreement with a global leader in the animal health business segment to evaluate our cell therapy technology for application in an undisclosed animal health area, and such evaluation is ongoing.

We are engaged in preclinical development and evaluation of MultiStem therapy in other indications, focusing on the neurological, cardiovascular and inflammatory and immune disease areas, and we conduct such work both through our own internal research efforts and through a broad global network of collaborators. We also engage in discussions with third parties about collaborating in the development of MultiStem therapy for various programs and may enter into one or more business partnerships to advance these programs over time.

In January 2016, we entered into a license agreement with Healios K.K., or Healios, to develop and commercialize MultiStem cell therapy for ischemic stroke in Japan, and to provide Healios with access to our proprietary technologies for use in Healios' proprietary "organ bud" program. Healios is working toward the development and commercialization of the MultiStem product in Japan, and we are providing the manufactured product to Healios for its clinical studies; provided, that, if we fail to perform our responsibilities to supply clinical trial product to Healios, then under certain circumstances, we may be required to grant Healios a license to make the product solely for use in the licensed field in Japan. Under the agreement, Healios also obtained a right to expand the scope of the collaboration to include the exclusive rights to develop and commercialize MultiStem for the treatment of certain additional indications in Japan, including ARDS.

In March 2018, we entered into a letter of intent, or LOI, as amended in April 2018, with Healios to expand Healios' license to develop MultiStem products and are working to execute the necessary agreements by May 31, 2018. If the expansion is consummated as contemplated by the LOI, Healios would, among other things, (i) expand its license in Japan to include ARDS (including idiopathic pulmonary fibrosis) and trauma in Japan, and use of MultiStem worldwide for organ buds for all organ diseases, (ii) obtain a worldwide exclusive license for use of MultiStem product to treat certain ophthalmological indications, and (iii) obtain an exclusive option to a license to develop and commercialize MultiStem products for ischemic stroke, ARDS and trauma in China. In exchange, if the expansion as contemplated by the LOI is consummated, we would be entitled to receive payments of $35 million ($10 million of which is funded in an escrow account to be paid to us upon execution), as well as additional possible payments, including milestones and royalties, including for the license in China if Healios elects to exercise the proposed option for the license in China.

We also have a collaboration with RTI for the development of products for certain orthopedic applications using our stem cell technologies in the bone graft substitutes market, and we continue to receive royalty revenue from product sales and may receive other payments from time to time upon the successful achievement of certain commercial milestones. In 2017, we received a $1.0 million payment associated with achievement of a commercial milestone. Also, in the fourth quarter of 2017, our royalty rate increased as a result of reaching a milestone for product sales. No milestones were achieved in the first quarter of 2018.

We have also developed other earlier stage programs targeted at indications with significant unmet needs. We may elect to enter into partnerships to advance the development of these programs, or pursue independent development.

Financial

As addressed herein, if the expansion of our collaboration with Healios is concluded as contemplated under the LOI, we expect to receive, at a minimum, the $10 million license fee that has been funded by Healios into an escrow account. If the full expansion is consummated, the LOI provides that we would be entitled to receive additional payments of $25 million, as well as additional possible payments such as milestones and royalties.

For the ischemic stroke indication under the existing 2016 license with Healios, we may receive additional success-based development, regulatory approval and sales milestones of $225 million in aggregate, subject to certain potential milestone credits, and tiered royalties on product sales that start in the low double digits and increase incrementally into the high teens depending on net sales levels. Additionally, we receive payments for product supplied to Healios under a manufacturing supply agreement, which is initially focused on clinical product supply, and, in 2017, we agreed to a cost-sharing arrangement with Healios for clinical product for its TREASURE trial in Japan that may impact the amount of proceeds we receive from future milestones. We began receiving cost-sharing proceeds late in 2017, and product supply is ongoing.

In addition, in September 2017, we entered into a services agreement with Healios, in which Healios provides financial support to establish a contract manufacturer in Japan to produce product for Healios, and services began in the fourth quarter of 2017. The costs of the services are reimbursed by Healios.

In connection with the entry into the LOI, Healios purchased 12,000,000 shares of our common stock for $21,100,000, or approximately $1.76 per share, and a warrant, or Warrant, to purchase up to an additional 20,000,000 shares of common stock. The Warrant will become exercisable once Healios makes the initial payment under the planned expansion under the LOI, except with respect to 4,000,000 shares underlying the Warrant that would become exercisable prior to such time upon release of the $10 million that has been funded into escrow, depending on the scope of the expansion. The Warrant may be terminated by us under certain conditions, including if Healios does not make its required expansion payments.

We have in place an equity purchase arrangement with Aspire Capital Fund LLC, or Aspire Capital, which provides us the ability to sell shares to Aspire Capital from time-to-time, as appropriate. Our current arrangement with Aspire Capital that was entered into in February 2018 includes Aspire Capital's commitment to purchase up to an aggregate of $100 million of shares of common stock over a three-year period and 450,000 shares of common stock were issued as a commitment fee. We filed a registration statement for the resale of 24,700,000 shares of common stock in connection with the new equity facility. Furthermore, the prior facility that was entered into in December 2015 with Aspire Capital has approximately 2.0 million shares that remain available to us for issuance. During the quarter ended March 31, 2018, we sold 3,300,000 shares to Aspire Capital at an average price of $1.67 per share. We sold no shares to Aspire Capital in the first quarter of 2017.

During the year ended December 31, 2017, we received proceeds of approximately $1.9 million from the exercise of warrants. All of our previously outstanding warrants were either exercised prior to expiration or expired in March 2017, and we had only the Warrant outstanding at March 31, 2018.

In 2016, a flood caused damage to our primary facilities that required the reconstruction of certain laboratory space and was covered by insurance at replacement cost. In February 2018, we received an additional $0.4 million in insurance proceeds.

Results of Operations

Since our inception, our revenues have consisted of license fees, contract revenues and milestone payments from our collaborators, and grant proceeds primarily from federal, state and foundation grants. We have derived no revenue from the commercial sale of therapeutic products to date, but we receive royalties on commercial sales by a licensee of products using our technologies. Research and development expenses consist primarily of external clinical and preclinical study fees, manufacturing costs, salaries and related personnel costs, legal expenses resulting from intellectual property prosecution processes, facility costs, and laboratory supply and reagent costs. We expense research and development costs as they are incurred. We expect to continue to make significant investments in research and development to enhance our technologies, advance clinical trials of our product candidates, expand our regulatory affairs and product development capabilities, conduct preclinical studies of our product and manufacture our product candidates. General and administrative expenses consist primarily of salaries and related personnel costs, professional fees and other corporate expenses. We expect to continue to incur substantial losses through at least the next several years.

Three Months Ended March 31, 2018 and 2017

Revenues decreased to $1.1 million for the three months ended March 31, 2018 compared to $1.5 million for the three months ended March 31, 2017. Our revenues are comprised of manufacturing-related activities for Healios, royalty and related contract revenue from our collaboration with RTI Surgical, Inc. and grant revenue. Our revenue from Healios increased during the first quarter of 2018 compared to the prior year first quarter by approximately $0.3 million as we continue to supply clinical product to Healios and provide other manufacturing-related services, and we expect these revenues will be higher for the 2018 annual period as compared to the 2017 year. Regarding our royalty revenue, excluding a $1.0 million milestone payment from RTI in the 2017 first quarter, royalty revenues increased in the first quarter of 2018 as a result of an increase in the royalty rate that became effective late 2017 associated with our technology license to RTI. Absent potential new collaborations, we expect our contract revenues to be comprised primarily of revenues associated with our Healios collaboration, and royalty payments and potential commercial milestone payments from RTI. Grant revenue varies from period-to-period with new and completed grants, and the timing of grant-funded activities. Absent new grant awards, we expect our annual grant revenue to decline in 2018 from 2017 with the expiration of certain grant-funded programs.

Research and Development Expenses. Research and development expenses increased to $8.9 million for the three months ended March 31, 2018 from $5.6 million in the comparable period in 2017. The $3.3 million increase is primarily comprised of an increase in preclinical and clinical development costs of $2.7 million, an increase in personnel costs of $0.3 million, and an increase in internal research supplies and other research costs of $0.3 million. The increase in our clinical and preclinical costs during the period is primarily a result of increased process development activities to support large-scale manufacturing, clinical product manufacturing costs, a portion of which are invoiced to Healios, and technology transfer services on Healios' behalf in Japan that are reimbursed to us by Healios at cost. Our clinical development, clinical manufacturing, and manufacturing process development costs vary over time based on the timing and stage of clinical trials underway, manufacturing campaigns for trials, and manufacturing process development projects. We expect our annual research and development expenses to increase in 2018 compared to 2017 related to these activities, including the launch of the MASTERS-2 stroke trial. Other than external expenses for our clinical and preclinical programs, we do not track our research expenses by project; rather, we track such expenses by the type of cost incurred.

General and Administrative Expenses. General and administrative expenses increased to $2.7 million for the three months ended March 31, 2018 from $2.1 million in the comparable period in 2017. The $0.6 million increase was due primarily to an increase of $0.3 million in professional fees, and increases in personnel costs, stock-based compensation costs and other administrative costs compared to the same period last year. We expect our annual 2018 general and administrative expenses to increase as compared to 2017 with the implementation of a new enterprise resource planning system and increased professional fees.

Depreciation . Depreciation expense was consistent at $0.2 million for the three months ended March 31, 2018 and March 31, 2017, respectively. We expect that our depreciation will increase somewhat in the 2018 year from the 2017 year due to new equipment requirements for process development activities.

Gain from Insurance Proceeds . In 2016, a flood caused damage to our primary facilities that required the reconstruction of certain laboratory space and was covered by insurance at replacement cost. In February 2018, we received an additional $0.4 million in insurance proceeds.

Income from Change in Fair Value of Warrants . We had no income recognized during the three months ended March 31, 2018 for the market value change in our warrant liabilities, since as of March 31, 2018, all of our warrants were either exercised or expired, other than the Healios Warrant. For the comparable period of 2017, we had $0.7 million of income reflecting primarily changes in our stock price.

Other Income, net. Other income, net, generally includes interest income and expense, refundable foreign tax credits, foreign currency gains and losses.

Liquidity and Capital Resources

Our sources of liquidity include our cash balances. At March 31, 2018, we had $49.7 million in cash and cash equivalents. We have primarily financed our operations through business collaborations, grant funding and equity financings. We conduct all of our operations through our subsidiary, ABT Holding Company. Consequently, our ability to fund our operations depends on ABT Holding Company's financial condition and its ability to make dividend payments or other cash distributions to us. There are no restrictions such as government regulations or material contractual arrangements that restrict the ability of ABT Holding Company to make dividend and other payments to us.

We incurred losses since inception of operations in 1995 and had an accumulated deficit of $359 million at March 31, 2018. Our losses have resulted principally from costs incurred in research and development, clinical and preclinical product development, acquisition and licensing costs, and general and administrative costs associated with our operations. We used all of our sources of capital to develop our technologies, to discover and develop therapeutic product candidates, develop business collaborations and to acquire certain technologies and assets.

As addressed herein, if the expansion of our collaboration with Healios is concluded as contemplated under the LOI, we expect to receive, at a minimum, the $10 million license fee that has been funded by Healios into an escrow account. If the full expansion is consummated, the LOI provides that we would be entitled to receive additional payments of $25 million, as well as additional possible payments such as milestones and royalties. Under the proposed collaboration expansion agreement, this $25 million payment obligation would be paid in instalments that cannot be terminated over time, and though the payments would be non-refundable, they could be used as credits against certain milestone payments due under the license.

For the ischemic stroke indication under the existing 2016 license with Healios, we may receive additional success-based development, regulatory approval and sales milestones of $225 million in aggregate, subject to certain potential milestone credits, and tiered royalties on product sales that start in the low double digits and increase incrementally into the high teens depending on net sales levels. Additionally, we receive payments for product supplied to Healios under a manufacturing supply agreement, which is initially focused on clinical product supply, and in 2017, we agreed to a cost-sharing arrangement with Healios for clinical product for its TREASURE trial in Japan that may impact the amount of proceeds we receive from future milestones.

In connection with the entry into the LOI, Healios purchased 12,000,000 shares of our common stock for $21,100,000, or approximately $1.76 per share, and the Warrant to purchase up to an additional 20,000,000 shares of common stock. The Warrant will become exercisable once Healios makes the initial payment under the planned expansion under the proposed collaboration expansion agreement, except with respect to 4,000,000 shares underlying the Warrant that would become exercisable prior to such time upon release of the $10 million that is funded into escrow, depending on the scope of the expansion. The Warrant has a term that expires in September 2020 (subject to a potential extension), includes both fixed and floating exercise price mechanisms, and is capped such that in no event will Healios own more than 19.9% of our common stock. We may receive additional proceeds from the exercise of the Warrant over its term, although there can be no assurances that Healios will exercise the Warrant in whole or in part.

We have had an equity purchase arrangement in place with Aspire Capital since 2011 that has provided us the ability to sell shares to Aspire Capital from time-to-time, as appropriate, through two-to-three year equity facilities, each with similar terms. Our current arrangement with Aspire Capital that was entered into in February 2018 includes Aspire Capital’s commitment to purchase up to an aggregate of $100 million of shares of common stock over a three-year period and 450,000 shares of common stock were issued as a commitment fee. We filed a registration statement for the resale of 24,700,000 shares of common stock in connection with the new equity facility. Furthermore, the prior facility that was entered into in December 2015 with Aspire Capital has approximately 2.0 million shares that remain available to us for issuance. During the quarter ended March 31, 2018, we sold 3,300,000 shares to Aspire Capital at an average price of $1.67 per share. We sold no shares to Aspire Capital in the first quarter of 2017.

Under the terms of our collaboration agreement with RTI Surgical, Inc., we are eligible to receive $34.5 million in remaining cash payments upon the successful achievement of certain commercial milestones, after the first commercial milestone payment of $1.0 million was achieved in 2017, though there can be no assurances that further such milestones will be achieved. In addition, we receive tiered royalties on worldwide commercial sales of implants using our technologies based on a royalty rate starting in the mid-single digits and increasing into the mid-teens. We began receiving royalties from RTI in 2014 and in the fourth quarter of 2017, a second commercial milestone was achieved, resulting in an increase in the rate of royalties we receive on product sales by RTI, although there can be no assurances that further such milestones resulting in increased royalty rates will be achieved.

We are obligated to pay the University of Minnesota a sublicense fee or a royalty based on worldwide commercial sales of licensed products if covered by a valid licensed patent. The low single-digit royalty rate may be reduced if third-party payments for intellectual property rights are necessary or commercially desirable to permit the manufacture or sale of the product. As of March 31, 2018, we have paid no royalties to the University of Minnesota and have paid sublicense fees from time-to-time in connection with our collaborations.

We will require substantial additional funding in order to continue our research and product development programs, including preclinical evaluation and clinical trials of our product candidates and manufacturing process development. At March 31, 2018, we had available cash and cash equivalents of $49.7 million, and we intend to meet our short-term liquidity needs with available cash. We also have $10 million of license fees related to the planned collaboration expansion with Healios that has been funded in an escrow account to be released to us by June 1, 2018. Over the longer term, we will make use of available cash, but will have to continue to generate additional funding to meet our needs, through business development, achievement of milestones under our collaborations, and grant-funding opportunities. Additionally, we may raise capital from time to time through our equity purchase agreement, subject to its volume and price limitations. We also manage our cash by deferring certain discretionary costs and staging certain development costs to extend our operational runway, as needed. Over time, we may consider the sale of additional equity securities, or possibly borrowing from financing institutions.

Our capital requirements over time depend on a number of factors, including progress in our clinical development programs, our clinical and preclinical pipeline of additional opportunities and their stage of development, additional external costs such as payments to contract research organizations and contract manufacturing organizations, additional personnel costs and the costs in filing and prosecuting patent applications and enforcing patent claims. The availability of funds impacts our ability to advance multiple clinical programs concurrently, and any shortfall in funding could result in our having to delay or curtail research and development efforts. Further, these requirements may change at any time due to technological advances, business development activity or competition from other companies. We cannot assure you that adequate funding will be available to us or, if available, that it will be available on acceptable terms.

We expect to continue to incur substantial losses through at least the next several years and may incur losses in subsequent periods. The amount and timing of our future losses are highly uncertain. Our ability to achieve and thereafter sustain profitability will be dependent upon, among other things, successfully developing, commercializing and obtaining regulatory approval or clearances for our technologies and products resulting from these technologies.

Cash Flow Analysis

Net cash used in operating activities was $5.7 million for the three months ended March 31, 2018 and $5.4 million for the three months ended March 31, 2017, reflecting the increased net loss in the first quarter of 2018 (i.e., cash used to fund preclinical and clinical development activities), compared to the prior year period, as partially offset by proceeds received from Healios for the cost-share arrangement for clinical product supply, and an increase in

accounts payable due to service providers, such as contract manufacturers, under longer-term contracts. Net cash used in operating activities may fluctuate significantly on a quarter-to-quarter basis, as it has over the past several years, primarily due to the receipt of collaboration fees and payment of specific clinical trial costs, such as clinical manufacturing campaigns, contract research organization costs and manufacturing process development projects, and we expect it to increase in 2018 as compared to 2017 with the launch of our MASTERS-2 clinical trial, among other things.

Net cash used in investing activities was $0.3 million and $0.1 million in the three-month periods ended March 31, 2018 and 2017, respectively. We expect that our capital expenditures for equipment will increase in 2018 compared to 2017.

Financing activities provided cash of $26.3 million for the three months ended March 31, 2018, which primarily included the $21.1 million investment in us by Healios and proceeds from the issuance of common stock to Aspire Capital under our equity purchase agreement in the first quarter of 2018, net of offering costs. Financing activities provided cash of $22.7 million for the three months ended March 31, 2017 related primarily to $20.9 million net proceeds from the February 2017 stock offering and $1.9 million from the exercise of common stock warrants.

Off-Balance Sheet Arrangements

We have no off-balance sheet arrangements.

Critical Accounting Policies and Management Estimates

The Securities and Exchange Commission, or SEC, defines critical accounting policies as those that are, in management's view, important to the portrayal of our financial condition and results of operations and demanding of management's judgment. Our discussion and analysis of financial condition and results of operations are based on our consolidated financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles. The preparation of these financial statements requires us to make estimates on experience and on various assumptions that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from those estimates. A description of these accounting policies and estimates is included in Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our Annual Report on Form 10-K for the year ended December 31, 2017. There have been no material changes in our accounting policies and estimates as described in our Annual Report on Form 10-K for the year ended December 31, 2017, except as it relates to the adoption of ASC 606 on January 1, 2018, for which our accounting policy is included in Note 3 to the financial statements.

For additional information regarding our accounting policies, see Note B to the Consolidated Financial Statements in our Annual Report on Form 10-K for the year ended December 31, 2017.

Cautionary Note on Forward-Looking Statements

This Quarterly Report on Form 10-Q contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 that involve risks and uncertainties. These forward-looking statements relate to, among other things, the expected timetable for development of our product candidates, our growth strategy, and our future financial performance, including our operations, economic performance, financial condition, prospects, and other future events. We have attempted to identify forward-looking statements by using such words as "anticipates," "believes," "can," "continue," "could," "estimates," "expects," "intends," "may," "plans," "potential," "should," "suggest," "will," or other similar expressions. These forward-looking statements are only predictions and are largely based on our current expectations. These forward-looking statements appear in a number of places in this annual report.

In addition, a number of known and unknown risks, uncertainties, and other factors could affect the accuracy of these statements. Some of the more significant known risks that we face are the risks and uncertainties inherent in the process of discovering, developing, and commercializing products that are safe and effective for use as human therapeutics, including the uncertainty regarding market acceptance of our product candidates and our ability to generate revenues. The following risks and uncertainties may cause our actual results, levels of activity, performance, or achievements to differ materially from any future results, levels of activity, performance, or achievements expressed or implied by these forward-looking statements:

- our ability to work with Healios under the LOI to successfully negotiate the terms of and execute the documents necessary to expand our existing collaboration;
- our ability to raise capital to fund our operations;
- the timing and nature of results from our MultiStem clinical trials, including the MASTERS-2 Phase 3 clinical trial and the Healios TREASURE clinical trial in Japan;
- the possibility of delays in, adverse results of, and excessive costs of the development process;
- our ability to successfully initiate and complete clinical trials of our product candidates;
- the possibility of delays, work stoppages or interruptions in manufacturing by third parties or us, such as due to material supply constraints or regulatory issues;
- uncertainty regarding market acceptance of our product candidates and our ability to generate revenues, including MultiStem cell therapy for the treatment of stroke, AMI and ARDS, and the prevention of GvHD and other disease indications;
- changes in external market factors;
- changes in our industry's overall performance;
- changes in our business strategy;
- our ability to protect and defend our intellectual property and related business operations, including the successful prosecution of our patent applications and enforcement of our patent rights, and operate our business in an environment of rapid technology and intellectual property development;
- our possible inability to realize commercially valuable discoveries in our collaborations with pharmaceutical and other biotechnology companies;
- our ability to meet milestones and earn royalties under our collaboration agreements, including the success of our collaboration with Healios;
- our collaborators' ability to continue to fulfill their obligations under the terms of our collaboration agreements;
- the success of our efforts to enter into new strategic partnerships and advance our programs, including, without limitation, in the United States, Europe and Japan;
- our possible inability to execute our strategy due to changes in our industry or the economy generally;
- changes in productivity and reliability of suppliers;
- the success of our competitors and the emergence of new competitors; and
- the risks mentioned elsewhere in our Annual Report on Form 10-K for the year ended December 31, 2017 under Item 1A, "Risk Factors."

Although we currently believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee our future results, levels of activity or performance. We undertake no obligation to publicly update forward-looking statements, whether as a result of new information, future events or otherwise, except as otherwise required by law. You are advised, however, to consult any further disclosures we make on related subjects in our reports on Forms 10-Q, 8-K and 10-K furnished to the SEC. You should understand that it is not possible to predict or identify all risk factors. Consequently, you should not consider any such list to be a complete set of all potential risks or uncertainties.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

Interest Rate Risk

Our exposure to interest rate risk is related to our investment portfolio and our borrowings. Fixed rate investments and borrowings may have their fair market value adversely impacted from changes in interest rates. Due in part to these factors, our future investment income may fall short of expectations. Further, we may suffer losses in investment principal if we are forced to sell securities that have declined in market value due to changes in interest rates. When appropriate based on interest rates, we invest our excess cash primarily in debt instruments of the United States government and its agencies and corporate debt securities, and as of March 31, 2018, we had no investments.

We have entered into loan arrangements with financial institutions when needed and when available to us. At March 31, 2018, we had no borrowings outstanding.

Item 4. Controls and Procedures.

Disclosure controls and procedures

Our management, under the supervision of and with the participation of our Chief Executive Officer and our Senior Vice President of Finance, has evaluated the effectiveness of our disclosure controls and procedures, as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934, as of the end of the period covered by this Quarterly Report on Form 10-Q. Based upon this evaluation, our Chief Executive Officer and Senior Vice President of Finance have concluded that, as of the end of the period covered by this Quarterly Report on Form 10-Q, our disclosure controls and procedures were effective.

Changes in internal control over financial reporting

During the last fiscal quarter covered by this Quarterly Report on Form 10-Q, there has been no change in our internal control over financial reporting (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934) that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

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

During the quarter ended March 31, 2018, we sold an aggregate of 3,300,000 shares of common stock to Aspire Capital under our equity purchase agreement, generating aggregate proceeds of $5.5 million. Each issuance of these unregistered shares qualifies as an exempt transaction pursuant to Section 4(2) of the Securities Act of 1933. Each issuance qualified for exemption under Section 4(2) of the Securities Act of 1933 because none involved a public offering. Each offering was not a public offering due to the number of persons involved, the manner of the issuance and the number of securities issued. In addition, in each case Aspire Capital had the necessary investment intent.

Item 6. Exhibits.

Exhibit No.	Description
4.1	Common Stock Purchase Warrant issued to HEALIOS K.K. by Athersys, Inc., dated as of March 14, 2018.
10.1	Security Purchase Agreement, by and between Athersys, Inc. and HEALIOS K.K., dated as of March 13, 2018.
10.2	Investor Rights Agreement, by and between Athersys, Inc. and HEALIOS K.K., dated as of March 13, 2018.
31.1	Certification of Gil Van Bokkelen, Chairman and Chief Executive Officer, pursuant to SEC Rules 13a-14(a) and 15d-14(a) adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Laura K. Campbell, Senior Vice President of Finance, pursuant to SEC Rules 13a-14(a) and 15d-14(a) adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of Gil Van Bokkelen, Chairman and Chief Executive Officer, and Laura Campbell, Senior Vice President of Finance, pursuant to 18 U.S.C. Section 1350, adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

SIGNATURES

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

ATHERSYS, INC.

Date: May 10, 2018

/s/ Gil Van Bokkelen

Gil Van Bokkelen
Chairman and Chief Executive Officer
(principal executive officer authorized to sign on behalf of the registrant)

/s/ Laura K. Campbell

Laura K. Campbell
Senior Vice President of Finance
(principal financial and accounting officer authorized to sign on behalf of the registrant)

Exhibit 4.1

THIS WARRANT AND THE SECURITIES ISSUABLE UPON EXERCISE OF THIS WARRANT HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND MAY NOT UNDER ANY CIRCUMSTANCES BE SOLD, TRANSFERRED, OR OTHERWISE DISPOSED OF WITHOUT AN EFFECTIVE REGISTRATION STATEMENT FOR SUCH SECURITIES UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND ANY OTHER APPLICABLE SECURITIES LAWS OR AN OPINION OF COUNSEL SATISFACTORY TO THE COMPANY THAT REGISTRATION IS NOT REQUIRED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR APPLICABLE SECURITIES LAWS.

COMMON STOCK PURCHASE WARRANT

ATHERSYS, INC.

Issue Date: March 14, 2018 (the " Issue Date ")

THIS COMMON STOCK PURCHASE WARRANT certifies that, for value received, HEALIOS K.K. (" Healios "), or its permitted assigns (the " Holder "), is entitled, upon the terms and subject to the limitations on exercise and the conditions hereinafter set forth, at any time on or after the Issue Date and on or prior to the close of business on September 1, 2020 (subject to adjustment pursuant to Section 5(l), the " Termination Date "), but not thereafter, to purchase from Athersys, Inc., a Delaware corporation (the " Company "), up to 20,000,000 shares (subject to the limitations contained herein, including Section 3(d), and subject to adjustment hereunder, the " Warrant Shares ") of the Company's common stock, par value $0.001 per share (the " Common Stock "). The purchase price of one Warrant Share shall be equal to the applicable exercise price set forth in Section 1(b) (each such price, as applicable, the " Exercise Price "). This Warrant is being issued pursuant to that certain Securities Purchase Agreement, dated as of March 13, 2018 (as may be amended from time to time, the " Purchase Agreement "), between Healios and the Company. Healios and the Company are also parties to that certain Investor Rights Agreement, dated as of March 14, 2018 (as may be amended from time to time, the " Investor Rights Agreement "), and that certain Letter of Intent for Collaboration Expansion, dated as of March 13, 2018 (as may be amended from time to time, the " LOI "), pursuant to which Healios and the Company intend to enter into a collaboration expansion agreement substantially in the form attached thereto (as may be amended from time to time, the " Collaboration Agreement ").

As used in this Warrant, (a) an " Affiliate " means, with respect to any Person, any other Person who, directly or indirectly, controls, is controlled by, or under common control with such Person; for purposes of this definition, the term " control " (including the correlative meanings of the terms " controlled by " and " under common control with "), as used with respect to any Person, means the possession, directly or indirectly, of the power to direct or cause the direction of the management policies of such Person, whether through the ownership of voting securities or by contract or otherwise, (b) a " Business Day " means any day excluding Saturday, Sunday or any day which is a legal holiday under the laws of the State of New York or of Tokyo, Japan, or a day on which banking institutions are authorized or required by law or other governmental action to close, (c) " Capital Stock " means, with respect to any Person, (i) any capital stock of such Person, (ii) any security convertible, with or without consideration, into any capital stock of such Person, (iii) any other shares, interests, rights to purchase, warrants, options, participations or other equivalents of or interests in (however designated) the capital stock of such Person and (iv) any other equity interest in, or right to vote generally in elections of directors or the comparable governing body of, such Person, (d) a " Person " means any individual, partnership, corporation, limited liability company, association, joint stock company, trust, joint venture, unincorporated organization or governmental entity (or any department, agency, or political subdivision thereof) and (e) a " Trading Day " means any day on which the The Nasdaq Stock Market, LLC is open for trading.

Section 1. Vesting; Exercisability; Exercise Price . The Holder's right to exercise this Warrant with respect to the Warrant Shares is subject to vesting and limitations on exercisability as follows:

(a) Except as set forth below in Section 1(b)(ii), this Warrant will become exercisable on the later of (i) June 1, 2018 and (ii) the first date that Healios has satisfied the $2.5 million payment obligations set forth in Section 7.2(a) of the Collaboration Agreement. Accordingly, except as set forth below in Section 1(b)(ii),in no event will this Warrant be exercisable unless such $2.5 million payment has been made.

(b) Subject to Section 1(a) and subject to any adjustment required by Section 3:

(i) this Warrant may be exercised at the Exercise Price per Warrant Share with respect to 6,000,000 Warrant Shares in the aggregate as follows:

(A) during the period from June 1, 2018 through December 31, 2018, Holder may exercise this Warrant with respect to no more than 1,500,000 Warrant Shares at an Exercise Price of $2.50 per Warrant Share;

(B) during the period from September 1, 2018 through March 31, 2019, Holder may exercise this Warrant with respect to no more than 1,500,000 Warrant Shares at an Exercise Price of $2.75 per Warrant Share;

(C) during the period from January 1, 2019 through June 30, 2019, Holder may exercise this Warrant with respect to no more than 1,500,000 Warrant Shares at an Exercise Price of $3.00 per Warrant Share; and

(D) during the period from April 1, 2019 through September 30, 2019, Holder may exercise this Warrant with respect to no more than 1,500,000 Warrant Shares at an Exercise Price of $3.25 per Warrant Share;

(ii) this Warrant may be exercised at an Exercise Price per Warrant Share equal to the greater of $1.76 and the Reference Price with respect to no more than 4,000,000 Warrant Shares during the period beginning on the later of (A) the date that the Collaboration Agreement has been entered into and (B) the date that the $10.0 million held in escrow as contemplated by the LOI is released to the Company, through September 1, 2020; and

(iii) this Warrant may be exercised at the Exercise Price per Warrant Share with respect to 10,000,000 Warrant Shares in the aggregate as follows:

(A) during the period from June 1, 2018 through August 31, 2018, Holder may exercise this Warrant at an Exercise Price per Warrant Share equal to the greater of $2.50 and the Reference Price;

(B) during the period from September 1, 2018 through November 30, 2018, Holder may exercise this Warrant at an Exercise Price per Warrant Share equal to the greater of $2.75 and the Reference Price;

(C) during the period from December 1, 2018 through February 28, 2019, Holder may exercise this Warrant at an Exercise Price per Warrant Share equal to the greater of $3.00 and the Reference Price;

(D) during the period from March 1, 2019 through May 31, 2019, Holder may exercise this Warrant at an Exercise Price per Warrant Share equal to the greater of $3.25 and the Reference Price;

(E) during the period from June 1, 2019 through August 31, 2019, Holder may exercise this Warrant at an Exercise Price per Warrant Share equal to the greater of $3.50 and the Reference Price;

(F) during the period from September 1, 2019 through November 30, 2019, Holder may exercise this Warrant at an Exercise Price per Warrant Share equal to the greater of $3.75 and the Reference Price;

(G) during the period from December 1, 2019 through February 29, 2020, Holder may exercise this Warrant at an Exercise Price per Warrant Share equal to the greater of $4.00 and the Reference Price; and

(H) during the period from March 1, 2020 through September 1, 2020, Holder may exercise this Warrant at an Exercise Price per Warrant Share equal to the greater of $4.25 and the Reference Price.

As used in this Warrant, " Reference Price ", means 110% of the average closing price per share of the Common Stock for the ten (10) Trading Days ending on the trading day immediately preceding (and not including) the Exercise Date, as reported on The Nasdaq Stock Market, LLC (or in the event the Common Stock is no longer listed or traded on any Nasdaq stock exchange, then on the principal stock exchange or market on which the Common Stock is listed or traded, including any of the OTC Markets).

(c) Subject to any adjustment required by Section 3, notwithstanding anything to the contrary in this Warrant, in no event shall this Warrant be exercisable for more than 20,000,000 Warrant Shares.

Section 2. Exercise .

(a) Subject to Section 1, exercise of the purchase rights represented by this Warrant with respect to Warrant Shares may be made, in whole or in part, at any time or times on or after the Issue Date and on or before the Termination Date by delivery to the Company (or such other office or agency of the Company as it may designate by notice in writing to the registered Holder at the address of the Holder appearing on the books of the Company) of a duly completed and executed copy of a notice of exercise substantially in the form attached hereto as Exhibit A (a " Notice of Exercise "). The date on which such delivery shall have taken place (or be deemed to have taken place) shall be referred to herein as the " Exercise Date ". Within seven (7) Trading Days following the date of exercise as aforesaid, the Holder shall deliver the aggregate Exercise Price for the shares specified in the applicable Notice of Exercise by wire transfer or cashier's check drawn on a United States bank; provided , however , in the event that the Holder has not delivered such aggregate Exercise Price within seven (7) Trading Days following the date of such exercise as aforesaid, the Company shall not be obligated to deliver such Warrant Shares hereunder until such payment is made. No ink-original Notice of Exercise shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Notice of Exercise be required. Notwithstanding anything herein to the contrary, subject to Section 5(k), the Holder shall not be required to physically surrender this Warrant to the Company until the Holder has purchased all of the Warrant Shares available hereunder and the Warrant has been exercised in full, in which case, the Holder shall surrender this Warrant to the Company for cancellation within three (3) Business Days after the relevant event shall have occurred. Partial exercises of this Warrant resulting in purchases of a portion of the total number of Warrant Shares available hereunder shall have the effect of lowering the outstanding number of Warrant Shares purchasable hereunder in an amount equal to the applicable number of Warrant Shares purchased. The Holder and the Company shall maintain records showing the number of Warrant Shares purchased and the date of such purchases. The Company shall deliver any objection to any Notice of Exercise within two (2) Business Days of receipt of such notice, including any objection to the Holder's calculation of the Reference Price (as defined in Section 1(b)). **The Holder, by acceptance of this Warrant, acknowledges and agrees that, by reason of the provisions of this paragraph, following the purchase of a portion of the Warrant Shares hereunder, the number of Warrant Shares available for purchase hereunder at any given time may be less than the amount stated on the face hereof.**

(b) Mechanics of Exercise .

(i) Delivery of Warrant Shares Upon Exercise . Upon each exercise of this Warrant, the Company shall promptly, but in no event later than seven (7) Trading Days after delivery of the applicable Notice of Exercise (subject to delivery by the Holder to the Company of the aggregate Exercise Price payable pursuant to Section 1(b)), instruct the transfer agent for the Common Stock (the " Transfer Agent ") to record the issuance of the Warrant Shares purchased hereunder to Holder in book-entry form pursuant to the Transfer Agent's regular procedures. The Warrant Shares shall be deemed to have been issued, and the Holder shall be deemed to have become a holder of record of such shares for all purposes, as of the Exercise Date with payment to the Company of the Exercise Price having been paid.

(ii) Rescission Rights . If the Company fails to issue or cause to have issued the Warrant Shares pursuant to Section 2(b)(i) within seven (7) Trading Days after delivery of the applicable Notice of Exercise, then the Holder will have the right to rescind such exercise. The right of rescission of the Holder under this Section 2(b)(ii) is subject to delivery by the Holder of the aggregate Exercise Price payable pursuant to Section 1(b).

(iii) No Fractional Shares or Scrip . No fractional shares or scrip representing fractional shares shall be issued upon the exercise of this Warrant. As to any fraction of a share which the Holder would otherwise be entitled to purchase upon such exercise, the Company shall, at its election, either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Exercise Price or round up to the next whole share.

(iv) Charges, Taxes and Expenses . Issuance of Warrant Shares shall be made without charge to the Holder for any issue, transfer, stamp or other tax or other incidental expense in respect of the issuance of such Warrant Shares, all of which taxes and expenses shall be paid by the Company, and such Warrant Shares shall be issued in the name of the Holder. Without limiting the generality of the foregoing, the Company shall pay all fees required for same-day processing of any Notice of Exercise.

(v) Closing of Books . The Company will not close its stockholder books or records in any manner which prevents the timely exercise of this Warrant, pursuant to the terms hereof.

(c) Holder's Exercise Limitations . The Company shall not effect any exercise of this Warrant, and a Holder shall not have the right to exercise any portion of this Warrant, pursuant to Section 2 or otherwise, to the extent that after giving effect to such issuance after exercise as set forth on the applicable Notice of Exercise, the Holder (together with the Holder's Affiliates, and any other Persons acting as a group together with the Holder or any of the Holder's Affiliates), would beneficially own shares of Common Stock in excess of the Beneficial Ownership Limitation (as defined below). For purposes of the foregoing sentence, the number of shares of Common Stock beneficially owned by the Holder and its Affiliates shall include the number of shares of Common Stock issuable upon exercise of this Warrant with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which would be issuable upon (i) exercise of the remaining, nonexercised portion of this Warrant beneficially owned by the Holder or any of its Affiliates and (ii) exercise or conversion of the unexercised or nonconverted portion of any other securities of the Company subject to a limitation on conversion or exercise that results in such securities or the Common Stock underlying such securities not being beneficially owned by the Holder or any of its Affiliates. Except as set forth in the preceding sentence, for purposes of this Section 2(c), beneficial ownership shall be calculated in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended (the " Exchange Act "), and the rules and regulations promulgated thereunder, it being acknowledged by the Holder that the Company is not representing to the Holder that such calculation is in compliance with Section 13(d) of the Exchange Act and the Holder is solely responsible for any schedules required to be filed in accordance therewith. To the extent that the limitation contained in this Section 2(d) applies, the determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates) and of which portion of this Warrant is exercisable shall be in the sole discretion of the Holder, and the submission of a Notice of Exercise shall be deemed to be the Holder's determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates) and of which portion of this Warrant is exercisable, in each case subject to the Beneficial Ownership Limitation, and the Company shall have no obligation to verify or confirm the accuracy of such determination and shall have no liability for exercises of the Warrant that are not in compliance with the Beneficial Ownership Limitation. In addition, a determination as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder and the Company shall have no obligation to verify or confirm the accuracy of such determination and shall have no liability for exercises of the Warrant that are not in compliance with the Beneficial Ownership Limitation. For purposes of this Section 2(c), in determining the number of outstanding shares of Common Stock, the Holder may rely on the number of outstanding shares of Common Stock as reflected in (A) the Company's most recent periodic or annual report filed with the Commission, as the case may be, (B) a more recent public announcement by the Company or (C) a more recent written notice by the Company or the Transfer Agent setting forth the number of shares of Common Stock outstanding. Upon the written or oral request of the Holder, the Company shall within two (2) Trading Days confirm orally and in writing to the Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including this Warrant, by the Holder or its Affiliates since the date as of which such number of outstanding shares of Common Stock was reported. As used in this Warrant, " Beneficial Ownership Limitation " means 19.9% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock issuable upon exercise of this Warrant. The provisions of this Section 2(c) shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 2(c) to correct this paragraph (or any portion hereof) which may be defective or inconsistent with the intended Beneficial Ownership Limitation herein contained or to make changes or supplements necessary or desirable to properly give effect to such limitation.

Section 3. Certain Adjustments.

(a) Stock Dividends, Subdivision, Combinations and Consolidations. If the Company, at any time while this Warrant is outstanding (in whole or in part): (i) pays a stock dividend or otherwise makes a distribution or distributions on shares of its Common Stock (or other class of Capital Stock of the Company then issuable upon exercise of this Warrant) or any other equity or equity equivalent securities payable in shares of Common Stock (or such other class of Capital Stock) (which, for avoidance of doubt, shall not include any shares of Common Stock (or such other class of Capital Stock) issued by the Company upon exercise of this Warrant), (ii) subdivides outstanding shares of Common Stock (or other class of Capital Stock of the Company then issuable upon exercise of this Warrant) into a larger number of shares or (iii) combines or consolidates (including, without limitation, by reverse stock split) outstanding shares of Common Stock (or other class of Capital Stock of the Company then issuable upon exercise of this Warrant) into a smaller number of shares, then in each case the Exercise Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock outstanding immediately before such event and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event; with respect to Section 1(b), the number of Warrant Shares issuable at certain specified Exercise Prices shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock outstanding immediately after such event and of which the denominator shall be the number of shares of Common Stock outstanding immediately before such event; and the total number of shares issuable upon exercise of this Warrant shall be proportionately adjusted such that the aggregate Exercise Price of this Warrant shall remain unchanged. Any adjustment made pursuant to this Section 3(a) shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision, combination or consolidation. If the Company, at any time while this Warrant is outstanding (in whole or in part) distributes rights on shares of its Common Stock (or other class of Capital Stock of the Company then issuable upon exercise of this Warrant) in connection with a shareholder rights plan, no adjustment shall be made pursuant to this Section 3 and any such rights shall accompany the Warrant Shares issued pursuant to this Warrant if such shareholder rights plan remains in effect.

(b) Reclassifications, Reorganizations, Consolidations and Mergers . In the event of (i) any capital reorganization of the Company, (ii) any reclassification or recapitalization of the stock of the Company (other than (x) a change in par value or from par value to no par value or from no par value to par value or (y) as a result of a stock dividend, subdivision, combination or consolidation of shares as to which Section 3(a) shall apply) or (iii) any consolidation or merger of the Company with or into another Person (where the Company is not the surviving corporation or where there is a change in or distribution with respect to the Common Stock or any other class of Capital Stock then issuable upon exercise of this Warrant), this Warrant shall, after such reorganization, reclassification, recapitalization, consolidation or merger, be exercisable for the kind and number of shares of stock or other securities or property (" Alternate Consideration ") of the Company or of the successor corporation resulting from such consolidation or surviving such merger, if any, to which the holder of the number of Warrant Shares underlying this Warrant (at the time of such reorganization, reclassification, recapitalization, consolidation or merger, and subject to the limitations set forth in Section 1 and Section 2) would have been entitled upon such reorganization, reclassification, recapitalization, consolidation or merger. In such event, the aggregate Exercise Price otherwise payable for the shares of Common Stock (or such other class of Capital Stock) issuable upon exercise of this Warrant shall be allocated among the Alternative Consideration receivable as a result of such reorganization, reclassification, recapitalization, consolidation, or merger in proportion to the respective fair market values of such Alternate Consideration. If and to the extent that the holders of Common Stock (or such other class of Capital Stock) have the right to elect the kind or amount of consideration receivable upon consummation of such reorganization, reclassification, recapitalization, consolidation or merger, then the consideration that the Holder shall be entitled to receive upon exercise shall be specified by the Holder, which specification shall be made by the Holder by the later of (A) ten (10) Business Days after the Holder is provided with a final version of all material information concerning such choice as is provided to the holders of Common Stock (or such other class of Capital Stock), and (B) the last time at which the holders of Common Stock (or such other class of Capital Stock) are permitted to make their specifications known to the Company; provided , however , that if the Holder fails to make any specification within such time period, the Holder's choice shall be deemed to be whatever choice is made by a plurality of all holders of Common Stock (or such other class of Capital Stock) that are not affiliated with the Company (or, in the case of a consolidation or merger, any other party thereto) and affirmatively make an election (or of all such holders if none of them makes an election). From and after any such reorganization, reclassification, recapitalization, consolidation or merger, all references to "Warrant Shares" herein shall be deemed to refer to the Alternate Consideration to which the Holder is entitled pursuant to this Section 3(b). The provisions of this clause shall similarly apply to successive reorganizations, reclassifications, recapitalizations, consolidations, or mergers.

(c) Other Distributions . During such time as this Warrant is outstanding, if the Company shall declare or make any dividend or other distribution of its assets (or rights to acquire its assets) to holders of shares of Common Stock, by way of return of capital or otherwise (including, without limitation, any distribution of cash, stock or other securities, property or options by way of a dividend, spin off, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction) other than any dividend or distribution referred to in Sections 3(a) or (b) (a " Distribution "), at any time after the issuance of this Warrant, then, in each such case, the Holder shall be entitled to participate in such Distribution to the same extent that the Holder would have participated therein if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations on exercise hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date of which a record is taken for such Distribution, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the participation in such Distribution (provided , however , to the extent that the Holder's right to participate in any such Distribution would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Distribution to such extent (or in the beneficial ownership of any shares of Common Stock as a result of such Distribution to such extent) and the portion of such Distribution shall be held in abeyance for the benefit of the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation). To the extent that this Warrant has not been partially or completed exercised at the time of such Distribution, such portion of the Distribution shall be held in abeyance for the benefit of the Holder until the Holder has exercised this Warrant.

(d) Calculations . All calculations under this Section 3 shall be made to the nearest cent or the nearest 1/100th of a share, as the case may be. For purposes of this Section 3, the number of shares of Common Stock (or such other Company security as is then issuable upon exercise of this Warrant) deemed to be issued and outstanding as of a given date shall be the sum of the number of shares of Common Stock (or such other Company security) (excluding treasury shares, if any) issued and outstanding on such date.

(e) Notice to Holder .

(i) Adjustment to Terms of Warrant . Whenever any of the terms of this Warrant are adjusted pursuant to any provision of this Section 3 or any other applicable provision hereof, the Company shall promptly send to the Holder a notice signed by a duly authorized officer of the Company and setting forth (x) the Exercise Price, number of Warrant Shares and, if applicable, the kind and amount of Alternate Consideration purchasable hereunder after such adjustment and (y) the facts requiring such adjustment in reasonable detail.

(ii) Notice to Allow Exercise by Holder . If, during the period in which this Warrant is outstanding, (A) the Company shall declare a dividend (or any other distribution in whatever form) on the Common Stock, (B) the Company shall declare a special nonrecurring cash dividend on or a redemption of the Common Stock, (C) the Company shall authorize the granting to all holders of the Common Stock rights or warrants to subscribe for or purchase any shares of capital stock of any class or of any rights, (D) the approval of any stockholders of the Company shall be required in connection with any reclassification of the Common Stock, any consolidation or merger to which the Company is a party, any sale or transfer of all or substantially all of the assets of the Company, or any compulsory share exchange whereby the Common Stock is converted into other securities, cash or property, or (E) the Company shall authorize the voluntary or involuntary dissolution, liquidation or winding up of the affairs of the Company, then, in each case, the Company shall cause to be mailed to the Holder at its last address as it shall appear upon the Warrant Register of the Company, at least 20 calendar days prior to the applicable record or effective date hereinafter specified, a notice stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution, redemption, rights or warrants, or if a record is not to be taken, the date as of which the holders of the Common Stock of record to be entitled to such dividend, distributions, redemption, rights or warrants are to be determined or (y) the date on which such reclassification, consolidation, merger, sale, transfer or share exchange is expected to become effective or close, and the date as of which it is expected that holders of the Common Stock of record shall be entitled to exchange their shares of the Common Stock for securities, cash or other property deliverable upon such reclassification, consolidation, merger, sale, transfer or share exchange; provided that the failure to mail such notice or any defect therein or in the mailing thereof shall not affect the validity of the corporate action required to be specified in such notice. To the extent that any notice provided hereunder constitutes, or contains, material, non-public information regarding the Company or any of the Subsidiaries, the Company shall simultaneously file such notice with the Securities and Exchange Commission (the " SEC ") pursuant to a Current Report on Form 8-K. The Holder shall remain entitled to exercise this Warrant during the period commencing on the date of such notice to the effective date of the event triggering such notice except as may otherwise be expressly set forth herein.

Section 4. Transfer of Warrant and Warrant Shares .

(a) Restrictive Legend . The Warrant Shares (unless and until registered under the Securities Act of 1933, as amended (the " Securities Act "), or transferred pursuant to Rule 144 promulgated under the Securities Act, or any successor rule or regulation hereafter adopted by the SEC, as such rule may be amended from time to time (" Rule 144 ")) will be stamped or imprinted with a legend in substantially the following form:

> THE SECURITIES REPRESENTED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND MAY NOT UNDER ANY CIRCUMSTANCES BE SOLD, TRANSFERRED, OR OTHERWISE DISPOSED OF WITHOUT AN EFFECTIVE REGISTRATION STATEMENT FOR SUCH SECURITIES UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND ANY OTHER APPLICABLE SECURITIES LAWS OR AN OPINION OF COUNSEL SATISFACTORY TO THE COMPANY THAT REGISTRATION IS NOT REQUIRED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR APPLICABLE SECURITIES LAWS.

(b) Transferability . Healios and any subsequent Holder shall not sell, assign, transfer, pledge or dispose of any portion of this Warrant, by operation of law or otherwise, without the prior written consent of the Company, other than the transfer of this Warrant in its entirety to any Affiliate of Healios, which may be conducted without consent provided that an assignment form substantially in the form attached hereto as Exhibit B is duly completed and executed by any such subsequent Holder. Upon any permitted transfer of this Warrant in full, the Holder shall be required to physically surrender this Warrant to the Company within three (3) Trading Days of the date the Holder delivers an assignment form to the Company assigning this Warrant full. The Warrant, if properly assigned in accordance herewith, may be exercised by a new holder for the purchase of Warrant Shares without having a new Warrant issued. The Company shall not assign or transfer any part of its obligations under this Warrant without the prior written consent of Healios, except in a consolidation or merger described in Section 3(b).

(c) Investor Rights Agreement; Warrant Register .

(i) All Warrant Shares issuable upon exercise of this Warrant will be subject to the rights and obligations under the Investor Rights Agreement, including, without limitation, such Warrant Shares being Registrable Securities (as defined in the Investor Rights Agreement).

(ii) The Company shall register this Warrant upon records to be maintained by the Company for that purpose (the " Warrant Register ") in the name of the record Holder hereof from time to time. Absent manifest error or actual notice to the contrary, the Company may deem and treat the Holder of this Warrant so registered as the absolute owner hereof for the purpose of any exercise hereof or any distribution to the Holder, and for all other purposes.

Section 5. Miscellaneous .

(a) No Rights as Stockholder Until Exercise . This Warrant does not entitle the Holder to any voting rights, dividends or other rights as a stockholder of the Company prior to the exercise hereof as set forth in Section 2(b).

(b) Loss, Theft, Destruction or Mutilation of Warrant . The Company covenants that upon delivery by the Holder to the Company of (a) notice of the loss, theft, destruction or mutilation of this Warrant and (b) in the case of loss, theft or destruction, an indemnity agreement in a form and amount reasonably satisfactory to the Company or, in the case of mutilation, surrender of the mutilated Warrant, the Company will make and deliver a new Warrant of like tenor dated as of the Issue Date.

(c) Saturdays, Sundays, Holidays, etc . If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall not be a Business Day, then, such action may be taken or such right may be exercised on the next succeeding Business Day.

(d) Authorized Shares . The Company covenants that, during the period this Warrant is exercisable (in whole or in part), it will reserve from its authorized and unissued Common Stock a sufficient number of shares to provide for the issuance of the Warrant Shares upon the exercise of any purchase rights under this Warrant. The Company further covenants that its issuance of this Warrant shall constitute full authority to its officers who are charged with the duty of executing stock certificates to execute and issue the necessary Warrant Shares upon the exercise of the purchase rights under this Warrant. The Company will take all such reasonable action as may be necessary to assure that such Warrant Shares may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of any national securities exchange upon which the Common Stock. The Company covenants that all Warrant Shares which may be issued upon the exercise of the purchase rights represented by this Warrant will, upon exercise of the purchase rights represented by this Warrant and full payment for such Warrant Shares in accordance herewith, be duly authorized, validly issued, fully paid and non-assessable, not subject to any preemptive rights and free from all taxes, liens and charges created by the Company in respect of the issue thereof (other than pursuant to the Investor Rights Agreement and taxes in respect of any transfer occurring contemporaneously with such issue).

(e) Governing Law . This Warrant shall be governed by and construed in accordance with the laws of the State of New York without giving effect to the principles of conflict of laws thereof. EACH PARTY HEREBY IRREVOCABLY WAIVES ANY RIGHT IT MAY HAVE, AND AGREES NOT TO REQUEST, A JURY TRIAL FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION HEREWITH OR ARISING OUT OF THIS WARRANT OR ANY TRANSACTION CONTEMPLATED HEREBY.

(f) Nonwaiver . No course of dealing or any delay or failure to exercise any right hereunder on the part of Holder shall operate as a waiver of such right or otherwise prejudice the Holder's rights, powers or remedies.

(g) Notices . Any notice, request or other document required or permitted to be given or delivered to the Holder by the Company shall be delivered in accordance with the notice provisions of the Investor Rights Agreement.

(h) Limitation of Liability . No provision hereof, in the absence of any affirmative action by the Holder to exercise this Warrant to purchase Warrant Shares, and no enumeration herein of the rights or privileges of the Holder, shall give rise to any liability of the Holder for the purchase price of any Common Stock or as a stockholder of the Company, whether such liability is asserted by the Company or by creditors of the Company.

(i) Successors and Assigns . Subject to applicable securities laws, this Warrant and the rights and obligations evidenced hereby shall inure to the benefit of and be binding upon the successors and permitted assigns of the Company and the permitted assigns of Holder. The provisions of this Warrant are intended to be for the benefit of any Holder from time to time of this Warrant and shall be enforceable by the Holder or holder of Warrant Shares.

(j) Amendment. This Warrant may be modified or amended or the provisions hereof waived with the written consent of the Company and the Holder.

(k) Termination. This Warrant, and all rights, obligations and liabilities hereunder, shall be automatically terminated upon the earliest of (i) (A) the termination of the Collaboration Agreement by the Company (or any of its subsidiaries) pursuant to Section 8.2 thereof or (B) the termination of any other license agreement and/or collaboration agreement between the Company (or any of its subsidiaries) and Healios in effect as of the Issue Date or entered into pursuant to the terms of the Collaboration Agreement, in each case in accordance with the terms of such agreement and as a result of an uncured breach by Healios that has triggered such termination; provided, that this Warrant shall not terminate pursuant to Section 5(k)(i)(B) unless the Company provides Healios with written notice of the applicable breach, and Healios does not either cure such breach within the cure period provided for in the applicable agreement or reach an agreement with the Company (both parties negotiating in good faith), within 30 days of receipt of such notice, to adequately compensate the Company for such breach, (ii) July 1, 2018, if Healios has not satisfied the $2.5 million payment obligations set forth in Section 7.2(a) of the Collaboration Agreement by such date and (iii) the date immediately following the Termination Date (subject to any Notice of Exercise pending at the Termination Date, in which case such date shall be the date immediately after the date that the Company delivers the Warrant Shares that were subject to such pending Notice of Exercise). Upon termination of this Warrant, the Holder shall surrender this Warrant to the Company for cancellation within three (3) Business Days after the relevant termination event shall have occurred.

(l) Extension. In the event that, in connection with the clinical trial being conducted in Japan by or on behalf of Healios and referred to by Healios and the Company as the "TREASURE" study (referenced in Section 6.2 of the form of Collaboration Agreement attached to the LOI), the Company fails to provide adequate MultiStem product supply to Healios to dose 220 patients by December 31, 2018, then the Termination Date will automatically be extended to the date that is the 24-month anniversary of the date on which such adequate supply is delivered, and the end dates contained in Section 1(b)(ii) and Section 1(b)(iii)(H) will be automatically extended to the new Termination Date.

(m) Severability. Wherever possible, each provision of this Warrant shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Warrant shall be prohibited by or invalid under applicable law, such provision shall be ineffective to the extent of such prohibition or invalidity, without invalidating the remainder of such provisions or the remaining provisions of this Warrant.

(n) Headings. The headings used in this Warrant are for the convenience of reference only and shall not, for any purpose, be deemed a part of this Warrant.

[Signatures Contained on the Following Page]

IN WITNESS WHEREOF, the Company has caused this Warrant to be executed by its officer thereunto duly authorized as of the Issue Date.

ATHERSYS, INC.

By: /s/ Gil Van Bokkelen
Name: Gil Van Bokkelen
Title: Chairman & CEO

[Signatures Page to Warrant]

EXHIBIT A

NOTICE OF EXERCISE

TO: ATHERSYS, INC.

Reference is made to that certain Common Stock Purchase Warrant (the "Warrant") issued by Athersys, Inc. (the "Company") on _____ __, 2018 Capitalized terms used but not otherwise defined herein shall the respective meanings give thereto in the Warrant.

(1) The undersigned Holder of the Warrant hereby elects to exercise the Warrant for _____ Warrant Shares pursuant to Section 1(b)__ of the Warrant, subject to delivery of the aggregate Exercise Price for the Warrant Shares as to which the Warrant is so exercised and the undersigned Holder hereby instructs the Company to issue the applicable number of Warrant Shares in the name of the undersigned Holder.

(2) The undersigned Holder of the Warrant represents and warrants to the Company that, as of the date hereof, Holder's calculation of the Reference Price is $____ per Warrant Share.

(3) The undersigned Holder hereby represents and warrants to the Company that, as of the date hereof:

a) Experience; Accredited Investor Status. The Holder (i) is an accredited investor as that term is defined in Rule 501 of Regulation D promulgated under the Securities Act, (ii) is capable of evaluating the merits and risks of its investment in the Company, (iii) has the capacity to protect its own interests, and (iii) has the financial ability to bear the economic risk of its investment in the Company.

b) Company Information. The Holder has been provided access to all information regarding the business and financial condition of the Company, its expected plans for future business activities, material contracts, intellectual property, and the merits and risks of its purchase of the Warrants Shares, which it has requested or otherwise needs to evaluate an investment in the Warrant Shares. It has had an opportunity to discuss the Company's business, management and financial affairs with directors, officers and management of the Company and has had the opportunity to review the Company's operations and facilities. It has also had the opportunity to ask questions of, and receive answers from, the Company and its management regarding the terms and conditions of this investment and all such questions have been answered to its satisfaction.

c) Investment. The Holder has not been formed solely for the purpose of making this investment and is acquiring the Warrant Shares for investment for its own account, not as a nominee or agent, and not with the view to, or for resale in connection with, any distribution of any part thereof. It understands that the Warrant Shares have not been registered under the Securities Act or applicable state and other securities laws and are being issued by reason of a specific exemption from the registration provisions of the Securities Act and applicable state and other securities laws, the availability of which depends upon, among other things, the bona fide nature of the investment intent and the accuracy of its representations as expressed herein.

d) Transfer Restrictions. The Holder acknowledges and understands that (i) transfers of the Warrant Shares are subject to transfer restrictions under the federal securities laws and the Investor Rights Agreement and (ii) it may have to bear the economic risk of this investment for an indefinite period of time unless the Warrant Shares are subsequently registered under the Securities Act and applicable state and other securities laws or unless an exemption from such registration is available.

Name of Registered Owner: _____
Signature of Authorized Signatory of Registered Owner : _____
Name of Authorized Signatory: _____
Title of Authorized Signatory: _____
Date: _____

EXHIBIT B

ASSIGNMENT FORM

1. *(To assign the foregoing Warrant, execute this form and supply required information. Do not use this form to purchase shares.)*

2. FOR VALUE RECEIVED, the foregoing Warrant and all rights evidenced thereby are hereby assigned to the undersigned assignee. Such assignee hereby acknowledges, agrees and confirms by its signature below that, from and after the date hereof, it will be bound by the terms and conditions of the foregoing Warrant.

3. Such assignee further acknowledge, agrees and confirms by its signature below that, from and after the date hereof, it shall be joined to that certain Investor Rights Agreement, dated March 14, 2018, by and between Athersys, Inc. and Healios, K.K. (the "Investor Rights Agreement"), as the Investor, and shall be subject to all of the applicable rights, restrictions, conditions, duties and obligations set forth therein. Any notices required or permitted to be delivered to such assignee pursuant to the Investor Rights Agreement shall be delivered to the address set forth below.

Assignee Name: _____
(Please Print)

Assignee Address: _____
(Please Print)

Dated: _____ __, _____

Holder's Signature: _____

Holder's Address: _____

Exhibit 10.1

SECURITIES PURCHASE AGREEMENT

Dated as of March 13, 2018

by and between

ATHERSYS, INC.

and

HEALIOS K.K.

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SCHEDULES AND EXHIBITS

SECURITIES PURCHASE AGREEMENT

This Securities Purchase Agreement (this " ***Agreement*** "), is made as of March 13, 2018, by and between Athersys, Inc. (the " ***Company*** ") and HEALIOS K.K. (" ***Buyer*** "). The Company and Buyer are herein referred to as the " ***Parties*** ."

WHEREAS, the Company has authorized the sale of the Shares and the Warrant to Buyer; and

WHEREAS, Buyer wishes to purchase, and the Company wishes to issue and sell, the Shares and the Warrant on the terms and subject to the conditions set forth herein.

NOW THEREFORE, in consideration of the premises and the mutual covenants contained in this Agreement and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Company and Buyer hereby agree as follows:

ARTICLE I

PURCHASE AND SALE

1.1 Subscription of the Shares and the Warrant.

Buyer hereby confirms its subscription for and offer to purchase the Shares and the Warrant from the Company on and subject to the terms and conditions of this Agreement. The Company hereby accepts the subscription by the Buyer.

1.2 Purchase Price of the Shares and the Warrant.

The amount payable by Buyer, in the aggregate, to the Company for the purchase of the Shares and the Warrant pursuant to this Agreement will be the Subscription Amount.

1.3 Exemption from Registration.

(a) The Shares, the Warrant and the Warrant Shares (i) have not been registered under the Securities Act of 1933, as amended (the " ***Securities Act*** "), or any applicable state or other securities laws, (ii) will be issued under an exemption or exemptions from registration under the Securities Act and any applicable state and other securities laws, and (iii) will be restricted securities (as that term is defined in Rule 144(a)(3) promulgated under the Securities Act) and may not be resold unless such Shares, Warrant and Warrant Shares are registered under the Securities Act and any applicable state and other securities laws or an exemption from registration is available.

(b) Accordingly, the Shares, the Warrant and the Warrant Shares shall, upon issuance, bear legends in substantially the following form (in addition to any other legends required to be placed thereon under applicable securities laws), and the Company shall give instructions to the Transfer Agent in order to implement the restrictions on transfer set forth and described herein and in the Investor Rights Agreement:

THE SECURITIES REPRESENTED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND MAY NOT UNDER ANY CIRCUMSTANCES BE SOLD, TRANSFERRED, OR OTHERWISE DISPOSED OF WITHOUT AN EFFECTIVE REGISTRATION STATEMENT FOR SUCH SECURITIES UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND ANY OTHER APPLICABLE SECURITIES LAWS OR AN OPINION OF COUNSEL SATISFACTORY TO THE COMPANY THAT REGISTRATION IS NOT REQUIRED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR APPLICABLE SECURITIES LAWS.

ARTICLE II

THE CLOSING

2.1 Closing and Closing Date.

The closing of the sale of the Shares and the Warrant (the " ***Closing*** ") shall take place at the offices of Jones Day, 901 Lakeside Avenue, Cleveland, Ohio, on the earliest practicable date, but no later than the third (3 rd) Business Day following the date hereof (the " ***Closing Date*** "). At the Closing, on the terms and subject to the conditions contained herein, the Company shall issue, sell and deliver to Buyer, and Buyer shall purchase and acquire from the Company, the Shares, free and clear of any Liens and with no restrictions on the transfer thereof (in each case other than pursuant to this Agreement and pursuant to the federal securities laws).

2.2 Closing and Post-Closing Deliveries.

(a) At the Closing, the Company shall:

(i) irrevocably instruct the Transfer Agent to record the issuance of the Shares to Buyer in book-entry form pursuant to the Transfer Agent's regular procedures;

(ii) deliver to Buyer the Warrant registered in the name of Buyer;

(iii) deliver to Buyer a certificate of good standing in respect of the Company issued by the Secretary of State of the State of Delaware dated as of a date within five (5) Business Days of the Closing Date; and

(iv) deliver to Buyer a copy of the investor rights agreement, dated as of the Closing Date, (the " ***Investor Rights Agreement*** "), between the Company and Buyer, addressing the respective rights and obligations of Buyer as an investor in the Company, duly executed by the Company.

(b) At the Closing, Buyer shall deliver to the Company:

(i) by bank wire transfer of immediately available funds of U.S. dollars to an account designated in writing by the Company, an amount in cash equal to the Subscription Amount; and

(ii) a copy of the Investor Rights Agreement, duly executed by Buyer.

(c) As promptly as practicable following the Closing, the Company shall deliver to Buyer evidence from the Transfer Agent of the issuance of the Shares.

ARTICLE III

REPRESENTATIONS AND WARRANTIES OF THE COMPANY

The Company hereby represents and warrants to Buyer as of the date hereof as follows and acknowledges and confirms that Buyer is relying upon such representations and warranties in entering into this Agreement and consummating the transactions contemplated herein:

3.1 Organization; Good Standing; Qualification and Power.

The Company is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware, has all requisite power and authority to own, lease and operate its assets and to carry on its business as presently being conducted, and is qualified to do business and is in good standing in every jurisdiction in which the failure so to qualify or be in good standing could reasonably be expected to have a Material Adverse Effect.

3.2 Subsidiaries.

Each of the Subsidiaries is duly organized, validly existing and in good standing under the laws of its jurisdiction of organization and is in good standing under such laws. Each of the Subsidiaries is wholly owned by the Company. None of the Subsidiaries owns or leases property or engages in any activity in any jurisdiction that might require its qualification to do business as a foreign corporation in such jurisdiction and in which the failure to qualify as such would have a Material Adverse Effect. Other than the Company's ownership of the Subsidiaries, the Company does not currently own or control, directly or indirectly, any interest in any other corporation, partnership, trust, joint venture, limited liability company, association, or other business entity.

3.3 Authorization.

(a) The Company has all requisite power and authority to execute and deliver each of the Transaction Documents and any and all instruments necessary or appropriate in order to effectuate fully the terms hereof and thereof and all related transactions and to perform its obligations hereunder and thereunder. Each of the Transaction Documents has been duly authorized by all necessary corporate action of, and executed and delivered by, the Company.

(b) The issuance, sale and delivery of the Shares, the Warrant and the Warrant Shares have been duly authorized by all necessary corporate action of the Company. The Shares, when issued and delivered by the Company pursuant to this Agreement against payment of the consideration provided for herein, will be validly issued, fully paid and non-assessable. The Warrant Shares, when issued and delivered by the Company pursuant to the Warrant against payment of the consideration provided for therein, will be validly issued, fully paid and non-assessable.

3.4 Noncontravention; No Consent or Approval Required.

The execution, delivery and performance by the Company of the Transaction Documents and the consummation of the transactions contemplated hereby and thereby have not and will not (a) violate any provision of the Organizational Documents of the Company, (b) violate any law to which the Company or any of its assets is subject, (c) result in a breach of, constitute a default under, result in the acceleration of, create in any party the right to accelerate, terminate, modify or cancel any Contract to which the Company or any of the Subsidiaries is a party or by which any of the assets of the Company or any of the Subsidiaries is bound, or (d) result in the imposition of any Lien upon any of the assets of the Company or the Subsidiaries or the obligation by the Company or any Subsidiary to pay any penalty or premium which, with respect to each of the foregoing clauses, could reasonably be expected to have a Material Adverse Effect. No consent, approval or authorization of, declaration or notice to, or filing with, any Person is required by the Company for the valid authorization, execution and delivery by the Company of the Transaction Documents or for the consummation of the transactions contemplated hereby and thereby, other than (x) those consents, approvals, authorizations, declarations or filings that have been obtained or made, as the case may be, and (y) filings pursuant to federal or state securities and other applicable laws, including the filing of a Form D with the Securities and Exchange Commission (the "***SEC***"), that (other than those which are permitted to be made after the Closing and which will be duly made in accordance with time periods under applicable laws), have been made by the Company in connection with the sale of the Shares and the Warrant.

3.5 Compliance with Laws ; Organizational Documents .

The Company (a) has complied in all material respects with, and is in material compliance with, all laws applicable to it and its business, and (b) has all Permits used or necessary in the conduct of its business as presently conducted, other than such Permits that, if not obtained, could not reasonably be expected to have a Material Adverse Effect. Such Permits are in full force and effect, the Company has not received notice of any material violations with respect to any thereof, and no material Proceeding is pending or, to the Company's knowledge, threatened to revoke or limit any thereof.

3.6 Capitalization of the Company.

(a) As of the date hereof, (i) the authorized capital stock of the Company consisted of the classes and amounts set forth on **Schedule 3.6(a)(i)** , and (ii) the issued and outstanding capital stock of the Company (separated by class and series) was as set forth on **Schedule 3.6(a)(ii) .**

(b) Except as contemplated by this Agreement, including pursuant to the Warrant, or as set forth on **Schedule 3.6(b)** or as otherwise have been waived, as of the date hereof, there are no (i) outstanding warrants, options, rights, agreements, convertible securities or other commitments or instruments pursuant to which the Company is or may become obligated to issue or sell any shares of its capital stock or other securities or (ii) preemptive or similar rights to purchase or otherwise acquire shares of the capital stock or other securities of the Company pursuant to any provision of law, the Company's Organizational Documents or any Contract to which the Company, or to the Company's knowledge, any stockholder thereof, is a party.

3.7 Material Agreements.

To the Company's knowledge, (a) there is no material breach or default by any party under any Contract to which the Company or any Subsidiary is a party that is material to the Company's or any Subsidiary's business, operations, assets, financial condition or operating results (each, a " ***Material Agreement*** ") and (b) each Material Agreement is in full force and effect, constitutes the valid and binding obligation of the respective parties thereto (assuming due execution by the parties other than the Company or its subsidiaries, as applicable), and is enforceable in accordance with its terms, except as enforceability thereof may be limited by applicable bankruptcy, reorganization, insolvency or other laws affecting creditors' rights generally or by general principles of equity. The Company has publicly filed or provided to Buyer complete and accurate copies of each Material Agreement.

3.8 Brokers.

On behalf of the Company, there is no agent, broker, investment banker, consultant, Person or firm that has acted on behalf, or under the authority of, the Company or, to the Company's knowledge, any of its stockholders, or will be entitled to any fee or commission directly or indirectly from the Company or, to the Company's knowledge, any of its stockholders, in connection with any of the transactions contemplated by the Transaction Documents.

3.9 Financial Statements.

The Company has filed with the SEC its audited balance sheet as of December 31, 2016 (the " ***Statement Date*** "), and the audited statements of income and cash flows for the year ending on the Statement Date (together, the " ***Audited Financial Statements*** ") and the unaudited balance sheet and statements of income and cash flows for the nine-month period ended September 30, 2017 (the " ***Interim Financial Statements*** "). The Audited Financial Statements, together with the notes thereto, have been prepared in accordance with GAAP, consistently applied throughout the periods indicated and present fairly, in all material respects, the financial condition and position and results of operation of the Company as of the Statement Date and for the period indicated. The Interim Financial Statements present fairly, in all material respects, the financial condition and position and results of operations of the Company as of the date and for the period indicated, and have been prepared in accordance with GAAP, except for the absence of footnote disclosure and customary year-end adjustments.

3.10 Changes.

Except as set forth in the SEC Reports or as set forth on **Schedule 3.10** , since September 30, 2017, there has not been:

(a) Any change in or effect on the assets, Liabilities, financial condition or operations of the Company from that reflected in the Interim Financial Statements, other than changes in the ordinary course of business, none of which individually or in the aggregate has had or could reasonably be expected to have a Material Adverse Effect;

(b) Any waiver by the Company of a material right of the Company or a material debt owed to the Company;

(c) Any direct or indirect loans made by the Company to any stockholder, employee, officer or director of the Company, other than advances made in the ordinary course of business;

(d) Any debt, obligation or liability incurred, assumed or guaranteed by the Company, except for advances from customers and those for immaterial amounts and for current Liabilities incurred in the ordinary course of business;

(e) Any change in any Material Agreement which has had or could reasonably be expected to have a Material Adverse Effect; or

(f) Any other event or condition of any character that, either individually or cumulatively, has had or could reasonably be expected to have a Material Adverse Effect.

3.11 Absence of Undisclosed Liabilities.

Neither the Company nor any of the Subsidiaries has any material Liabilities, except (a) to the extent reflected or reserved against on the balance sheet included in the Interim Financial Statements or disclosed in the Audited Financial Statements and (b) Liabilities arising in the ordinary course of business consistent with past practice since September 30, 2017. There are no material loss contingencies (as such term is used in Statement of Financial Accounting Standards No. 5, or any successor thereto, issued by the Financial Accounting Standards Board) of or affecting the Company or any of the Subsidiaries which are required to be disclosed or for which adequate provision was required to be made on the balance sheet included in the Interim Financial Statements or in the Audited Financial Statements which have not been disclosed or for which adequate provision has not been made on the balance sheet included in the Interim Financial Statements or in the Audited Financial Statements or in the notes thereto.

3.12 Title to Assets, Properties and Rights.

The Company and the Subsidiaries have good and marketable title to all real property owned by them and have good title to all personal property owned by them, in each case free and clear of all liens, encumbrances and defects except such as are described in the SEC Reports or such as do not materially affect the value of such property and do not interfere with the use made and proposed to be made of such property by the Company and the Subsidiaries; and any real property and buildings held under lease by the Company and the Subsidiaries are held by them under valid, subsisting and enforceable leases with such exceptions as are not material and do not materially interfere with the use made and proposed to be made of such property and buildings by the Company and the Subsidiaries.

3.13 Taxes.

Except as would not, singly or in the aggregate, reasonably be expected to have a Material Adverse Effect: (A) the Company and each of the Subsidiaries have filed all United States federal, state, local and foreign income Tax returns required by law to be filed through the date hereof and the returns and reports are true and correct in all material respects. All Taxes shown by such returns or otherwise assessed, which are due and payable, have been paid other than Taxes that the Company or any of the Subsidiaries are contesting in good faith and as to which adequate reserves have been established in accordance with GAAP; and (B) there is no deficiency that has been asserted in writing against the Company or any of the Subsidiaries or any of their respective properties or assets other than Tax deficiencies that the Company or any of the Subsidiaries are contesting in good faith and as to which adequate reserves have been established in accordance with GAAP.

3.14 Litigation and Other Proceedings.

There are no Proceedings pending or, to the Company's knowledge, threatened against the Company, any of the Subsidiaries or their properties, whether at law or in equity, whether civil or criminal in nature, that are or could reasonably be expected to have, either individually or in the aggregate, a Material Adverse Effect.

ARTICLE IV

REPRESENTATIONS AND WARRANTIES OF BUYER

Buyer represents and warrants to the Company as of the date hereof as follows and acknowledges and confirms that Company is relying upon such representations and warranties in entering into this Agreement and consummating the transactions contemplated herein:

4.1 Experience; Accredited Investor Status.

Buyer (a) is an accredited investor as that term is defined in Rule 501 of Regulation D promulgated under the Securities Act and, by virtue of its experience in evaluating and investing in private placement transactions of securities in companies similar to the Company, (b) is capable of evaluating the merits and risks of its investment in the Company and has the capacity to protect its own interests, (c) has the financial ability to bear the economic risk of its investment in the Company and (d) is not purchasing the Shares, the Warrant or any Warrant Shares as a result of any advertisement, article, notice or other communication regarding the Shares, the Warrant or any Warrant Shares published in any newspaper, magazine or similar media or broadcast over television or radio or presented at any seminar or other general solicitation or general advertisement.

4.2 Company Information.

Buyer has been provided access to all information regarding the business and financial condition of the Company, its expected plans for future business activities, material contracts, intellectual property, and the merits and risks of its purchase of the Shares, the Warrant and any Warrant Shares, which Buyer has reasonably requested or otherwise needs to evaluate an investment in the Shares, the Warrant and any Warrant Shares. Buyer has had an opportunity to discuss the Company's business, management and financial affairs with directors, officers and management of the Company and has had the opportunity to review the Company's operations and facilities. Buyer has also had the opportunity to ask questions of and receive answers from, the Company and its management regarding the terms and conditions of this investment and all such questions have been answered to Buyer's satisfaction.

4.3 Investment.

Buyer is acquiring the Shares, the Warrant and any Warrant Shares for investment for its own account, not as a nominee or agent, and not with the view to, or for resale in connection with, any distribution of any part thereof. Buyer understands that the Shares, the Warrant and the Warrant Shares have not been registered under the Securities Act or applicable state and other securities laws and are being issued by reason of a specific exemption from the registration provisions of the Securities Act and applicable state and other securities laws, the availability of which depends upon, among other things, the bona fide nature of the investment intent and the accuracy of Buyer's representations as expressed herein.

4.4 Transfer Restrictions.

Buyer acknowledges and understands that (a) transfers of the Shares, the Warrant and any Warrant Shares are subject to transfer restrictions contained in this Agreement, the Warrant, the Investor Rights Agreement and under the federal securities laws and (b) Buyer must bear the economic risk of this investment for an indefinite period of time because the Shares, the Warrant and any Warrant Shares must be held indefinitely unless subsequently registered under the Securities Act and applicable state and other securities laws or unless an exemption from such registration is available.

4.5 Brokers or Finders.

Buyer has not retained any agent, broker, investment banker, consultant, Person or firm that has acted on behalf of, or under the authority of, Buyer or, to Buyer's knowledge, any of its stockholders, or that will be entitled to any fee or commission directly or indirectly from Buyer or, to Buyer's knowledge, any of its stockholders, in connection with any of the transactions contemplated by the Transaction Documents.

4.6 Organization; Qualification and Power.

Buyer is company duly organized and validly existing under the laws of Japan, has all requisite power and authority to own, lease and operate its assets and to carry on its business as presently being conducted, and is qualified to do business and in good standing in every jurisdiction in which the failure so to qualify or be in good standing could reasonably be expected to have a Material Adverse Effect on Buyer.

4.7 Authorization.

Buyer has all requisite power and authority to execute and deliver each of the Transaction Documents and any and all instruments necessary or appropriate in order to effectuate fully the terms hereof and thereof and all related transactions, and to perform its obligations hereunder and thereunder. Buyer's entry into each of the Transaction Documents and its performance of the transactions contemplated hereby and thereby have been duly authorized by all necessary corporate or limited liability company action, as applicable, of, and executed and delivered by, Buyer. Subject to the Company's execution and delivery of this Agreement, this Agreement is a valid and binding obligation of Buyer enforceable against Buyer in accordance with its terms, except as enforceability may be limited by applicable equitable principles or by bankruptcy, insolvency, reorganization, moratorium, or similar laws affecting creditors' rights generally, and by the exercise of judicial discretion in accordance with equitable principles.

4.8 No Consent or Approval Required.

No consent, approval or authorization of, or declaration to or filing with, any Person shall be required by Buyer for the valid authorization, execution and delivery by such Buyer of this Agreement or for the consummation of the transactions contemplated hereby other than those consents, approvals, authorizations, declarations or filings which have been obtained or made, as the case may be.

4.9 No Prior Short Selling.

Buyer has no present intention to and at no time prior to the date of this Agreement has any of Buyer, its agents, representatives or affiliates engaged in or effected, in any matter whatsoever, directly or indirectly, any (i) "short sale" (as such term is defined in Section 242.200 of Regulation SHO of the Exchange Act) of the Common Stock or (ii) hedging transaction, which establishes a net short position with respect to the Common Stock.

4.10 Beneficial Ownership of Common Stock.

As of the date hereof, Buyer is not a Beneficial Owner of (a) any Common Stock or (b) any securities or other instruments representing the right to acquire Common Stock. Other than pursuant to the Investor Rights Agreement, Buyer does not have a formal or informal agreement, arrangement or understanding with any Person to acquire, dispose of or vote any securities of the Company.

ARTICLE V

MISCELLANEOUS

5.1 Expenses.

Each Party will pay its own expenses incurred in connection with the transactions contemplated by this Agreement, including, without limitation, any broker fees or expenses of financial advisors, financial sponsors, legal counsel or other advisors.

5.2 No Third Party Beneficiaries.

Except as expressly provided herein, this Agreement shall not confer any rights or remedies upon any Person other than the Parties hereto and their respective successors and permitted assigns, personal representatives, heirs and estates, as the case may be.

5.3 Complete Agreement.

This Agreement constitutes the entire agreement among the Parties hereto with respect to the transactions contemplated hereby and supersede any prior understandings, agreements or representations by or among such Parties, written or oral, that may have related in any way to the purchase and sale of the Shares and the Warrant.

5.4 Successors and Assigns.

This Agreement shall be binding upon and inure to the benefit of the Parties hereto and their respective successors and permitted assigns. None of the Parties hereto shall be permitted to assign its rights or obligations hereunder without the prior written consent of the other Party hereto.

5.5 Counterparts.

This Agreement may be executed in any number of counterparts; each such counterpart shall be deemed to be an original instrument and all counterparts together shall constitute one instrument. This Agreement may also be executed and delivered by portable document format (pdf) and in two or more counterparts, each of which will be deemed an original, but all of which together will constitute one and the same instrument.

5.6 Press Releases and Public Announcements.

The Parties will agree upon the timing and content of any initial press release, or other public communications relating to this Agreement and the transactions contemplated herein.

(a) Except to the extent already disclosed in any initial press release or other public communication, no public announcement concerning the existence or the terms of this Agreement or concerning the transactions described herein shall be made, either directly or indirectly, by any of the Parties hereto without such Party first obtaining the approval of the other Parties and agreement upon the nature, text, and timing of such announcement, which approval and agreement shall not be unreasonably withheld; *provided, however* , that nothing in this **Section 5.6** shall be deemed to prohibit any Party from making any disclosure which its counsel deems necessary or advisable in order to satisfy such Party's disclosure obligations imposed by law or by Tokyo Stock Exchange rule or regulation, including, but not limited to, obligations pursuant to the Exchange Act, and *provided further* that each Party acknowledges that this Agreement and the Investor Rights Agreement will be filed with the SEC by the Company.

(b) The Party desiring to make any such public announcement shall provide the other Parties with a written copy of the proposed announcement in sufficient time prior to public release to allow such other Parties to comment upon such announcement, prior to public release.

5.7 Notices.

All notices, requests, demands, claims and other communications hereunder shall be in writing and shall be deemed to have been duly given if delivered personally, via electronic mail, by facsimile, sent by nationally recognized overnight courier or mailed by registered or certified mail (return receipt requested), postage prepaid, to the appropriate Party at the address, email address or facsimile number, as applicable, set forth below (or at such other address for such Party as shall be specified by like notice):

If to the Company, to:

Athersys, Inc.
3201 Carnegie Avenue
Cleveland, OH 44115
Telephone: (216) 431-9900
Facsimile: (216) 361-9495
Email: lcampbell@athersys.com
Attention: Senior Vice President of Finance

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

Jones Day
901 Lakeside Avenue
Cleveland, Ohio 44114
Telephone: (216)586-7103
Facsimile: (216) 579-0212
Email: mjsolecki@jonesday.com
Attention: Michael J. Solecki

If to Buyer, to:

HEALIOS K.K.
Attention: General Manager of Finance and Accounting Division
World Trade Center Bldg. 15F
2-4-1 Hamamatsucho,
Minato-ku, Tokyo, 135-6115 Japan
Facsimile: +81-3-3434-7231

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

Morrison & Foerster LLP
Shin-Marunouchi Building, 29th Floor
1-5-1 Marunouchi, Chiyoda-ku, Tokyo
100-6529, Japan
Telephone: +81-3-3214-6522
Facsimile: +81-3-3214-6512
Email: RLaxer@mofo.com
Attention: Randy S. Laxer

and to:

Morrison & Foerster LLP
250 West 55th Street
New York, NY 10019-9601, U.S.A.
Telephone: +1 (212) 468-8000
Facsimile: +1 (212) 468-7900
Email: JBell@mofo.com
Attention: Jeffrey Bell

All such notices and other communications shall be deemed to have been given and received (i) in the case of personal delivery, on the date of such delivery, (ii) in the case of delivery by email or facsimile, (A) when delivered prior to 5:00 p.m. (New York time) on a Business Day or (B) if delivered after 5:00 p.m. on a Business Day or on a day that is not a Business Day, on the first Business Day following the date of delivery, (iii) in the case of delivery by nationally recognized overnight courier, on the second Business Day following the date when sent, and (iv) in the case of mailing, on the fifth Business Day following such mailing.

5.8 Confidentiality.

Buyer shall, and shall cause its respective officers, directors, employees, agents, affiliates and its affiliate's officers, directors, employees and agents, if any, to, hold confidential and not use in any manner detrimental to the Company all information they may have or obtain pursuant to their rights under this Agreement concerning the Company and its assets, business, operations, or prospects; *provided, however* , that the foregoing shall not apply to (a) information that is or becomes generally available to the public other than as a result of the improper disclosure by Buyer or any of its affiliates or its or its affiliates' employees, agents, accountants, legal counsel or other representatives, (b) information that is or becomes available to Buyer or any of its employees, agents, accountants, legal counsel, or other representatives on a non-confidential basis prior to its disclosure by the Company or its employees, agents, accountants, legal counsel or other representatives, (c) information that is required to be disclosed by Buyer or any of its affiliates or its or its affiliates' employees, agents, accountants, legal counsel, or other representatives as a result of any applicable law, rule, or regulation of any Governmental Entity or stock exchange and (d) any information that is reasonably required to be disclosed by Buyer in order to enforce its rights pursuant to this Agreement.

5.9 Governing Law.

This Agreement shall be governed by and construed in accordance with the laws of the State of New York without giving effect to the principles of conflict of laws thereof.

5.10 Jurisdiction; Venue.

Each of the Parties hereto hereby submits and consents irrevocably to the exclusive jurisdiction of the courts of the State of New York and the United States District Court for the Southern District of New York for the interpretation and enforcement of the provisions of this Agreement. Each of the Parties hereto also agrees that the jurisdiction over the person of such Parties and the subject matter of such dispute shall be effected by the mailing of process or other papers in connection with any such action in the manner provided for in **Section 5.7** or in such other manner as may be lawful, and that service in such manner shall constitute valid and sufficient service of process.

5.11 Jury Trial.

EACH PARTY HEREBY IRREVOCABLY WAIVES ANY RIGHT IT MAY HAVE, AND AGREES NOT TO REQUEST, A JURY TRIAL FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION HEREWITH OR ARISING OUT OF THIS AGREEMENT OR ANY TRANSACTION CONTEMPLATED HEREBY.

5.12 Amendments and Waivers.

This Agreement may be amended or modified and the terms and conditions hereof may be waived, only by a written instrument signed by the Company and Buyer or, in the case of a waiver, the Party or Parties hereto waiving compliance. No delay on the part of any Party hereto in exercising any right, power or privilege hereunder shall operate as a waiver thereof, nor shall any waiver on the part of any Party hereto of any right, power or privilege hereunder, nor any single or partial exercise of any right, power or privilege hereunder, preclude any other or other exercise thereof hereunder. The rights and remedies herein provided are cumulative and are not exclusive of any rights or remedies which any Party hereto may otherwise have at law or in equity.

5.13 Termination.

The representations and warranties of the Company and Buyer contained in **Articles III** and **IV** hereof and the agreements and covenants set forth in this **Article V** shall survive the termination of this Agreement. No termination of this Agreement shall affect the Company's or Buyer's rights or obligations under the Investor Rights Agreement, which shall survive any such termination in accordance with its terms.

5.14 Headings.

The captions to the several Articles and Sections hereof are not a part of this Agreement, but are included merely for convenience of reference only and shall not affect its meaning or interpretation.

5.15 Certain Definitions.

" ***$*** " or " ***dollar*** " means U.S. dollars.

" ***Agreement*** " has the meaning set forth in the preamble to this Agreement.

" ***Audited Financial Statements*** " has the meaning set forth in Section 3.9 of this Agreement.

" ***Beneficial Ownership*** " has the meaning set forth in Rule 13d-3 of the Exchange Act. The terms " ***Beneficial Owner*** ," " ***Beneficially Own*** ," and " ***Beneficially Owned*** " shall have the correlative meanings.

" ***Business Day*** " means any day except any Saturday, any Sunday, any day which is a federal legal holiday in the United States or Japan, or any day on which banking institutions in the State of New York or Tokyo, Japan are authorized or required by law or other governmental action to close.

" ***Buyer*** " has the meaning set forth in the preamble of this Agreement.

" ***Closing*** " has the meaning set forth in Section 2.1 of this Agreement.

" ***Closing Date*** " has the meaning set forth in Section 2.1 of this Agreement.

" ***Common Stock*** " means the shares of common stock, par value $0.001 per share, of the Company.

" ***Company*** " has the meaning set forth in the preamble to this Agreement.

" ***Contract*** " means any loan or credit agreement, note, bond, mortgage, indenture, lease, sublease, purchase order, instrument, permit, concession, franchise, license, commitment, contract, subcontract or other agreement, in each case, whether written or oral.

" ***Exchange Act*** " means the Securities Exchange Act of 1934.

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

" ***Governmental Entity*** " means any domestic or foreign federal, state, municipal, or other governmental department, commission, board, bureau, agency or instrumentality, or any court or tribunal.

" ***Interim Financial Statements*** " has the meaning set forth in Section 3.9 of this Agreement.

" ***Investor Rights Agreement*** " has the meaning set forth in Section 2.2 of this Agreement.

" ***Liabilities*** " mean any liabilities or obligations, whether known or unknown, asserted or unasserted, absolute or contingent, accrued or unaccrued, liquidated or unliquidated, and whether due or to become due, regardless of when asserted.

" ***Lien*** " means any security interest, pledge, lien, bailment (in the nature of a pledge or for purposes of security), mortgage, deed of trust, the grant of a power to confess judgment, conditional sale or title retention agreement (including any lease in the nature thereof), charge, encumbrance, easement, reservation, restriction, cloud, right of first refusal or first offer, option, commitment or other similar arrangement or interest in real or personal property, whether oral or written.

“ ***Material Adverse Effect*** ” means a material adverse effect on the business, properties, operations, assets, condition (financial or otherwise) or operating results of the Company and the Subsidiaries, taken as a whole.

“ ***Material Adverse Effect on Buyer*** ” means a material adverse effect on the business, properties, operations, assets, condition (financial or otherwise) or operating results of the Buyer.

“ ***Material Agreement*** ” has the meanings set forth in Section 3.7 of this Agreement.

“ ***Organizational Document*** ” means, with respect to a Person (other than an individual), any document by which such Person establishes its legal existence or which governs such Person’s internal affairs.

“ ***Parties*** ” has the meaning set forth in the preamble to this Agreement.

“ ***Permits*** ” means all permits, licenses, authorizations, registrations, franchises, approvals, consents, certificates, variances and similar rights obtained, or required to be obtained, from Governmental Entities.

“ ***Person*** ” means and includes an individual, a partnership, a corporation, a limited liability company, an association, a joint stock company, a trust, a joint venture, an unincorporated organization, or a Governmental Entity (or any department, agency, or political subdivision thereof).

“ ***Proceeding*** ” means any action, suit, proceeding, complaint, charge, hearing, inquiry or investigation before or by a Governmental Entity or an arbitrator.

“ ***SEC*** ” has the meaning set forth in Section 3.4 of this Agreement.

“ ***SEC Reports*** ” means the Company’s reports, schedules, forms, statements and other documents filed by it under the Exchange Act since January 1, 2017 to the date hereof, including pursuant to Section 13(a) or 15(d) thereof.

“ ***Securities Act*** ” has the meaning set forth in Section 1.3(a) of this Agreement.

“ ***Shares*** ” means an aggregate of 12,000,000 shares of Common Stock.

“ ***Statement Date*** ” has the meaning set forth in Section 3.9 of this Agreement.

“ ***Subscription Amount*** ” means $21,100,000.00.

“ ***Subsidiaries*** ” means ABT Holding Company, a Delaware corporation, Advanced Biotherapeutics, Inc., a Delaware corporation, Athersys Limited, a United Kingdom company, ReGenesys LLC, a Delaware limited liability company, ReGenesys BVBA, a Belgium company, and ReGenesys EU NV, a Belgium company.

" ***Tax*** " as used in this Agreement, means, with respect to any Person, (a) all income taxes (including any tax on or based upon net income, gross income, income as specially defined, earnings, profits or selected items of income, earnings or profits) and all gross receipts, sales, use, ad valorem, transfer, franchise, license, withholding, payroll, employment, excise, severance, stamp, occupation, premium, property or windfall profits taxes, alternative or add-on minimum taxes, customs duties and other taxes, fees, assessments or charges of any kind whatsoever, together with all interest and penalties, additions to tax and other additional amounts imposed by any taxing authority (domestic or foreign) on such Person (if any) and (b) any liability for the payment of any amount of the type described in clause (a) above as a result of being a "transferee" (within the meaning of Section 6901 of the Internal Revenue Code of 1986, as amended, or any other applicable law) of another entity or a member of an affiliated or combined group.

" ***Transaction Documents*** " means this Agreement, the Investor Rights Agreement and the Warrant.

" ***Transfer Agent*** " means Computershare, Inc.

" ***Warrant*** " means the warrant to purchase up to 20,000,000 shares of Common Stock, substantially in the form attached hereto as **Exhibit A**.

" ***Warrant Shares*** " means the shares of Common Stock issuable upon exercise of the Warrant.

5.16 Incorporation of Schedules and Exhibits.

The schedules and exhibits identified in this Agreement are incorporated herein by reference and made a part hereof.

5.17 Rules of Construction.

The term " ***this Agreement*** " means this agreement together with all schedules and the exhibits hereto, as the same may from time to time be amended, modified, supplemented or restated in accordance with the terms hereof. In this Agreement, the term " ***the Company's knowledge*** " or " ***the knowledge of the Company*** " means the knowledge of each officer of the Company, which could have been acquired after making such reasonable due inquiry and exercising such reasonable diligence as a prudent business person could have made or exercised in the management of his or her business affairs, including reasonable due inquiry of those key employees and professionals of the Company who could reasonably be expected to have actual knowledge of the matters in question. Accounting terms used but not otherwise defined herein shall have the meanings given to them under GAAP. The use in this Agreement of the term " ***including*** " means " ***including, without limitation*** ." The words " ***herein*** ," " ***hereof*** ," " ***hereunder*** " and other words of similar import refer to this Agreement as a whole, including the schedules and exhibits, as the same may from time to time be amended, modified, supplemented or restated, and not to any particular section, subsection, paragraph, subparagraph or clause contained in this Agreement. All references to sections, schedules and exhibits mean the sections of this Agreement and the schedules and exhibits attached to this Agreement, except where otherwise stated. The title of and the section and paragraph headings in this Agreement are for convenience of reference only and shall not govern or affect the interpretation of any of the terms or provisions of this Agreement. Any reference made in this Agreement to any statute or statutory provision or to any accounting standard means such statute, statutory provision or accounting standard as in effect at such time, or to any successor statute, statutory provision or accounting standard relating to the same subject as the statute, statutory provision or accounting standard so referred to in this Agreement, and to any then-applicable rules or regulations promulgated thereunder. The use herein of the masculine, feminine or neuter forms shall also denote the other forms, and words imparting the singular number only shall include the plural and vice versa, as in each case the context may require or permit. Where specific language is used to clarify by example a general statement contained herein, such specific language shall not be deemed to modify, limit or restrict in any manner the construction of the general statement to which it relates. The language used in this Agreement has been chosen by the Parties to express their mutual intent, and no rule of strict construction shall be applied against any Party.

5.18 Severability.

In the event that any provision of this Agreement is determined to be invalid or unenforceable by a court of competent jurisdiction, the remainder of this Agreement shall remain in full force and effect without such provision. In such event, the Parties hereto shall in good faith attempt to negotiate a substitute clause for any provision declared invalid or unenforceable, which substitute clause shall most nearly approximate the intent of the Parties hereto in agreeing to such invalid provision, without itself being invalid.

[*Signature pages follow* .]

IN WITNESS WHEREOF, the Company and Buyer have caused their duly authorized representatives to execute this Agreement as of the date first above written.

ATHERSYS, INC.

By: /s/ Gil Van Bokkelen
Name: Gil Van Bokkelen
Title: Chairman & CEO

IN WITNESS WHEREOF, the Company and Buyer have caused their duly authorized representatives to execute this Agreement as of the date first above written.

HEALIOS K.K.

By: /s/ Hardy TS Kagimoto
Name: Hardy TS Kagimoto
Title: President & CEO

Schedule 3.6(a)(i)

Capitalization of the Company - Authorized Capital Stock (pre-Closing)

Common Stock, par value $0.001 per share	300,000,000 shares
Preferred Stock, par value $0.001 per share	10,000,000 shares

Schedule 3.6(a)(ii)

Capitalization of the Company - Issued and Outstanding Capital Stock (pre-Closing)

Common Stock, par value $0.001 per share	125,830,331 shares issued and outstanding
Preferred Stock, par value $0.001 per share	No shares issued and outstanding

Schedule 3.6(b)

Outstanding Warrants, Options, Rights, Agreements, etc.

Shares of Common Stock issuable pursuant to:

- The Athersys, Inc. Amended and Restated 2007 Long-Term Incentive Plan.
- The Athersys, Inc. Equity Incentive Compensation Plan.
- The settlement agreement, dated as of October 12, 2017, between Athersys, Inc. and Garnet BioTherapeutics, Inc.
- The common stock purchase agreement, dated as of December 17, 2015, between Athersys, Inc. and Aspire Capital Fund, LLC.
- The common stock purchase agreement, dated as of February 1, 2018, between Athersys, Inc. and Aspire Capital Fund, LLC.

Schedule 3.10

Changes

None.

Exhibit A

THIS WARRANT AND THE SECURITIES ISSUABLE UPON EXERCISE OF THIS WARRANT HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND MAY NOT UNDER ANY CIRCUMSTANCES BE SOLD, TRANSFERRED, OR OTHERWISE DISPOSED OF WITHOUT AN EFFECTIVE REGISTRATION STATEMENT FOR SUCH SECURITIES UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND ANY OTHER APPLICABLE SECURITIES LAWS OR AN OPINION OF COUNSEL SATISFACTORY TO THE COMPANY THAT REGISTRATION IS NOT REQUIRED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR APPLICABLE SECURITIES LAWS.

COMMON STOCK PURCHASE WARRANT

ATHERSYS, INC.

Issue Date: March [●], 2018 (the " Issue Date ")

THIS COMMON STOCK PURCHASE WARRANT certifies that, for value received, HEALIOS K.K. (" Healios "), or its permitted assigns (the " Holder "), is entitled, upon the terms and subject to the limitations on exercise and the conditions hereinafter set forth, at any time on or after the Issue Date and on or prior to the close of business on September 1, 2020 (subject to adjustment pursuant to Section 5(l), the " Termination Date "), but not thereafter, to purchase from Athersys, Inc., a Delaware corporation (the " Company "), up to 20,000,000 shares (subject to the limitations contained herein, including Section 3(d), and subject to adjustment hereunder, the " Warrant Shares ") of the Company's common stock, par value $0.001 per share (the " Common Stock "). The purchase price of one Warrant Share shall be equal to the applicable exercise price set forth in Section 1(b) (each such price, as applicable, the " Exercise Price "). This Warrant is being issued pursuant to that certain Securities Purchase Agreement, dated as of March 13, 2018 (as may be amended from time to time, the " Purchase Agreement "), between Healios and the Company. Healios and the Company are also parties to that certain Investor Rights Agreement, dated as of March [●], 2018 (as may be amended from time to time, the " Investor Rights Agreement "), and that certain Letter of Intent for Collaboration Expansion, dated as of March 13, 2018 (as may be amended from time to time, the " LOI "), pursuant to which Healios and the Company intend to enter into a collaboration expansion agreement substantially in the form attached thereto (as may be amended from time to time, the " Collaboration Agreement ").

As used in this Warrant, (a) an " Affiliate " means, with respect to any Person, any other Person who, directly or indirectly, controls, is controlled by, or under common control with such Person; for purposes of this definition, the term " control " (including the correlative meanings of the terms " controlled by " and " under common control with "), as used with respect to any Person, means the possession, directly or indirectly, of the power to direct or cause the direction of the management policies of such Person, whether through the ownership of voting securities or by contract or otherwise, (b) a " Business Day " means any day excluding Saturday, Sunday or any day which is a legal holiday under the laws of the State of New York or of Tokyo, Japan, or a day on which banking institutions are authorized or required by law or other governmental action to close, (c) " Capital Stock " means, with respect to any Person, (i) any capital stock of such Person, (ii) any security convertible, with or without consideration, into any capital stock of such Person, (iii) any other shares, interests, rights to purchase, warrants, options, participations or other equivalents of or interests in (however designated) the capital stock of such Person and (iv) any other equity interest in, or right to vote generally in elections of directors or the comparable governing body of, such Person, (d) a " Person " means any individual, partnership, corporation, limited liability company, association, joint stock company, trust, joint venture, unincorporated organization or governmental entity (or any department, agency, or political subdivision thereof) and (e) a " Trading Day " means any day on which the The Nasdaq Stock Market, LLC is open for trading.

Section 1. Vesting; Exercisability; Exercise Price . The Holder's right to exercise this Warrant with respect to the Warrant Shares is subject to vesting and limitations on exercisability as follows:

(a) Except as set forth below in Section 1(b)(ii), this Warrant will become exercisable on the later of (i) June 1, 2018 and (ii) the first date that Healios has satisfied the $2.5 million payment obligations set forth in Section 7.2(a) of the Collaboration Agreement. Accordingly, except as set forth below in Section 1(b)(ii),in no event will this Warrant be exercisable unless such $2.5 million payment has been made.

(b) Subject to Section 1(a) and subject to any adjustment required by Section 3:

(i) this Warrant may be exercised at the Exercise Price per Warrant Share with respect to 6,000,000 Warrant Shares in the aggregate as follows:

(A) during the period from June 1, 2018 through December 31, 2018, Holder may exercise this Warrant with respect to no more than 1,500,000 Warrant Shares at an Exercise Price of $2.50 per Warrant Share;

(B) during the period from September 1, 2018 through March 31, 2019, Holder may exercise this Warrant with respect to no more than 1,500,000 Warrant Shares at an Exercise Price of $2.75 per Warrant Share;

(C) during the period from January 1, 2019 through June 30, 2019, Holder may exercise this Warrant with respect to no more than 1,500,000 Warrant Shares at an Exercise Price of $3.00 per Warrant Share; and

(D) during the period from April 1, 2019 through September 30, 2019, Holder may exercise this Warrant with respect to no more than 1,500,000 Warrant Shares at an Exercise Price of $3.25 per Warrant Share;

(ii) this Warrant may be exercised at an Exercise Price per Warrant Share equal to the greater of $1.76 and the Reference Price with respect to no more than 4,000,000 Warrant Shares during the period beginning on the later of (A) the date that the Collaboration Agreement has been entered into and (B) the date that the $10.0 million held in escrow as contemplated by the LOI is released to the Company, through September 1, 2020; and

(iii) this Warrant may be exercised at the Exercise Price per Warrant Share with respect to 10,000,000 Warrant Shares in the aggregate as follows:

(A) during the period from June 1, 2018 through August 31, 2018, Holder may exercise this Warrant at an Exercise Price per Warrant Share equal to the greater of $2.50 and the Reference Price;

(B) during the period from September 1, 2018 through November 30, 2018, Holder may exercise this Warrant at an Exercise Price per Warrant Share equal to the greater of $2.75 and the Reference Price;

(C) during the period from December 1, 2018 through February 28, 2019, Holder may exercise this Warrant at an Exercise Price per Warrant Share equal to the greater of $3.00 and the Reference Price;

(D) during the period from March 1, 2019 through May 31, 2019, Holder may exercise this Warrant at an Exercise Price per Warrant Share equal to the greater of $3.25 and the Reference Price;

(E) during the period from June 1, 2019 through August 31, 2019, Holder may exercise this Warrant at an Exercise Price per Warrant Share equal to the greater of $3.50 and the Reference Price;

(F) during the period from September 1, 2019 through November 30, 2019, Holder may exercise this Warrant at an Exercise Price per Warrant Share equal to the greater of $3.75 and the Reference Price;

(G) during the period from December 1, 2019 through February 29, 2020, Holder may exercise this Warrant at an Exercise Price per Warrant Share equal to the greater of $4.00 and the Reference Price; and

(H) during the period from March 1, 2020 through September 1, 2020, Holder may exercise this Warrant at an Exercise Price per Warrant Share equal to the greater of $4.25 and the Reference Price.

As used in this Warrant, " Reference Price ", means 110% of the average closing price per share of the Common Stock for the ten (10) Trading Days ending on the trading day immediately preceding (and not including) the Exercise Date, as reported on The Nasdaq Stock Market, LLC (or in the event the Common Stock is no longer listed or traded on any Nasdaq stock exchange, then on the principal stock exchange or market on which the Common Stock is listed or traded, including any of the OTC Markets).

(c) Subject to any adjustment required by Section 3, notwithstanding anything to the contrary in this Warrant, in no event shall this Warrant be exercisable for more than 20,000,000 Warrant Shares.

Section 2. Exercise .

(a) Subject to Section 1, exercise of the purchase rights represented by this Warrant with respect to Warrant Shares may be made, in whole or in part, at any time or times on or after the Issue Date and on or before the Termination Date by delivery to the Company (or such other office or agency of the Company as it may designate by notice in writing to the registered Holder at the address of the Holder appearing on the books of the Company) of a duly completed and executed copy of a notice of exercise substantially in the form attached hereto as Exhibit A (a " Notice of Exercise "). The date on which such delivery shall have taken place (or be deemed to have taken place) shall be referred to herein as the " Exercise Date ". Within seven (7) Trading Days following the date of exercise as aforesaid, the Holder shall deliver the aggregate Exercise Price for the shares specified in the applicable Notice of Exercise by wire transfer or cashier's check drawn on a United States bank; provided , however , in the event that the Holder has not delivered such aggregate Exercise Price within seven (7) Trading Days following the date of such exercise as aforesaid, the Company shall not be obligated to deliver such Warrant Shares hereunder until such payment is made. No ink-original Notice of Exercise shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Notice of Exercise be required. Notwithstanding anything herein to the contrary, subject to Section 5(k), the Holder shall not be required to physically surrender this Warrant to the Company until the Holder has purchased all of the Warrant Shares available hereunder and the Warrant has been exercised in full, in which case, the Holder shall surrender this Warrant to the Company for cancellation within three (3) Business Days after the relevant event shall have occurred. Partial exercises of this Warrant resulting in purchases of a portion of the total number of Warrant Shares available hereunder shall have the effect of lowering the outstanding number of Warrant Shares purchasable hereunder in an amount equal to the applicable number of Warrant Shares purchased. The Holder and the Company shall maintain records showing the number of Warrant Shares purchased and the date of such purchases. The Company shall deliver any objection to any Notice of Exercise within two (2) Business Days of receipt of such notice, including any objection to the Holder's calculation of the Reference Price (as defined in Section 1(b)). **The Holder, by acceptance of this Warrant, acknowledges and agrees that, by reason of the provisions of this paragraph, following the purchase of a portion of the Warrant Shares hereunder, the number of Warrant Shares available for purchase hereunder at any given time may be less than the amount stated on the face hereof.**

(b) Mechanics of Exercise .

(i) Delivery of Warrant Shares Upon Exercise . Upon each exercise of this Warrant, the Company shall promptly, but in no event later than seven (7) Trading Days after delivery of the applicable Notice of Exercise (subject to delivery by the Holder to the Company of the aggregate Exercise Price payable pursuant to Section 1(b)), instruct the transfer agent for the Common Stock (the " Transfer Agent ") to record the issuance of the Warrant Shares purchased hereunder to Holder in book-entry form pursuant to the Transfer Agent's regular procedures. The Warrant Shares shall be deemed to have been issued, and the Holder shall be deemed to have become a holder of record of such shares for all purposes, as of the Exercise Date with payment to the Company of the Exercise Price having been paid.

(ii) Rescission Rights . If the Company fails to issue or cause to have issued the Warrant Shares pursuant to Section 2(b)(i) within seven (7) Trading Days after delivery of the applicable Notice of Exercise, then the Holder will have the right to rescind such exercise. The right of rescission of the Holder under this Section 2(b)(ii) is subject to delivery by the Holder of the aggregate Exercise Price payable pursuant to Section 1(b).

(iii) No Fractional Shares or Scrip . No fractional shares or scrip representing fractional shares shall be issued upon the exercise of this Warrant. As to any fraction of a share which the Holder would otherwise be entitled to purchase upon such exercise, the Company shall, at its election, either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Exercise Price or round up to the next whole share.

(iv) Charges, Taxes and Expenses . Issuance of Warrant Shares shall be made without charge to the Holder for any issue, transfer, stamp or other tax or other incidental expense in respect of the issuance of such Warrant Shares, all of which taxes and expenses shall be paid by the Company, and such Warrant Shares shall be issued in the name of the Holder. Without limiting the generality of the foregoing, the Company shall pay all fees required for same-day processing of any Notice of Exercise.

(v) Closing of Books . The Company will not close its stockholder books or records in any manner which prevents the timely exercise of this Warrant, pursuant to the terms hereof.

(c) Holder's Exercise Limitations . The Company shall not effect any exercise of this Warrant, and a Holder shall not have the right to exercise any portion of this Warrant, pursuant to Section 2 or otherwise, to the extent that after giving effect to such issuance after exercise as set forth on the applicable Notice of Exercise, the Holder (together with the Holder's Affiliates, and any other Persons acting as a group together with the Holder or any of the Holder's Affiliates), would beneficially own shares of Common Stock in excess of the Beneficial Ownership Limitation (as defined below). For purposes of the foregoing sentence, the number of shares of Common Stock beneficially owned by the Holder and its Affiliates shall include the number of shares of Common Stock issuable upon exercise of this Warrant with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which would be issuable upon (i) exercise of the remaining, nonexercised portion of this Warrant beneficially owned by the Holder or any of its Affiliates and (ii) exercise or conversion of the unexercised or nonconverted portion of any other securities of the Company subject to a limitation on conversion or exercise that results in such securities or the Common Stock underlying such securities not being beneficially owned by the Holder or any of its Affiliates. Except as set forth in the preceding sentence, for purposes of this Section 2(c), beneficial ownership shall be calculated in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended (the " Exchange Act "), and the rules and regulations promulgated thereunder, it being acknowledged by the Holder that the Company is not representing to the Holder that such calculation is in compliance with Section 13(d) of the Exchange Act and the Holder is solely responsible for any schedules required to be filed in accordance therewith. To the extent that the limitation contained in this Section 2(d) applies, the determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates) and of which portion of this Warrant is exercisable shall be in the sole discretion of the Holder, and the submission of a Notice of Exercise shall be deemed to be the Holder's determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates) and of which portion of this Warrant is exercisable, in each case subject to the Beneficial Ownership Limitation, and the Company shall have no obligation to verify or confirm the accuracy of such determination and shall have no liability for exercises of the Warrant that are not in compliance with the Beneficial Ownership Limitation. In addition, a determination as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder and the Company shall have no obligation to verify or confirm the accuracy of such determination and shall have no liability for exercises of the Warrant that are not in compliance with the Beneficial Ownership Limitation. For purposes of this Section 2(c), in determining the number of outstanding shares of Common Stock, the Holder may rely on the number of outstanding shares of Common Stock as reflected in (A) the Company's most recent periodic or annual report filed with the Commission, as the case may be, (B) a more recent public announcement by the Company or (C) a more recent written notice by the Company or the Transfer Agent setting forth the number of shares of Common Stock outstanding. Upon the written or oral request of the Holder, the Company shall within two (2) Trading Days confirm orally and in writing to the Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including this Warrant, by the Holder or its Affiliates since the date as of which such number of outstanding shares of Common Stock was reported. As used in this Warrant, " Beneficial Ownership Limitation " means 19.9% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock issuable upon exercise of this Warrant. The provisions of this Section 2(c) shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 2(c) to correct this paragraph (or any portion hereof) which may be defective or inconsistent with the intended Beneficial Ownership Limitation herein contained or to make changes or supplements necessary or desirable to properly give effect to such limitation.

Section 3. Certain Adjustments .

(a) Stock Dividends, Subdivision, Combinations and Consolidations . If the Company, at any time while this Warrant is outstanding (in whole or in part): (i) pays a stock dividend or otherwise makes a distribution or distributions on shares of its Common Stock (or other class of Capital Stock of the Company then issuable upon exercise of this Warrant) or any other equity or equity equivalent securities payable in shares of Common Stock (or such other class of Capital Stock) (which, for avoidance of doubt, shall not include any shares of Common Stock (or such other class of Capital Stock) issued by the Company upon exercise of this Warrant), (ii) subdivides outstanding shares of Common Stock (or other class of Capital Stock of the Company then issuable upon exercise of this Warrant) into a larger number of shares or (iii) combines or consolidates (including, without limitation, by reverse stock split) outstanding shares of Common Stock (or other class of Capital Stock of the Company then issuable upon exercise of this Warrant) into a smaller number of shares, then in each case the Exercise Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock outstanding immediately before such event and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event; with respect to Section 1(b), the number of Warrant Shares issuable at certain specified Exercise Prices shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock outstanding immediately after such event and of which the denominator shall be the number of shares of Common Stock outstanding immediately before such event; and the total number of shares issuable upon exercise of this Warrant shall be proportionately adjusted such that the aggregate Exercise Price of this Warrant shall remain unchanged. Any adjustment made pursuant to this Section 3(a) shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision, combination or consolidation. If the Company, at any time while this Warrant is outstanding (in whole or in part) distributes rights on shares of its Common Stock (or other class of Capital Stock of the Company then issuable upon exercise of this Warrant) in connection with a shareholder rights plan, no adjustment shall be made pursuant to this Section 3 and any such rights shall accompany the Warrant Shares issued pursuant to this Warrant if such shareholder rights plan remains in effect.

(b) Reclassifications, Reorganizations, Consolidations and Mergers . In the event of (i) any capital reorganization of the Company, (ii) any reclassification or recapitalization of the stock of the Company (other than (x) a change in par value or from par value to no par value or from no par value to par value or (y) as a result of a stock dividend, subdivision, combination or consolidation of shares as to which Section 3(a) shall apply) or (iii) any consolidation or merger of the Company with or into another Person (where the Company is not the surviving corporation or where there is a change in or distribution with respect to the Common Stock or any other class of Capital Stock then issuable upon exercise of this Warrant), this Warrant shall, after such reorganization, reclassification, recapitalization, consolidation or merger, be exercisable for the kind and number of shares of stock or other securities or property (" Alternate Consideration ") of the Company or of the successor corporation resulting from such consolidation or surviving such merger, if any, to which the holder of the number of Warrant Shares underlying this Warrant (at the time of such reorganization, reclassification, recapitalization, consolidation or merger, and subject to the limitations set forth in Section 1 and Section 2) would have been entitled upon such reorganization, reclassification, recapitalization, consolidation or merger. In such event, the aggregate Exercise Price otherwise payable for the shares of Common Stock (or such other class of Capital Stock) issuable upon exercise of this Warrant shall be allocated among the Alternative Consideration receivable as a result of such reorganization, reclassification, recapitalization, consolidation, or merger in proportion to the respective fair market values of such Alternate Consideration. If and to the extent that the holders of Common Stock (or such other class of Capital Stock) have the right to elect the kind or amount of consideration receivable upon consummation of such reorganization, reclassification, recapitalization, consolidation or merger, then the consideration that the Holder shall be entitled to receive upon exercise shall be specified by the Holder, which specification shall be made by the Holder by the later of (A) ten (10) Business Days after the Holder is provided with a final version of all material information concerning such choice as is provided to the holders of Common Stock (or such other class of Capital Stock), and (B) the last time at which the holders of Common Stock (or such other class of Capital Stock) are permitted to make their specifications known to the Company; provided , however , that if the Holder fails to make any specification within such time period, the Holder's choice shall be deemed to be whatever choice is made by a plurality of all holders of Common Stock (or such other class of Capital Stock) that are not affiliated with the Company (or, in the case of a consolidation or merger, any other party thereto) and affirmatively make an election (or of all such holders if none of them makes an election). From and after any such reorganization, reclassification, recapitalization, consolidation or merger, all references to "Warrant Shares" herein shall be deemed to refer to the Alternate Consideration to which the Holder is entitled pursuant to this Section 3(b). The provisions of this clause shall similarly apply to successive reorganizations, reclassifications, recapitalizations, consolidations, or mergers.

(c) Other Distributions . During such time as this Warrant is outstanding, if the Company shall declare or make any dividend or other distribution of its assets (or rights to acquire its assets) to holders of shares of Common Stock, by way of return of capital or otherwise (including, without limitation, any distribution of cash, stock or other securities, property or options by way of a dividend, spin off, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction) other than any dividend or distribution referred to in Sections 3(a) or (b) (a " Distribution "), at any time after the issuance of this Warrant, then, in each such case, the Holder shall be entitled to participate in such Distribution to the same extent that the Holder would have participated therein if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations on exercise hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date of which a record is taken for such Distribution, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the participation in such Distribution (provided , however , to the extent that the Holder's right to participate in any such Distribution would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Distribution to such extent (or in the beneficial ownership of any shares of Common Stock as a result of such Distribution to such extent) and the portion of such Distribution shall be held in abeyance for the benefit of the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation). To the extent that this Warrant has not been partially or completed exercised at the time of such Distribution, such portion of the Distribution shall be held in abeyance for the benefit of the Holder until the Holder has exercised this Warrant.

(d) Calculations . All calculations under this Section 3 shall be made to the nearest cent or the nearest 1/100th of a share, as the case may be. For purposes of this Section 3, the number of shares of Common Stock (or such other Company security as is then issuable upon exercise of this Warrant) deemed to be issued and outstanding as of a given date shall be the sum of the number of shares of Common Stock (or such other Company security) (excluding treasury shares, if any) issued and outstanding on such date.

(e) Notice to Holder .

(i) Adjustment to Terms of Warrant . Whenever any of the terms of this Warrant are adjusted pursuant to any provision of this Section 3 or any other applicable provision hereof, the Company shall promptly send to the Holder a notice signed by a duly authorized officer of the Company and setting forth (x) the Exercise Price, number of Warrant Shares and, if applicable, the kind and amount of Alternate Consideration purchasable hereunder after such adjustment and (y) the facts requiring such adjustment in reasonable detail.

(ii) Notice to Allow Exercise by Holder . If, during the period in which this Warrant is outstanding, (A) the Company shall declare a dividend (or any other distribution in whatever form) on the Common Stock, (B) the Company shall declare a special nonrecurring cash dividend on or a redemption of the Common Stock, (C) the Company shall authorize the granting to all holders of the Common Stock rights or warrants to subscribe for or purchase any shares of capital stock of any class or of any rights, (D) the approval of any stockholders of the Company shall be required in connection with any reclassification of the Common Stock, any consolidation or merger to which the Company is a party, any sale or transfer of all or substantially all of the assets of the Company, or any compulsory share exchange whereby the Common Stock is converted into other securities, cash or property, or (E) the Company shall authorize the voluntary or involuntary dissolution, liquidation or winding up of the affairs of the Company, then, in each case, the Company shall cause to be mailed to the Holder at its last address as it shall appear upon the Warrant Register of the Company, at least 20 calendar days prior to the applicable record or effective date hereinafter specified, a notice stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution, redemption, rights or warrants, or if a record is not to be taken, the date as of which the holders of the Common Stock of record to be entitled to such dividend, distributions, redemption, rights or warrants are to be determined or (y) the date on which such reclassification, consolidation, merger, sale, transfer or share exchange is expected to become effective or close, and the date as of which it is expected that holders of the Common Stock of record shall be entitled to exchange their shares of the Common Stock for securities, cash or other property deliverable upon such reclassification, consolidation, merger, sale, transfer or share exchange; provided that the failure to mail such notice or any defect therein or in the mailing thereof shall not affect the validity of the corporate action required to be specified in such notice. To the extent that any notice provided hereunder constitutes, or contains, material, non-public information regarding the Company or any of the Subsidiaries, the Company shall simultaneously file such notice with the Securities and Exchange Commission (the " SEC ") pursuant to a Current Report on Form 8-K. The Holder shall remain entitled to exercise this Warrant during the period commencing on the date of such notice to the effective date of the event triggering such notice except as may otherwise be expressly set forth herein.

Section 4. Transfer of Warrant and Warrant Shares .

(a) Restrictive Legend . The Warrant Shares (unless and until registered under the Securities Act of 1933, as amended (the " Securities Act "), or transferred pursuant to Rule 144 promulgated under the Securities Act, or any successor rule or regulation hereafter adopted by the SEC, as such rule may be amended from time to time (" Rule 144 ")) will be stamped or imprinted with a legend in substantially the following form:

> THE SECURITIES REPRESENTED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND MAY NOT UNDER ANY CIRCUMSTANCES BE SOLD, TRANSFERRED, OR OTHERWISE DISPOSED OF WITHOUT AN EFFECTIVE REGISTRATION STATEMENT FOR SUCH SECURITIES UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND ANY OTHER APPLICABLE SECURITIES LAWS OR AN OPINION OF COUNSEL SATISFACTORY TO THE COMPANY THAT REGISTRATION IS NOT REQUIRED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR APPLICABLE SECURITIES LAWS.

(b) Transferability . Healios and any subsequent Holder shall not sell, assign, transfer, pledge or dispose of any portion of this Warrant, by operation of law or otherwise, without the prior written consent of the Company, other than the transfer of this Warrant in its entirety to any Affiliate of Healios, which may be conducted without consent provided that an assignment form substantially in the form attached hereto as Exhibit B is duly completed and executed by any such subsequent Holder. Upon any permitted transfer of this Warrant in full, the Holder shall be required to physically surrender this Warrant to the Company within three (3) Trading Days of the date the Holder delivers an assignment form to the Company assigning this Warrant full. The Warrant, if properly assigned in accordance herewith, may be exercised by a new holder for the purchase of Warrant Shares without having a new Warrant issued. The Company shall not assign or transfer any part of its obligations under this Warrant without the prior written consent of Healios, except in a consolidation or merger described in Section 3(b).

(c) Investor Rights Agreement; Warrant Register .

(i) All Warrant Shares issuable upon exercise of this Warrant will be subject to the rights and obligations under the Investor Rights Agreement, including, without limitation, such Warrant Shares being Registrable Securities (as defined in the Investor Rights Agreement).

(ii) The Company shall register this Warrant upon records to be maintained by the Company for that purpose (the " Warrant Register ") in the name of the record Holder hereof from time to time. Absent manifest error or actual notice to the contrary, the Company may deem and treat the Holder of this Warrant so registered as the absolute owner hereof for the purpose of any exercise hereof or any distribution to the Holder, and for all other purposes.

Section 5. Miscellaneous .

(a) No Rights as Stockholder Until Exercise . This Warrant does not entitle the Holder to any voting rights, dividends or other rights as a stockholder of the Company prior to the exercise hereof as set forth in Section 2(b).

(b) Loss, Theft, Destruction or Mutilation of Warrant . The Company covenants that upon delivery by the Holder to the Company of (a) notice of the loss, theft, destruction or mutilation of this Warrant and (b) in the case of loss, theft or destruction, an indemnity agreement in a form and amount reasonably satisfactory to the Company or, in the case of mutilation, surrender of the mutilated Warrant, the Company will make and deliver a new Warrant of like tenor dated as of the Issue Date.

(c) Saturdays, Sundays, Holidays, etc . If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall not be a Business Day, then, such action may be taken or such right may be exercised on the next succeeding Business Day.

(d) Authorized Shares . The Company covenants that, during the period this Warrant is exercisable (in whole or in part), it will reserve from its authorized and unissued Common Stock a sufficient number of shares to provide for the issuance of the Warrant Shares upon the exercise of any purchase rights under this Warrant. The Company further covenants that its issuance of this Warrant shall constitute full authority to its officers who are charged with the duty of executing stock certificates to execute and issue the necessary Warrant Shares upon the exercise of the purchase rights under this Warrant. The Company will take all such reasonable action as may be necessary to assure that such Warrant Shares may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of any national securities exchange upon which the Common Stock. The Company covenants that all Warrant Shares which may be issued upon the exercise of the purchase rights represented by this Warrant will, upon exercise of the purchase rights represented by this Warrant and full payment for such Warrant Shares in accordance herewith, be duly authorized, validly issued, fully paid and non-assessable, not subject to any preemptive rights and free from all taxes, liens and charges created by the Company in respect of the issue thereof (other than pursuant to the Investor Rights Agreement and taxes in respect of any transfer occurring contemporaneously with such issue).

(e) Governing Law . This Warrant shall be governed by and construed in accordance with the laws of the State of New York without giving effect to the principles of conflict of laws thereof. EACH PARTY HEREBY IRREVOCABLY WAIVES ANY RIGHT IT MAY HAVE, AND AGREES NOT TO REQUEST, A JURY TRIAL FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION HEREWITH OR ARISING OUT OF THIS WARRANT OR ANY TRANSACTION CONTEMPLATED HEREBY.

(f) Nonwaiver . No course of dealing or any delay or failure to exercise any right hereunder on the part of Holder shall operate as a waiver of such right or otherwise prejudice the Holder's rights, powers or remedies.

(g) Notices . Any notice, request or other document required or permitted to be given or delivered to the Holder by the Company shall be delivered in accordance with the notice provisions of the Investor Rights Agreement.

(h) Limitation of Liability . No provision hereof, in the absence of any affirmative action by the Holder to exercise this Warrant to purchase Warrant Shares, and no enumeration herein of the rights or privileges of the Holder, shall give rise to any liability of the Holder for the purchase price of any Common Stock or as a stockholder of the Company, whether such liability is asserted by the Company or by creditors of the Company.

(i) Successors and Assigns . Subject to applicable securities laws, this Warrant and the rights and obligations evidenced hereby shall inure to the benefit of and be binding upon the successors and permitted assigns of the Company and the permitted assigns of Holder. The provisions of this Warrant are intended to be for the benefit of any Holder from time to time of this Warrant and shall be enforceable by the Holder or holder of Warrant Shares.

(j) Amendment . This Warrant may be modified or amended or the provisions hereof waived with the written consent of the Company and the Holder.

(k) Termination . This Warrant, and all rights, obligations and liabilities hereunder, shall be automatically terminated upon the earliest of (i) (A) the termination of the Collaboration Agreement by the Company (or any of its subsidiaries) pursuant to Section 8.2 thereof or (B) the termination of any other license agreement and/or collaboration agreement between the Company (or any of its subsidiaries) and Healios in effect as of the Issue Date or entered into pursuant to the terms of the Collaboration Agreement, in each case in accordance with the terms of such agreement and as a result of an uncured breach by Healios that has triggered such termination; provided , that this Warrant shall not terminate pursuant to Section 5(k)(i)(B) unless the Company provides Healios with written notice of the applicable breach, and Healios does not either cure such breach within the cure period provided for in the applicable agreement or reach an agreement with the Company (both parties negotiating in good faith), within 30 days of receipt of such notice, to adequately compensate the Company for such breach, (ii) July 1, 2018, if Healios has not satisfied the $2.5 million payment obligations set forth in Section 7.2(a) of the Collaboration Agreement by such date and (iii) the date immediately following the Termination Date (subject to any Notice of Exercise pending at the Termination Date, in which case such date shall be the date immediately after the date that the Company delivers the Warrant Shares that were subject to such pending Notice of Exercise). Upon termination of this Warrant, the Holder shall surrender this Warrant to the Company for cancellation within three (3) Business Days after the relevant termination event shall have occurred.

(l) Extension . In the event that, in connection with the clinical trial being conducted in Japan by or on behalf of Healios and referred to by Healios and the Company as the "TREASURE" study (referenced in Section 6.2 of the form of Collaboration Agreement attached to the LOI), the Company fails to provide adequate MultiStem product supply to Healios to dose 220 patients by December 31, 2018, then the Termination Date will automatically be extended to the date that is the 24-month anniversary of the date on which such adequate supply is delivered, and the end dates contained in Section 1(b)(ii) and Section 1(b)(iii)(H) will be automatically extended to the new Termination Date.

(m) Severability . Wherever possible, each provision of this Warrant shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Warrant shall be prohibited by or invalid under applicable law, such provision shall be ineffective to the extent of such prohibition or invalidity, without invalidating the remainder of such provisions or the remaining provisions of this Warrant.

(n) Headings . The headings used in this Warrant are for the convenience of reference only and shall not, for any purpose, be deemed a part of this Warrant.

[Signatures Contained on the Following Page]

IN WITNESS WHEREOF, the Company has caused this Warrant to be executed by its officer thereunto duly authorized as of the Issue Date.

ATHERSYS, INC.

By: _____
Name:
Title:

[Signature Page to Warrant]

EXHIBIT A

NOTICE OF EXERCISE

TO: ATHERSYS, INC.

Reference is made to that certain Common Stock Purchase Warrant (the "Warrant") issued by Athersys, Inc. (the "Company") on _____ __, 2018 Capitalized terms used but not otherwise defined herein shall the respective meanings give thereto in the Warrant.

(1) The undersigned Holder of the Warrant hereby elects to exercise the Warrant for _____ Warrant Shares pursuant to Section 1(b)__ of the Warrant, subject to delivery of the aggregate Exercise Price for the Warrant Shares as to which the Warrant is so exercised and the undersigned Holder hereby instructs the Company to issue the applicable number of Warrant Shares in the name of the undersigned Holder.

(2) The undersigned Holder of the Warrant represents and warrants to the Company that, as of the date hereof, Holder's calculation of the Reference Price is $____ per Warrant Share.

(3) The undersigned Holder hereby represents and warrants to the Company that, as of the date hereof:

a) Experience; Accredited Investor Status . The Holder (i) is an accredited investor as that term is defined in Rule 501 of Regulation D promulgated under the Securities Act, (ii) is capable of evaluating the merits and risks of its investment in the Company, (iii) has the capacity to protect its own interests, and (iii) has the financial ability to bear the economic risk of its investment in the Company.

b) Company Information . The Holder has been provided access to all information regarding the business and financial condition of the Company, its expected plans for future business activities, material contracts, intellectual property, and the merits and risks of its purchase of the Warrants Shares, which it has requested or otherwise needs to evaluate an investment in the Warrant Shares. It has had an opportunity to discuss the Company's business, management and financial affairs with directors, officers and management of the Company and has had the opportunity to review the Company's operations and facilities. It has also had the opportunity to ask questions of, and receive answers from, the Company and its management regarding the terms and conditions of this investment and all such questions have been answered to its satisfaction.

c) Investment . The Holder has not been formed solely for the purpose of making this investment and is acquiring the Warrant Shares for investment for its own account, not as a nominee or agent, and not with the view to, or for resale in connection with, any distribution of any part thereof. It understands that the Warrant Shares have not been registered under the Securities Act or applicable state and other securities laws and are being issued by reason of a specific exemption from the registration provisions of the Securities Act and applicable state and other securities laws, the availability of which depends upon, among other things, the bona fide nature of the investment intent and the accuracy of its representations as expressed herein.

d) Transfer Restrictions . The Holder acknowledges and understands that (i) transfers of the Warrant Shares are subject to transfer restrictions under the federal securities laws and the Investor Rights Agreement and (ii) it may have to bear the economic risk of this investment for an indefinite period of time unless the Warrant Shares are subsequently registered under the Securities Act and applicable state and other securities laws or unless an exemption from such registration is available.

Name of Registered Owner: _____

Signature of Authorized Signatory of Registered Owner : _____

Name of Authorized Signatory: _____

Title of Authorized Signatory: _____

Date: _____

EXHIBIT B

ASSIGNMENT FORM

1. *(To assign the foregoing Warrant, execute this form and supply required information. Do not use this form to purchase shares.)*

2. FOR VALUE RECEIVED, the foregoing Warrant and all rights evidenced thereby are hereby assigned to the undersigned assignee. Such assignee hereby acknowledges, agrees and confirms by its signature below that, from and after the date hereof, it will be bound by the terms and conditions of the foregoing Warrant.

3. Such assignee further acknowledge, agrees and confirms by its signature below that, from and after the date hereof, it shall be joined to that certain Investor Rights Agreement, dated March [●], 2018, by and between Athersys, Inc. and Healios, K.K. (the " Investor Rights Agreement "), as the Investor, and shall be subject to all of the applicable rights, restrictions, conditions, duties and obligations set forth therein. Any notices required or permitted to be delivered to such assignee pursuant to the Investor Rights Agreement shall be delivered to the address set forth below.

Assignee Name: _____
(Please Print)

Assignee Address: _____
(Please Print)

Dated: _____, _____

Holder's Signature: _____

Holder's Address: _____

Exhibit 10.2

INVESTOR RIGHTS AGREEMENT

THIS INVESTOR RIGHTS AGREEMENT (this " Agreement ") is entered into as of March 14, 2018, between Athersys, Inc., a Delaware corporation (the " Company "), and HEALIOS K.K. (the " Investor ").

RECITALS

A. On March 13, 2018, the Company and the Investor entered into a Securities Purchase Agreement (the " Purchase Agreement "), which provides for the issuance and sale to the Investor of (i) 12,000,000 shares (the " Shares ") of Common Stock and (ii) a warrant (the " Warrant ") to purchase up to 20,000,000 shares of Common Stock (the " Warrant Shares ").

B. As an inducement to entering into the Purchase Agreement, the Investor and the Company hereby agree that this Agreement will govern certain rights of the Investor and the Company related to the Shares and the Warrant Shares.

C. The parties agree as follows:

1. Definitions . Unless otherwise provided, all capitalized terms have the meaning given to them in this Section 1. For purposes of this Agreement:

(a) " **Affiliate** " means, with respect to any specified Person, any other Person who, directly or indirectly, controls, is controlled by or is under common control with such Person. For purposes of this definition, the term "control" (including the correlative meanings of the terms "controlled by" and "under common control with"), as used with respect to any Person, means the possession, directly or indirectly, of the power to direct or cause the direction of the management policies of such Person, whether through the ownership of voting securities or by contract or otherwise.

(b) " **beneficially own** " has the meaning given to such term under Rule 13d-3 of the Exchange Act; provided that , for purposes of this Agreement, the number of shares of Common Stock beneficially owned by the Investor and the Investor Affiliates at any given time shall exclude the number of shares of Common Stock which would be issuable upon (i) exercise of the then-nonexercised portion of the Warrant beneficially owned by the Investor or any of the Investor Affiliates and (ii) exercise or conversion of the unexercised or nonconverted portion of any other securities of the Company subject to a limitation on conversion or exercise analogous to the limitation contained herein beneficially owned by the Investor or any of the Investor Affiliates.

(c) " **Beneficial Ownership Limitation** " has the meaning given to such term in the Warrant. The provisions of Section 2(c) of the Warrant shall apply to this Agreement in connection with making any calculation of, or other determination with respect to, the Beneficial Ownership Limitation.

(d) " **Blackout Period** " has the meaning given to such term under Section 4.1(b) of this Agreement.

(e) " **Business Day** " means any day except any Saturday, any Sunday, any day which is a federal legal holiday in the United States or Japan, or any day on which banking institutions in the State of New York or Tokyo, Japan are authorized or required by law or other governmental action to close.

(a) " **Change of Control** " means any of the following events: (i) any Person or group of Persons is or becomes the beneficial owner, directly or indirectly, of a majority of the total voting power represented by all then-outstanding Common Stock, (ii) the Company consolidates with or merges into another Person, or any Person consolidates or merges into the Company, other than (A) a merger or consolidation which would result in the Securities (as defined in Section 3.1) outstanding immediately prior to such merger or consolidation continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity or any parent thereof) a majority of the combined voting power of the Securities or such surviving entity or any parent thereof outstanding immediately after such merger or consolidation or (B) a merger or consolidation effected to implement a recapitalization of the Company (or similar transaction) in which no Person becomes the beneficial owner, directly or indirectly, of a majority of the total voting power of all then-outstanding Securities, (iii) the Company conveys, transfers or leases all or substantially all of its assets to any Person other than a wholly owned Affiliate of the Company, or (iv) individuals who constitute Continuing Directors cease for any reason to constitute at least a majority of the Company Board.

(b) " **Closing Date** " means the date of the closing of the sale of the Shares and Warrant under the Purchase Agreement.

(c) " **Collaboration Agreement** " means the Collaboration Expansion Agreement contemplated by the Letter of Intent for Collaboration Expansion, which Letter of Intent is dated as of the date hereof, between the Company and the Investor.

(d) " **Common Stock** " means the shares of common stock, par value $0.001 per share, of the Company or, in the event of any capital reorganization of the Company, any reclassification or recapitalization of the stock of the Company, or any consolidation or merger of the Company with or into another Person where the Company is not the surviving corporation, the kind of equity securities of the Company or of the successor corporation that holders of Common Stock prior to such reorganization, reclassification, recapitalization, consolidation or merger hold or otherwise become entitled to following such reorganization, reclassification, recapitalization, consolidation or merger.

(e) " **Common Stock Equivalents** " means any securities of the Company that would entitle the holder thereof to acquire Common Stock, including, without limitation, any debt, preferred stock, right, option, warrant or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock.

(f) " **Company Board** " means the board of directors of the Company.

(g) " **Continuing Directors** " means the directors of the Company on the date hereof, and each other director, if in each case, such other director's nomination for election to the Company Board was recommended by, or whose appointment to the Company Board was approved by, at least a majority of the other Continuing Directors.

(h) " **Damages** " means any joint or several loss, claim, damage, liability, cost (including, without limitation, reasonable cost of preparation and investigation and reasonable attorney's fees), and judgment, fine, penalty, charge, or settlement cost in respect of any Proceeding, and expense to which a party hereto may become subject under the Securities Act, the Exchange Act, or other federal or state law, insofar as such loss, claim, damage, liability, cost, judgment, fine, penalty, charge, settlement cost or expense (or any action in respect thereof) arises out of or is based upon (i) any untrue statement or alleged untrue statement of a material fact contained in any registration statement of the Company filed pursuant to the terms of this Agreement, including any preliminary prospectus or prospectus contained therein or any amendments or supplements thereto, or (ii) an omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein (with respect to any preliminary prospectus or prospectus or any amendments or supplements thereto, in the light of the circumstances under which they were made) not misleading.

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

(j) " **Form S-3** " means such form under the Securities Act as in effect on the date hereof or any registration form under the Securities Act subsequently adopted by the SEC that permits incorporation of substantial information by reference to other documents filed by the Company with the SEC.

(k) " **group** " means a "group" within the meaning of Section 13(d)(3) of the Exchange Act.

(l) " **Governmental Entity** " means any domestic or foreign federal, state, municipal, or other governmental department, commission, board, bureau, agency or instrumentality, or any court or tribunal.

(m) " **Investor Affiliate** " means any Affiliate of the Investor.

(n) " **Investor Director** " means any director nominee selected by the Investor to the Company Board.

(o) " **Person** " means and includes an individual, a partnership, a corporation, a limited liability company, an association, a joint stock company, a trust, a joint venture, an unincorporated organization, or a Governmental Entity (or any department, agency, or political subdivision thereof).

(p) " **Proceeding** " means an action, claim, suit, investigation, inquiry or proceeding (including, without limitation, an investigation or partial proceeding, such as a deposition) by any judicial, regulatory or self-regulatory Person, whether commenced or threatened.

(q) " **Registrable Securities** " means (i) the Shares issued by the Company to the Investor pursuant to the Purchase Agreement, (ii) the Warrant Shares issued by the Company to the Investor pursuant to the Warrant, and (iii) any shares of Common Stock issued to the Investor pursuant to Section 9.2. As to any particular Registrable Securities, such securities shall cease to be Registrable Securities when (A) such Registrable Securities have been sold or otherwise disposed of pursuant to an effective registration statement, or (B) such Registrable Securities have been sold under SEC Rule 144.

(r) " **SEC** " means the United States Securities and Exchange Commission.

(s) " **SEC Rule 144** " means Rule 144 promulgated by the SEC under the Securities Act (or any successor provision thereto).

(t) " **SEC Rule 415** " means Rule 415 promulgated by the SEC under the Securities Act, as such rule may be amended from time to time, or any other similar or successor rule or regulation of the SEC that may at any time permit the Investor to sell securities of the Company to the public on a registered basis.

(u) " **Securities Act** " means the Securities Act of 1933, as amended.

(v) " **Selling Expenses** " means all underwriting discounts, selling commissions, and stock transfer taxes applicable to the sale of Registrable Securities and the fees and disbursements of counsel to the Investor in connection with the sale of Registrable Securities.

(w) " **Termination Date** " has the meaning given to such term in the Warrant.

2. Voting . Commencing upon the issuance of the Shares to the Investor pursuant to the Purchase Agreement and continuing thereafter until the end of the Standstill Period (as defined below), the Investor will, and will cause each Investor Affiliate to, (i) cause all Common Stock beneficially owned by the Investor and the Investor Affiliates that they are entitled to vote at any meeting of stockholders to be present, in person or by proxy, at all meetings of the Company's stockholders so that such Common Stock will be counted as present for purposes of determining the presence of a quorum of stockholders at such meeting, and (ii) cause all Common Stock beneficially owned by such Investor and Investor Affiliates that they are entitled to vote at any meeting of stockholders to be voted in favor of the recommendations of the Company Board with respect to the election of each member of any slate of directors recommended by the Company Board, subject to the Company Board's recommendation of all Investor nominees designated by the Investor pursuant to Section 8.3(b).

3. Standstill .

3.1 As of the date of this Agreement, other than the Shares issued pursuant to the Purchase Agreement and the Warrant Shares issuable pursuant to the Warrant, the Investor represents that neither the Investor nor any Investor Affiliate beneficially owns any Common Stock or other securities entitled to be voted generally in the election of the Company Board or any direct or indirect options or other rights to acquire, or securities or other instruments that are convertible into, any such securities (collectively, " **Securities** ").

3.2 The Investor hereby agrees that, for a period commencing on the date hereof and ending on September 1, 2020 (the " **Standstill Period** "), it will not, and it will cause each Investor Affiliate and other Persons acting on its behalf or on behalf of any Investor Affiliate not to, unless invited in writing by the Company Board to take such action, propose or publicly announce or otherwise publicly disclose an intent to propose, or enter into or agree to enter into, singly or with any other Person (other than the Company or a Company Affiliate) (x) any form of business combination, acquisition, Change of Control transaction or other transaction relating to the Company or any of its Affiliates (other than a partnership or comparable strategic transaction involving the out-license of one or more of the Company's products) or (y) any form of restructuring, recapitalization or similar transaction with respect to the Company or any of its Affiliates.

3.3 During the Standstill Period, the Investor will not, and will cause its Affiliates and other Persons acting on its behalf not to, directly or indirectly, singly or with any other Person, unless invited in writing by the Company Board to take such action:

(a) acquire beneficial ownership of any Securities; provided , however , that Investor and any Investor Affiliate may acquire (i) Common Stock or Common Stock Equivalents pursuant to Section 9, (ii) Common Stock upon exercise of the Warrant or (iii) Common Stock or Common Stock Equivalents directly from the Company at a purchase price per share to be agreed upon by the Company; provided further , neither the Investor nor any Investor Affiliate shall be permitted to acquire any shares of Common Stock pursuant to an exercise of the Warrant or otherwise to the extent that after giving effect to such acquisition, the Investor (together with the Investor Affiliates, and any other Persons acting as a group together with the Investor or any of the Investor Affiliates), would beneficially own shares of Common Stock in excess of the Beneficial Ownership Limitation;

(b) make a tender, exchange or other offer to acquire any Securities;

(c) with respect to the Company or its Securities, make, engage or in any way participate in, directly or indirectly, any "solicitation" (as such term is used in the proxy rules of the SEC) of proxies or consents (whether or not relating to the election or removal of directors), or seek to advise or influence any third Person with respect to the voting of any Securities;

(d) call or seek to have called any meeting of the stockholders of the Company, propose or nominate for election to the Company Board any Person or cause any of its Securities to be voted in favor of any Person whose nomination has not been approved by the Company Board;

(e) initiate, propose or otherwise "solicit" (as such term is used in the proxy rules of the SEC) stockholders of the Company for the approval of stockholder proposals made to the Company, whether made pursuant to Rule 14a-8 or Rule 14a-4 under the Exchange Act or otherwise, or cause or encourage or attempt to cause or encourage any other Person to initiate any such stockholder proposal, regardless of its purpose;

(f) deposit any Securities in a voting trust or subject any Securities to any arrangement or agreement with respect to the voting of such Securities;

(g) (i) act in concert with other Persons to take any action in clauses (a) through (e) above or to form a group with others with respect to any Securities or (ii) enter into discussions, negotiations, arrangements or agreements with others relating to the actions referred to in clauses (a) through (e) above;

(h) take any action which would reasonably be expected to require the Company to make a public announcement in respect of any matter contemplated by Section 3.2 or this Section 3.3; or

(i) request or propose in writing to the Company Board, any member(s) thereof or any officer of the Company that the Company amend, waive or consider the amendment or waiver of, any provisions set forth in Section 3.2 or this Section 3.3.

Notwithstanding anything in Section 3.2 or Section 3.3 to the contrary, the restrictions set forth in Section 3.2 and Section 3.3 will not apply, solely to the extent necessary to facilitate a public or private offer by the Investor to enter into a Change of Control transaction, upon the earliest to occur of (x) the public announcement by the Company of its entry into a definitive agreement providing for a Change of Control, (y) as long as the Investor has not violated Section 3.2 or Section 3.3 with respect to such third Person, the public announcement by a third Person of any tender, exchange or other offer or proposal the consummation of which would result in a Change of Control (an " **Acquisition Proposal** ") and as to which the Company has not publicly made a recommendation against such Acquisition Proposal or (z) as long as the Investor has not violated Section 3.2 or Section 3.3 with respect to such third Person, a third Person publicly discloses that it has beneficial ownership of, or has entered into an agreement that would allow such third Person to acquire shares of Common Stock, in each case in excess of 10.0% of the Common Stock, other than a third Person that is a passive investor that has filed a Schedule 13G with respect to its beneficial ownership and has not filed a Schedule 13D with respect to such beneficial ownership; provided , however , that if (i) any of the transactions referred to in (a) or (b) terminates and the Company has not made a public announcement of its intent to solicit or engage in a transaction (or has announced its decision to discontinue pursuing such a transaction) the consummation of which would result in a Change of Control, or (ii) such third Person referred to in (c) publicly discloses that it no longer beneficially owns more than 10.0% of the Common Stock or that it terminates the agreement referred to in (c) above, then the restrictions contained in Section 3.2 and Section 3.3 will again be applicable. Furthermore, notwithstanding anything in Section 3.2 or Section 3.3 to the contrary, the Investor will not be prohibited from (1) making a confidential proposal to the Company Board that, on its own, is reasonably expected to not require the Company to make a public announcement regarding such proposal and (2) entering into discussions with potential capital sources and financial, legal, accounting and other professional advisors that are subject to confidentiality obligations solely for the purpose of preparing, and to facilitate, a confidential proposal to the Company Board as described in (1) above.

4. Registration Rights . The Company covenants and agrees as follows:

4.1 Registration Rights.

(a) At any time after the six-month anniversary of the Closing Date, upon the written request of the Investor, the Company shall file a registration statement on Form S-3, or, in the event Form S-3 is unavailable to the Company, Form S-1 or other then-available form (the " **Registration Statement** "), in each case as promptly as practicable, providing for the resale of all of the then-outstanding Registrable Securities in compliance with SEC Rule 415, including the prospectus forming part of the Registration Statement. The Registration Statement shall cover the resale on a continuous basis pursuant to SEC Rule 415 of all Registrable Securities. The Investor and its counsel shall have a reasonable opportunity to review and comment upon the Registration Statement or any amendment thereto and any related prospectus prior to its filing with the SEC. The Registration Statement (including any amendments or supplements thereto and prospectuses contained therein) shall not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein, or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading. The Registration Statement shall register only the Registrable Securities and no other securities of the Company.

(b) Notwithstanding the foregoing obligations, the Company may, upon written notice to the Investor, for a reasonable period of time, not to exceed 45 days in the case of clauses (A) and (B) below, or 30 days in the case of clause (C) below (each, a " **Blackout Period** "), delay the filing of the Registration Statement or a request for acceleration of the effective date, or suspend the effectiveness of the Registration Statement, in the event that (A) the Company is engaged in any activity or transaction or preparations or negotiations for any activity or transaction that the Company desires to keep confidential for business reasons, if the Company determines in good faith that the public disclosure requirements imposed on the Company under the Securities Act in connection with the Registration Statement would require at that time disclosure of such activity, transaction, preparations or negotiations and such disclosure could result in material harm to the Company or its business transactions or activities, (B) the Company does not yet have appropriate financial statements of any acquired or to be acquired entities necessary for filing, or (C) any other event occurs that makes any statement of a material fact made in the Registration Statement, including any document incorporated by reference therein, untrue or that requires the making of any additions or changes in the Registration Statement in order to make the statements therein not misleading; provided , however , that in the case of a Blackout Period pursuant to clause (A) above, the Blackout Period shall terminate upon the earlier of such 45-day period or the completion, resolution or public announcement of the relevant transaction or event. If the Company suspends the effectiveness of the Registration Statement pursuant to this section, the Company shall, as promptly as reasonably practicable following the termination of the circumstance which entitled the Company to do so, take such actions as may be necessary to reinstate the effectiveness of the Registration Statement and give written notice to the Investor authorizing the Investor to resume offerings and sales pursuant to the Registration Statement. If as a result thereof the prospectus included in the Registration Statement has been amended or supplemented to comply with the requirements of the Securities Act, the Company shall enclose such revised prospectus with the notice to Investor given pursuant to this section. The Company shall be entitled to exercise its rights under this Section 4.1(b) not more than once in any six (6) month period; provided , however , that the aggregate number of days of all Blackout Periods hereunder shall not exceed seventy-five (75) days in any twelve (12) month period. After the expiration of any Blackout Period and without further request from the Investor, the Company shall effect the filing (or if required amendment or supplement) of the Registration Statement, or the filing of other documents, as necessary to allow the Investor to resell the Registrable Securities as set forth herein.

4.2 Obligations of the Company . The Company shall:

(a) use its commercially reasonable efforts to ensure that registration on Form S-3 remains available to the Company for any period during which the Investor or the Investor's Affiliates holds any Registrable Securities;

(b) use its commercially reasonable efforts to cause the Registration Statement to become effective under the Securities Act within ninety (90) days after it is filed with the SEC;

(c) use its commercially reasonable efforts to keep the Registration Statement continuously effective until the earlier of (i) two (2) years following the first day of effectiveness of the Registration Statement (subject to extension pursuant to Section 4.3(b) or Section 4.3(c)) and (ii) such time that all Registrable Securities covered by the Registration Statement are no longer Registrable Securities (the " **Registration Period** ");

(d) furnish to the Investor such number of copies of a prospectus, including a preliminary prospectus, as required by the Securities Act, and such other documents as the Investor may reasonably request in order to facilitate the disposition of Registrable Securities;

(e) promptly following its actual knowledge thereof, notify the Investor:

(i) of the time when the Registration Statement has been declared effective or when a supplement or amendment to any prospectus forming a part of such Registration Statement has been filed (other than any deemed amendment of the Registration Statement by means of a document filed by the Company under the Exchange Act);

(ii) after the Registration Statement becomes effective, of any request by the SEC that the Company amend or supplement the Registration Statement or prospectus forming a part of the Registration Statement or for additional information; and

(iii) of the issuance by the SEC or any other Governmental Entity of any stop order suspending the effectiveness of the Registration Statement or the initiation of any Proceeding for such purpose; provided that the Company shall use its commercially reasonable efforts to prevent the issuance of any stop order or other suspension of effectiveness of the Registration Statement, or the suspension of the qualification of any Registrable Securities for sale in any jurisdiction and, if such an order or suspension is issued, to obtain the withdrawal of such order or suspension at the earliest practical time.

(f) use its commercially reasonable efforts to (i) register and qualify the Registrable Securities covered by the Registration Statement under the securities or "blue sky" laws of such jurisdictions within the United States as shall be reasonably requested by the Investor; (ii) prepare and file in those jurisdictions, such amendments (including post-effective amendments) and supplements to such registrations and qualifications as may be necessary to maintain the effectiveness thereof during the Registration Period, (iii) take such other actions as may be necessary to maintain such registrations and qualifications in effect at all times during the Registration Period, and (iv) take all other actions reasonably necessary or advisable to qualify the Registrable Securities for sale in such jurisdictions; provided that the Company shall not be required in connection therewith or as a condition thereto to qualify to do business or otherwise become subject to taxation or service of process in suits in any such jurisdictions where it is not already so qualified or subject. The Company shall promptly notify the Investor of the receipt by the Company of any notification with respect to the suspension of the registration or qualification of any of the Registrable Securities for sale under the securities or "blue sky" laws of any jurisdiction in the United States or its receipt of actual notice of the initiation or threat of any Proceeding for such purpose.

(g) in the event of any underwritten public offering of Registrable Securities, enter into and perform its obligations under an underwriting agreement, in usual and customary form, with the underwriter(s) of such offering;

(h) (i) use its commercially reasonable efforts to cause all the Registrable Securities covered by the Registration Statement to be listed on each national securities exchange or trading system on which the Common Stock is then listed and (ii) pay all associated fees and expenses with such listing;

(i) provide a transfer agent and registrar for all Registrable Securities and provide a CUSIP number for all such Registrable Securities, in each case not later than the effective date of the Registration Statement;

(j) promptly make available for inspection by the Investor or its representatives and agents, any managing underwriter(s) participating in any underwritten offering pursuant to the Registration Statement, and any attorney or accountant or other agent retained by any such underwriter or selected by the Investor, all financial and other records, pertinent corporate documents and properties of the Company during normal business hours at the offices where such information is typically kept, and cause the Company's officers, directors, employees and independent accountants to supply all information reasonably requested by the Investor or any such underwriter, attorney, accountant, agent or other representative, in each case, as reasonably necessary or advisable to verify the accuracy of the information in the Registration Statement and to conduct appropriate due diligence in connection therewith as is customary for similar due diligence examinations, provided that , any information that is designated in writing by the Company, in good faith, as confidential at the time of delivery of such information shall be kept confidential by the Investor or any such underwriter, attorney, accountant, agent or other representative;

(k) promptly (i) incorporate in a prospectus supplement or post-effective amendment to the Registration Statement such information as the Investor reasonably believes is required by the Securities Act to be included therein relating to the sale and distribution of Registrable Securities, including, without limitation, information with respect to the number of Registrable Securities being sold, the purchase price being paid therefor and any other terms of the offering of the Registrable Securities; and (ii) make all required filings of such prospectus supplement or post-effective amendment promptly after being notified of the matters to be incorporated in such prospectus supplement or post-effective amendment;

(l) use its commercially reasonable efforts to cause the Registrable Securities covered by the Registration Statement to be registered with or approved by such other governmental agencies or authorities in the United States as may be necessary to consummate the disposition of such Registrable Securities; and

(m) take all other reasonable actions as necessary and reasonably requested by the Investor to expedite and facilitate disposition by the Investor of Registrable Securities pursuant to the Registration Statement.

4.3 Obligations of the Investor. The Investor shall:

(a) furnish to the Company such information regarding the Investor and its plan and method of distribution of such Registrable Securities as the Company may, on advice of counsel, reasonably determine is required by applicable law, including, without limitation, information required by Item 507 of Regulation S-K promulgated under the Securities Act. The Company shall notify the Investor in writing of any such information that the Company reasonably requires from the Investor, and the Investor shall furnish such required information to the Company as promptly as practical after being notified by the Company, provided that , any information that is designated in writing by the Investor, in good faith, as confidential at the time of delivery of such information shall be kept confidential by the Company and shall not be disclosed except to the Company's counsel, for purposes of determining whether applicable law requires such information to be disclosed in the Registration Statement;

(b) upon receipt of any notice from the Company of the occurrence of any event of the type described in Sections 4.2(e)(ii) or 4.2(e)(iii), discontinue disposition of Registrable Securities covered by the Registration Statement and suspend use of the Registration Statement or prospectus forming a part of the Registration Statement until the Company has provided an amendment or supplement to the Registration Statement or prospectus or the Company has advised that the use of the Registration Statement or prospectus may be resumed, provided that , in the event that the Company gives any such notice, the period of time for which the Registration Statement must remain effective as set forth in Section 4.2(c) will be extended by the number of days during the time period from and including the date of the giving of such notice to and including the date when the Company has either provided an amendment to the Registration Statement or prospectus or advised that the use of the Registration Statement or prospectus may be resumed;

(c) upon receipt of any notice from the Company of a Blackout Period, the Investor will discontinue disposition of Registrable Securities covered by the Registration Statement and suspend use of the Registration Statement or prospectus forming a part of the Registration Statement until the Company has provided an amendment or supplement to the Registration Statement or prospectus or the Company has advised that the use of the Registration Statement or prospectus may be resumed, provided that , in the event that the Company gives any such notice, the period of time for which the Registration Statement must remain effective as set forth in Section 4.2(c) will be extended by the number of days during the time period from and including the date of the giving of such notice to and including the date when the Company has either provided an amendment to the Registration Statement or prospectus or advised that the use of the Registration Statement or prospectus may be resumed; and

(d) in the event of any underwritten public offering of Registrable Securities, the Investor shall enter into and perform its obligations under an underwriting agreement, in usual and customary form, with the underwriter(s) of such offering.

4.4 Expenses of Registration. All expenses (other than Selling Expenses) incurred in connection with registrations, filings, or qualifications pursuant to this Section 4, including, without limitation, all registration, filing, listing and qualification fees, printers' and accounting fees, and fees and disbursements of counsel for the Company, shall be borne and paid by the Company; provided, however, that the Company shall not be required to pay for any expenses of any registration process begun pursuant to Section 4.1 if the registration request is subsequently withdrawn at the request of the Investor; provided further that if, at the time of such withdrawal, the Investor shall have learned of any fact or circumstance that has arisen since the time of the Investor's request or was not known to the Investor at the time of the Investor's request, and in each case is reasonably likely to have a material adverse effect on the financial condition or business of the Company and its subsidiaries considered as one enterprise, and has withdrawn the request with reasonable promptness after learning of such information, then the Company shall be required to pay all of such expenses. All Selling Expenses relating to Registrable Securities registered pursuant to this Section 4 shall be borne and paid by the Investor.

4.5 Indemnification. If any Registrable Securities are included in the Registration Statement under this Section 4:

(a) To the extent permitted by law, the Company will indemnify and hold harmless the Investor and its officers, directors, employees, agents, managers, partners and shareholders, and each Person who controls such member (within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act), from and against any Damages, and the Company will reimburse the Investor, controlling Person or other aforementioned Person for any legal or other expenses reasonably incurred thereby in connection with investigating or defending any claim or Proceeding from which Damages may result; provided, however, that the indemnity agreement contained in this Section 4.5(a) shall not apply to amounts paid in settlement of any such claim or Proceeding if such settlement is effected without the consent of the Company, which consent shall not be unreasonably withheld, nor shall the Company be liable for any Damages to the extent that they arise out of or are based upon actions or omissions made in reliance upon and in conformity with written information furnished by or on behalf of the Investor, controlling Person or other aforementioned Person expressly for use in connection with the Registration Statement.

(b) To the extent permitted by law, the Investor will indemnify and hold harmless the Company, its directors, its officers who have signed the Registration Statement and each Person who controls the Company (within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act) against any Damages, and the Investor will reimburse the Company, controlling Person or other aforementioned Person for any legal or other expenses reasonably incurred thereby in connection with investigating or defending any claim or Proceeding from which Damages may result, in each case only to the extent that such Damages arise out of or are based upon actions or omissions made in reliance upon and in conformity with written information furnished by or on behalf of the Investor expressly for use in connection with the Registration Statement; provided , however , that the indemnity agreement contained in this Section 4.5(b) shall not apply to amounts paid in settlement of any such claim or Proceeding if such settlement is effected without the consent of the Investor, which consent shall not be unreasonably withheld; and provided further that in no event shall the aggregate amounts payable by the Investor by way of indemnity or contribution under Section 4.5(b) exceed the proceeds from the offering received by the Investor (net of any underwriting discounts and commissions paid by the Investor), except in the case of fraud or willful misconduct by the Investor.

(c) Promptly after receipt by an indemnified party under this Section 4.5 of notice of the commencement of any action (including any governmental action) for which a party may be entitled to indemnification hereunder, such indemnified party will, if a claim in respect thereof is to be made against any indemnifying party under this Section 4.5, give the indemnifying party notice of the commencement thereof. In case any such action is brought against any indemnified party and such indemnified party seeks or intends to seek indemnity from an indemnifying party, the indemnifying party shall be entitled to participate in, and, to the extent that it shall elect, jointly with all other indemnifying parties similarly notified, by written notice delivered to the indemnified party promptly after receiving the aforesaid notice from such indemnified party, to assume the defense thereof with counsel selected by the indemnifying party that is reasonably satisfactory to such indemnified party; provided , however , that an indemnified party (together with all other indemnified parties that may be represented without conflict by one counsel) shall have the right to retain one separate counsel, with the fees and expenses to be paid by the indemnifying party, if representation of such indemnified party by the counsel retained by the indemnifying party would be inappropriate due to actual or potential differing interests between such indemnified party and any other party represented by such counsel in such action. Upon receipt of notice from the indemnifying party to such indemnified party of such indemnifying party's election so to assume the defense of such action and approval by the indemnified party of counsel, the indemnifying party will not be liable to such indemnified party under this Section 4.5 for any legal or other expenses subsequently incurred by such indemnified party in connection with the defense thereof unless the indemnified party shall have employed separate counsel in accordance with the preceding sentence (it being understood, however, that the indemnifying party shall not be liable for the fees and expenses of more than one separate firm of attorneys (together with local counsel), representing all of the indemnified parties who are parties to such action). The failure to give notice to the indemnifying party will not relieve it of any liability that it may have to any indemnified party otherwise than under this Section 4.5, except to the extent that the indemnifying party would be materially prejudiced as a proximate result of such failure to notify. Without the prior written consent of the indemnified party, no indemnifying party may effect any settlement of any pending or threatened action unless such settlement includes an unconditional release of such indemnified party from all liability arising out of such proceeding.

4.6 Reports Under Exchange Act by the Company . With a view to making available to the Investor the benefits of SEC Rule 144 and any other rule or regulation of the SEC that may at any time permit the Investor to sell securities of the Company to the public without registration or pursuant to a registration on Form S-3 or Form S-1, the Company shall:

(a) make and keep available adequate current public information, as those terms are understood and defined in SEC Rule 144;

(b) use commercially reasonable efforts to file with the SEC in a timely manner all reports and other documents required of the Company under the Securities Act and the Exchange Act;

(c) furnish upon request to the Investor (i) to the extent accurate, a written statement by the Company that it has complied with the reporting requirements of SEC Rule 144, the Securities Act, and the Exchange Act, or that it qualifies as a registrant whose securities may be resold pursuant to Form S-3; (ii) a copy of the most recent annual or quarterly report of the Company and such other reports and documents filed by the Company with the SEC; and (iii) such other information as may be reasonably requested in availing the Investor of any rule or regulation of the SEC that permits the selling of any such securities without registration; and

(d) take such additional action as is requested by the Investor to enable the Investor to sell the Registrable Securities pursuant to Rule 144, including, without limitation, delivering all such legal opinions, consents, certificates, resolutions and instructions to the Company's transfer agent as may be reasonably requested from time to time by the Investor and otherwise fully cooperate with the Investor and the Investor's broker to effect such sale of securities pursuant to Rule 144.

4.7 Restrictive Legends . Upon the request of the Investor or an Investor Affiliate, in connection with any sale of Registrable Securities pursuant to the Registration Statement or pursuant to SEC Rule 144, the Company will cooperate with the Investor or such Investor Affiliate to facilitate the timely preparation and delivery of the Registrable Securities to be delivered to a transferee free of all restrictive legends. The Company will additionally cooperate with the Investor or an Investor Affiliate in connection with any financing arrangement permitted under Section 7 that the Investor or such Investor Affiliate plans to enter into to allow for the pledge of Registrable Securities as collateral for such financing arrangements (including perfection of such pledges).

5. Lock-up Agreements . If requested by the managing underwriter or underwriters in an underwritten offering of Common Stock or other securities by the Company, and provided that all executive officers and directors of the Company are bound by similar agreements, the Investor will, and will cause each Investor Affiliate to, not effect any public sale or distribution of Common Stock (except as part of such underwritten offering, if applicable), including a sale pursuant to SEC Rule 144 or any swap or other economic arrangement that transfers to another Person any of the economic consequences of owning Common Stock, during the period commencing on the date of the request (which will be no earlier than 14 days prior to the expected "pricing" of such offering) and continuing for not more than 90 days after the date of the prospectus relating to such offering (or final prospectus supplement if such offering is made pursuant to a shelf registration statement), pursuant to which such offering will be made. In the event that a managing underwriter or underwriters requests that the Investor and any Investor Affiliate not make public sales or distributions pursuant to this Section 5, the Investor will, and will cause each Investor Affiliate to, enter into a written agreement memorializing such obligations, which agreement will otherwise be on customary terms, provided that all executive officers and directors of the Company have entered into similar agreements.

6. Reports Under Exchange Act by the Investor and Investor Affiliates . The Investor acknowledges and agrees that the Investor and each Investor Affiliate will be solely responsible for any required filings under Sections 13 and 16 of the Exchange Act in connection with any acquisition or disposition of Common Stock. The Investor will provide the Company with a copy of any such filing contemporaneously with such filing being submitted to the SEC.

7. Resale Limitations . The Investor hereby agrees, and will cause each Investor Affiliate, not to, directly or indirectly, in one or more transactions, sell, assign, transfer or otherwise encumber, whether by pledge or otherwise (other than pledges of Common Stock pursuant to a credit agreement or other financing arrangement), through swap or hedging transactions or otherwise (each, a " **Transfer** "), without the written consent of the Company, (i) any Common Stock during the period commencing on the date hereof and ending on the six-month anniversary of the date hereof, (ii) 50.0% or more, in the aggregate, of the number of shares of Common Stock held by the Investor on the date hereof during the period commencing on the six-month anniversary of the date hereof and ending on the first anniversary of the date hereof, (iii) any Warrant Shares during the period commencing on the date hereof and ending on the Termination Date, (iv) to any Person or group of Persons who owns or, after giving effect to such Transfer, would own greater than 10.0% of the then-outstanding Common Stock of the Company or (v) to any Person who is a competitor of the Company as reasonably determined by the Company Board; provided , however , that, subject to compliance with Section 10(a), the Investor and the Investor Affiliates may effect transfers of Common Stock amongst themselves without restriction. The Investor hereby agrees, and will cause each Investor Affiliate, not to, directly or indirectly, in one or more transactions, loan any Common Stock. Notwithstanding anything to the contrary in the foregoing, this Section 7 will not prohibit the sale of any Common Stock in connection with a Change of Control.

8. Company Board .

8.1 Subject to Section 8.4, so long as (a) the Collaboration Agreement has been entered into and remains in effect and (b) the Investor and the Investor Affiliates collectively beneficially own 15.0% or more of the outstanding Common Stock, the Investor shall have the right to nominate two Investor Directors pursuant to this Section 8, at every annual meeting of the stockholders of the Company in which directors are generally elected, including, without limitation, at every adjournment or postponement thereof.

8.2 Subject to Section 8.4, so long as (a) the Collaboration Agreement has been entered into and remains in effect and (b) the Investor and the Investor Affiliates collectively beneficially own less than 15.0% of the outstanding Common Stock and 5.0% or more of the outstanding Common Stock, the Investor shall have the right to nominate one Investor Director pursuant to this Section 8, at every annual meeting of the stockholders of the Company in which directors are generally elected, including, without limitation, at every adjournment or postponement thereof. With respect to the Company's 2018 annual meeting of stockholders (the " **2018 Annual Meeting** "), the Company Board shall, to the extent necessary, increase the size of the Company Board, and nominate one Investor Director for election at the 2018 Annual Meeting, which Investor Director initially will be Dr. Tadahisa Kagimoto; provided , however , that if Company has filed its proxy statement for the 2018 Annual Meeting prior to the date that the Collaboration Agreement has been entered into, the Company will not be obligated to nominate the Investor Director at the 2018 Annual Meeting, but instead will, to the extent necessary, increase the size of the Company Board, and appoint one Investor Director, Dr. Tadahisa Kagimoto, to the Company Board promptly after the 2018 Annual Meeting.

8.3 The following procedures shall be followed with respect to the nomination of Investor Directors pursuant to Section 8.1 or Section 8.2:

(a) For purposes of whether the Investor has a right to nominate an Investor Director pursuant to Section 8.1 or Section 8.2, the Investor and the Investor Affiliates' beneficial ownership of the outstanding Common Stock will be measured as of the January 31st immediately preceding such annual meeting.

(b) No later than February 10th of each year, the Investor shall provide the Company Board with the Investor's nominee(s) for the Investor Director(s), along with any other information reasonably requested by the Company Board. With respect to the Investor nominee(s), the Investor shall use its best efforts to ensure that any such nominee satisfies any criteria and guidelines for director nominees that may be in effect from time to time, as well qualifies as "independent" under the rules of the NASDAQ Stock Market LLC (or the principal other U.S. national or regional securities exchange on which the Common Stock (or such other security) is then listed) and the Exchange Act, including the rules and regulations promulgated by the SEC thereunder (the " **Independence Requirements** "), other than an inability to qualify as "independent" solely as a result of such nominee's relationship with the Investor or any Investor Affiliate. The Company shall be entitled to rely on any written direction from the Investor regarding the Investor's nominee(s) on behalf of the Investor without further action by the Company.

(c) Within 20 days of receiving the Investor's nominee(s) for the Investor Director(s) in accordance with Section 8.3(b), the Company Board or any authorized committee thereof shall have made a good faith and reasonable determination as to the suitability of the Investor's nominee(s) for Investor Director(s) and shall notify the Investor of its determination in writing. Notwithstanding the foregoing, Dr. Tadahisa Kagimoto is deemed to be an acceptable nominee.

(d) If the Company Board or any authorized committee thereof approves of the Investor's nominee(s) for Investor Director(s), the Company Board shall recommend that the stockholders vote to elect such Investor's nominee(s) at the next annual meeting of stockholders at which directors will be generally elected.

(e) If the Company Board or any authorized committee thereof raises a reasonable objection to one or both of the Investor's nominees, as the case may be, for the Investor Director(s), then the Investor and the Company Board shall use commercially reasonable efforts to agree on the nominee(s) for such Investor Director(s), and if the Investor and the Company Board cannot agree on the nominee(s) on or before the twentieth day prior to the proposed filing of the Company's annual proxy statement, then such nominee for Investor Director(s) shall not be nominated by the Company at such annual meeting.

(f) If one or both of the Investor nominees is not nominated (as described in the foregoing clause (e)), then as soon as practicable after the annual meeting, the Investor and the Company Board shall use commercially reasonable efforts to agree on the nominee(s) for such Investor Director(s), which nominee(s) shall be appointed as director(s) by the Company Board promptly after such agreement is reached.

8.4 Notwithstanding anything to the contrary in this Agreement and without any further action by the Company, the Investor's right to nominate any Person to the Company Board shall automatically terminate, and be of no further force and effect, on the date that the Investor and the Investor Affiliates collectively beneficially own less than 5.0% of the outstanding Common Stock, other than solely as a result of issuances of additional shares of Common Stock by the Company during the 90-day period ending on January 31st of any given year. The Investor shall promptly, but in any case within five (5) days, provide notice to the Company upon Investor and the Investor Affiliates collectively ceasing to beneficially own 5.0% or more of the outstanding Common Stock as a result of Investor sales of Common Stock.

8.5 During the Standstill Period, so long as the Investor has a right to nominate an Investor Director pursuant to Section 8.1 or Section 8.2, the Company will use reasonable best efforts to ensure that the size of the Company Board is not increased beyond eight members (excluding any Investor Directors) without the written consent of the Investor.

8.6 Any Investor Director, upon appointment or election to the Company Board, will be governed by the same protections and obligations as all other directors of the Company, including, without limitation, protections and obligations regarding customary liability insurance for directors and officers, confidentiality, conflicts of interests, fiduciary duties, trading and disclosure policies, director evaluation process, director code of ethics, director share ownership guidelines, stock trading and pre-approval policies, and other governance matters.

9. Right of Consultation and Participation . During the Standstill Period, so long as the Collaboration Agreement has been entered into and remains in effect:

9.1 Prior to the Company (a) undertaking an underwritten public offering of Common Stock and/or Common Stock Equivalents (an " Underwritten Offering "), (b) undertaking a private offering exempt from the registration requirements of the Securities Act of Common Stock and/or Common Stock Equivalents for cash other than (i) pursuant to its existing equity facility or any replacement equity facility (which is covered in clause (c)) or (ii) pursuant to compensation arrangements for its employees, directors or consultants (a " Private Placement ") or (c) issuing Common Stock pursuant to its existing equity facility or any replacement equity facility (an " Equity Draw "), the Company will provide prior notice to, and consult with, the Investor regarding such Underwritten Offering, Private Placement or Equity Draw, as applicable.

9.2 If the Company proceeds with any Underwritten Offering, the Investor may participate in such Underwritten Offering by placing an order to purchase and, if such order is filled by the underwriters, purchase an amount of Common Stock and/or Common Stock Equivalents so that the Investor, together with the Investor Affiliates, is able to maintain at least up to the same percentage beneficial ownership of the outstanding Common Stock immediately prior to giving effect to the Underwritten Offering, up to 19.9% of the Common Stock and/or Common Stock Equivalents being offered (such amount of the Common Stock and/or Common Stock Equivalents, the " Underwritten Pro Rata Share "). If the Company proceeds with any Private Placement, the Investor will be entitled to participate in such Private Placement and purchase an amount of Common Stock and/or Common Stock Equivalents so that the Investor, together with the Investor Affiliates, is able to maintain at least up to the same percentage beneficial ownership of the outstanding Common Stock immediately prior to giving effect to the Private Placement, up to 19.9% of the Common Stock and/or Common Stock Equivalents being offered (such amount of the Common Stock and/or Common Stock Equivalents, the " Private Placement Pro Rata Share "). If the Company Proceeds with any Equity Draw, it shall provide written notice to the Investor of number of shares of Common Stock sold and the sale price of such shares promptly after the completion of such Equity Draw, and the Investor may provide notice to the Company, within ten (10) days of its receipt from such notice from the Company, of its intent to purchase up to an amount of Common Stock so that the Investor, together with the Investor Affiliates, is able to maintain at least up to the same percentage beneficial ownership of the outstanding Common Stock immediately prior to giving effect to the Equity Draw, up to 19.9% of the Common Stock sold in the Equity Draw (such amount of the Common Stock, the " Equity Draw Pro Rata Share ") from the Company in a private offering exempt from the registration requirements of the Securities Act (a " Private Placement Notice "). If the Investor provides a Private Placement Notice to the Company, the Investor and the Company agree that they will negotiate in good faith to enter into a binding securities purchase agreement within 30 days of the delivery of such Private Placement Notice pursuant to which the Company will agree to sell to the Investor Common Stock in an amount equal to the Equity Draw Pro Rata Share at a price per share to be agreed upon by the Company and Investor and substantially similar to the price per share in the Equity Draw so long as such sale would not require the approval of the Company's stockholders under the rules of the NASDAQ Stock Market LLC (or the principal other U.S. national or regional securities exchange on which the Common Stock is then listed). To the extent that the purchase of any of the Underwritten Pro Rata Share, Private Placement Pro Rata Share or Equity Draw Pro Rata Share by the Investor or any Investor Affiliate would require the approval of the Company's stockholders under the rules of the NASDAQ Stock Market LLC (or the principal other U.S. national or regional securities exchange on which the Common Stock is then listed), then such Pro Rata Share shall be reduced to an amount that would not require such stockholder approval. Notwithstanding anything to the contrary in the foregoing, neither the Investor nor any Investor Affiliate shall be permitted to acquire any shares of Common Stock and/or Common Stock Equivalents pursuant to this Section 9 to the extent that after giving effect to such acquisition, the Investor (together with the Investor Affiliates, and any other Persons acting as a group together with the Investor or any of the Investor Affiliates), would beneficially own shares of Common Stock in excess of the Beneficial Ownership Limitation.

9.3 If the Investor reasonably believes that, giving effect to an exercise of the Warrant in full (for the avoidance of doubt, disregarding any portion of the Warrant that has expired as of such date), the Investor, together with the Investor Affiliates, will not beneficially own 19.9% of the Common Stock, the Company agrees to negotiate in good faith with the Investor regarding, at the Investor's option, a potential sale of additional warrants exercisable for shares of Common Stock to the Investor or a potential sale of additional shares of Common Stock to the Investor.

10. Miscellaneous .

(a) Successors and Assigns . Any assignment of this Agreement or any of the rights or obligations under this Agreement (whether by operation of law or otherwise) by either the Company, on the one hand, or the Investor, on the other hand, will be void, invalid and of no effect without the prior written consent of the Investor (in the case of the Company) or the Company (in the case of the Investor); provided , however , that the rights under this Agreement may be assigned (but only with all related obligations) by the Investor to one or more Investor Affiliates so long as the assignee(s) agree in writing to be bound by the terms and conditions of this Agreement; provided , further , that any such assignment will not release, or be construed to release, the Investor from its duties and obligations under this Agreement. The terms and conditions of this Agreement inure to the benefit of and are binding upon the respective successors and permitted assignees of the parties. Nothing in this Agreement, express or implied, is intended to confer upon any party other than the parties hereto or their respective successors and permitted assignees any rights, remedies, obligations or liabilities under or by reason of this Agreement, except as expressly provided herein.

(b) Termination . This Agreement will automatically terminate with respect to the Investor at such time as the Investor, together with the Investor Affiliates, or any assignee of the Investor pursuant to Section 10(a) of this Agreement, together with such assignee's Affiliates, no longer beneficially owns at least 3.0% of the Common Stock. Upon such termination, neither the Company nor the Investor will have any further obligations or liabilities to each other hereunder; provided that such termination will not relieve any party from liability for any breach of this Agreement prior to such termination.

(c) Governing Law . This Agreement and any controversy arising out of or relating to this Agreement will be governed by and construed in accordance with the laws of the State of New York as to matters within the scope thereof, and as to all other matters will be governed by and construed in accordance with the internal laws of New York, without regard to conflict of laws principles that would result in the application of any law other than the law of the State of New York.

(d) Jurisdiction; Venue . Each of the Company and the Investor hereby submits and consents irrevocably to the exclusive jurisdiction of the courts of the State of New York and the United States District Court for the Southern District of New York for the interpretation and enforcement of the provisions of this Agreement. Each of the Company and the Investor also agrees that the jurisdiction over the person of such parties and the subject matter of such dispute shall be effected by the mailing of process or other papers in connection with any such action in the manner provided for in Section 10(h) or in such other manner as may be lawful, and that service in such manner shall constitute valid and sufficient service of process.

(e) Jury Trial . **EACH OF THE COMPANY AND THE INVESTOR HEREBY IRREVOCABLY WAIVES ANY RIGHT IT MAY HAVE, AND AGREES NOT TO REQUEST, A JURY TRIAL FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION HEREWITH OR ARISING OUT OF THIS AGREEMENT OR ANY TRANSACTION CONTEMPLATED HEREBY.**

(f) Counterparts . This Agreement may be executed in two or more counterparts, each of which will be deemed an original, but all of which together will constitute one and the same instrument. This Agreement may also be executed and delivered by portable document format (pdf) and in two or more counterparts, each of which will be deemed an original, but all of which together will constitute one and the same instrument.

(g) Interpretation . The titles and subtitles used in this Agreement are for convenience only and are not to be considered in construing or interpreting this Agreement. The use of the words "include" or "including" in this Agreement will be deemed to be followed by the words "without limitation." The use of the words "or," "either" or "any" will not be exclusive. References to statutes will include all regulations promulgated thereunder, and references to statutes will be construed to include all statutory and regulatory provisions consolidating, amending or replacing the statute or regulation as of the date hereof. The parties have participated jointly in the negotiation and drafting of this Agreement.

(h) Notices . All notices, requests, demands, and other communications hereunder will be in writing (which will include communications by e-mail) and will be delivered (i) in person or by courier or overnight service or (ii) by e-mail with a copy delivered as provided in clause (i), as follows:

If to the Company:

Athersys, Inc.
3201 Carnegie Avenue
Cleveland, Ohio 44115
Attention: Laura Campbell
Telephone: (216) 431-9900
E-mail: lcampbell@athersys.com

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

Jones Day
North Point
901 Lakeside Avenue
Cleveland, Ohio 44114
Attention: Michael J. Solecki
Telephone: (216) 586-7103
E-mail: mjsolecki@jonesday.com

If to the Investor:

HEALIOS K.K.
Attention: General Manager of Finance and Accounting Division
World Trade Center Bldg. 15F
2-4-1 Hamamatsucho,
Minato-ku, Tokyo, 135-6115 Japan
Facsimile: +81-3-3434-7231

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

Morrison & Foerster LLP
Shin-Marunouchi Building, 29th Floor
1-5-1 Marunouchi, Chiyoda-ku, Tokyo
100-6529, Japan
Telephone: +81-3-3214-6522
Facsimile: +81-3-3214-6512
Email: RLaxer@mofo.com
Attention: Randy S. Laxer

and to:

Morrison & Foerster LLP
250 West 55th Street
New York, NY 10019-9601, U.S.A.
Telephone: +1 (212) 468-8000
Facsimile: +1 (212) 468-7900
Email: JBell@mofo.com
Attention: Jeffrey Bell

All such notices and other communications shall be deemed to have been given and received (1) in the case of personal delivery, on the date of such delivery, (2) in the case of delivery by email or facsimile, (A) when delivered prior to 5:00 p.m. (New York time) on a Business Day or (B) if delivered after 5:00 p.m. on a Business Day or on a day that is not a Business Day, on the first Business Day following the date of delivery, (3) in the case of delivery by nationally recognized overnight courier, on the second Business Day following the date when sent, and (4) in the case of mailing, on the fifth Business Day following such mailing.

(i) Amendments and Waivers . Any term of this Agreement may be amended and the observance of any term of this Agreement may be waived (either generally or in a particular instance, and either retroactively or prospectively) only with the written consent of each party. No waivers of or exceptions to any term, condition or provision of this Agreement, in any one or more instances, will be deemed to be or construed as a further or continuing waiver of any such term, condition or provision.

(j) Severability . In case any one or more of the provisions contained in this Agreement is for any reason held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability will not affect any other provision of this Agreement, and such invalid, illegal or unenforceable provision will be reformed and construed so that it will be valid, legal and enforceable to the maximum extent permitted by law.

(k) Entire Agreement . This Agreement constitutes the full and entire understanding and agreement among the parties with respect to the subject matter hereof, and any other written or oral agreement relating to the subject matter hereof existing between the parties is expressly superseded hereby.

[Signatures follow.]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

ATHERSYS, INC.

By: /s/ Gil Van Bokkelen
Name: Gil Van Bokkelen
Title: Chairman & CEO

HEALIOS K.K.

By: /s/ Hardy TS Kagimoto
Name: Hardy TS Kagimoto
Title: President & CEO

EXHIBIT 31.1

CERTIFICATIONS

I, Gil Van Bokkelen, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Athersys, Inc.;

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

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

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

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

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

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

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

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

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

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

May 10, 2018

/s/ Gil Van Bokkelen

Gil Van Bokkelen
Chief Executive Officer and Chairman of the Board of Directors

EXHIBIT 31.2

CERTIFICATIONS

I, Laura K. Campbell, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Athersys, Inc.;

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

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

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

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

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

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

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

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

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

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

May 10, 2018

/s/ Laura K. Campbell

Laura K. Campbell
Senior Vice President of Finance

EXHIBIT 32.1

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

In connection with the Quarterly Report of Athersys, Inc. (the "Company") on Form 10-Q for the quarter ended March 31, 2018, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned officers of the Company certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to such officer's knowledge:

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

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company as of the dates and for the periods expressed in the Report.

Date: May 10, 2018

/s/ Gil Van Bokkelen
Name: Gil Van Bokkelen
Title: Chairman and Chief Executive Officer

/s/ Laura K. Campbell
Name: Laura K. Campbell
Title: Senior Vice President of Finance

The foregoing certification is being furnished solely pursuant to 18 U.S.C. Section 1350 and is not being filed as part of the Report or as a separate disclosure document.