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

FORM 10-K/A

(Mark One)

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

For the fiscal year ended December 31, 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 001-35932

ARCTURUS THERAPEUTICS LTD.

(Exact name of Registrant as specified in its Charter)

State of Israel	**46-1981974**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
10628 Science Center Drive, Suite 250	
San Diego, California	**92121**
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code: (858) 900-2660

Securities registered pursuant to Section 12(b) of the Act: Ordinary Shares, Par Value NIS 0.07 Per Share; Ordinary Shares traded on the NASDAQ stock market

Securities registered pursuant to Section 12(g) of the Act: **None**

Indicate by check mark if the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. YES ☐ NO ☒

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. YES ☐ NO ☒

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

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405) is not contained herein, and will not be contained, to the best of Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒

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

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

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

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

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the Registrant, based on the closing price of the Ordinary Shares on The NASDAQ Stock Market on March 1, 2019 was $41.3 million.

The number of Registrant's Ordinary Shares outstanding as of March 1, 2019 was 10,761,523.

EXPLANATORY NOTE

This Amendment No. 1 on Form 10-K/A (this "Amendment") to the Annual Report on Form 10-K (the "Initial Form 10-K") of Arcturus Therapeutics Ltd. ("we," "us," "Arcturus," or the "Company") for the year ended December 31, 2018, originally filed with the Securities and Exchange Commission (the "SEC"), on March 18, 2019 (SEC File No. 001-35932), is being filed solely for the purpose of attaching as Exhibit 10.14 a redacted copy of the Amended and Restated Joint Venture, Research Collaboration and License Agreement, dated July 14, 2018, by and between Providence Therapeutics Inc. and Arcturus Therapeutics, Inc., a wholly owned subsidiary of the Company.

This Amendment does not reflect events occurring after the filing of the Initial Form 10-K or modify or update the disclosures contained in the Initial Form 10-K in any way other than as discussed above. In connection with the filing of this Amendment and pursuant to the rules of the SEC, we are including with this Amendment certain certifications by our principal executive officer and principal financial officer.

PART IV

Item 15. Exhibits, Financial Statement Schedules.

(a) (1) No financial statements or schedules are filed with this Amendment.

(2) No financial statements or schedules are filed with this Amendment.

(3) The Exhibit Index from the Initial Form 10-K is incorporated herein by reference, except that Exhibit 10.14 from the Initial Form 10-K is hereby replaced with Exhibit 10.14 of this Amendment.

(b) The following exhibits are filed as part of this Amendment:

10.14 Amended and Restated Joint Venture, Research Collaboration and License Agreement, dated as of July 14, 2018 by and between Arcturus Therapeutics, Inc. and Providence Therapeutics, Inc.

31.1 Certification of Chief Executive Officer pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934, as amended, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

31.2 Certification of Chief Financial Officer pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934, as amended, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

(c) Not applicable.

Exhibit Index

Exhibit Number	Description
10.14*	Amended and Restated Joint Venture, Research Collaboration and License Agreement, dated as of July 14, 2018 by and between Arcturus Therapeutics, Inc. and Providence Therapeutics, Inc.
31.1*	Certification by Principal Executive Officer pursuant to Rule 13a-14(a) or 15d-14(a) under the Securities Exchange Act of 1934, as amended.
31.2*	Certification by Principal Financial Officer pursuant to Rule 13a-14(a) or 15d-14(a) under the Securities Exchange Act of 1934, as amended.

* Filed herewith.

SIGNATURES

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

ARCTURUS THERAPEUTICS LTD.

Date: April 10, 2019

By: /s/ Joseph E. Payne
Name: Joseph E. Payne
Title: President, Chief Executive Officer and Director

EXHIBIT 10.14

AMENDED AND RESTATED
JOINT VENTURE, RESEARCH COLLABORATION AND LICENSE AGREEMENT

This Amended and Restated Joint Venture, Research Collaboration And License Agreement (this "***Agreement***") is entered into as of July ___, 2018 (the "***Restatement Date***"), by and between **Providence Therapeutics Inc.**, a corporation incorporated under the laws of Alberta, Canada having a registered address at MaRS Centre, West Tower, 661 University Ave, Suite 1300, Toronto, Ontario, Canada ("***Providence***"), and **Arcturus Therapeutics, Inc.**, a Delaware corporation with its principal place of business located at 10628 Science Center Drive, Suite 250, CA 92121, USA ("***Arcturus***"). Arcturus and Providence are sometimes referred to herein individually as a "***Party***" and collectively as the "***Parties***".

RECITALS

Whereas, Arcturus and Providence entered into that certain Joint Venture, Research Collaboration and License Agreement dated March 16, 2016, as amended by that certain First Amendment to Joint Venture, Research Collaboration and License Agreement dated April 2017 (collectively, the "***Original Agreement***"); and

Whereas, the Parties wish to amend and restate the Original Agreement in its entirety, effective as of the Restatement Date, as set forth in this Agreement.

Now Therefore, in consideration of the premises and the mutual promises and covenants contained in this Agreement, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereto agree as follows:

ARTICLE 1

DEFINITIONS

All references to particular Exhibits, Articles or Sections shall mean the Exhibits to, and Articles and Sections of, this Agreement, unless otherwise specified. For the purposes of this Agreement and the Exhibits hereto, the following words and phrases shall have the following meanings:

1.1 "**Accounting Standards**" means, as applicable, (a) Canadian generally accepted accounting principles, (b) U.S. Generally Accepted Accounting Principles, or (c) International Financial Reporting Standards; in each case consistently applied throughout the organization of a Party. Unless otherwise defined or stated herein, financial terms shall be calculated under applicable Accounting Standards.

1.2 "**Affiliate**" means, with respect to any Person (other than an individual), any other Person (excluding an individual) which controls, is controlled by or is under common control with such Person, for as long as such control exists. For purposes of this Section, "***control***" shall mean the direct or indirect ownership of more than fifty percent (50%) of the voting or economic interest of a Person, or the power, whether pursuant to contract, ownership of securities or otherwise, to direct the management and policies of a Person.

1.3 "**After-Acquired IP**" means any item of Know-How, any Patent Right or any other intellectual property right of a Third Party with respect to which, in each case, Arcturus first obtains a right to grant access, or a license or sublicense, from such Third Party after the Effective Date, under an agreement or arrangement obligating Arcturus to pay royalties and/or milestone payments to such Third Party with respect to products covered by or using such Know-How, Patent Right or other intellectual property right.

1.4 "**Alliance Manager**" shall have the meaning set forth in Section 2.2.2.

1.5 "**Arcturus FTE**" means a full-time employee or consultant, or more than one employee or consultant working the equivalent of a full-time employee or consultant, with "full-time" meaning 1,880 hours per calendar year.

1.6 "**Arcturus FTE Rate**" means $350,000 per Arcturus FTE.

1.7 *Intentionally Omitted*.

1.8 "**Arcturus Invention**" means any Invention made solely by one or more employees, consultants or contractors of Arcturus.

1.9 "**Arcturus Know-How**" means any Know-How that is: (i) Controlled by Arcturus or any of its Controlled Affiliates as of the Effective Date or during the Research Period; and (ii) necessary or useful for the Development or Commercialization of Collaboration Compounds or Products in the Licensed Field; including, without limitation, Arcturus Inventions, but excluding Arcturus Patents, and Arcturus' interest in Joint Inventions and Joint Patents.

1.10 "**Arcturus Patents**" means all Patent Rights that are: (i) Controlled by Arcturus or any of its Controlled Affiliates as of the Effective Date or during the Term; and (ii) necessary or useful for the Development or Commercialization of Collaboration Compounds or Products in the Licensed Field but excluding Arcturus' interest in Joint Patents.

1.11 "**Arcturus Platform Improvement**" means any Invention, regardless of inventorship, that is an improvement, enhancement or modification to any Arcturus Platform Technology.

1.12 "**Arcturus Platform Technology**" means (a) any Arcturus proprietary technology that Arcturus uses to formulate oligotherapeutics for delivery, or otherwise be combined with, or applied to, oligotherapeutics to enable or improve delivery or distribution of such oligotherapeutics (including, without limitation, Arcturus' proprietary LUNAR™ lipid-enabled delivery system); and (b) any Arcturus proprietary chemistry that Arcturus uses to modify oligotherapeutics for improved or enhanced potency, safety, stability or other physicochemical properties (including, without limitation, Arcturus' proprietary Unlocked Nucleic Acid (UNA) chemistry).

1.13 "**Arcturus Product-Specific Patent**" shall have the meaning provided in Section 10.2.1.

1.14 "**Arcturus Services**" shall have the meaning set forth in Section 5.2.

1.15 "**Arcturus Technology**" means Arcturus Patents and Arcturus Know-How.

1.16 "**Brain Neoplasm**" means a neoplasm that is located in, and the primary origin of which is, the brain. For clarity, a neoplasm that is metastatic to the brain but originated outside the brain does not constitute a Brain Neoplasm for purposes of this Agreement.

1.17 "**Breast Neoplasm**" means a neoplasm that is located in, and the primary origin of which is, the breast. For clarity, a neoplasm that is metastatic to the breast but originated outside the breast does not constitute a Breast Neoplasm for purposes of this Agreement.

1.18 "**C.F.R.**" means the United States Code of Federal Regulations.

1.19 "**Collaboration**" shall have the meaning set forth in Section 3.1.

1.20 "**Collaboration Compound**" means, with respect to a particular patient, under no circumstances will a Collaboration Compound be applicable to multiple patients:

(a) any mRNA Vaccine expressing such patient's Individual Epitope(s), which mRNA Vaccine is identified or optimized (i) by or on behalf of a Party or jointly by the Parties or (ii) by or on behalf of Providence (including, for purposes of this Section 1.20(a), any Affiliate or Sublicensee of Providence); or

(b) any chemical modification (*e.g.*, by substituting a non-natural nucleotide for a natural nucleotide in such sequence, or chemically modifying a nucleotide in such sequence) of an mRNA Vaccine described in Section 1.20(a), whether such chemical modification is made by a Party or jointly by the Parties or by or on behalf of Providence (including, for purposes of this Section 1.20(b), any Affiliate or Sublicensee of Providence).

1.21 "**Collaboration Program**" shall have the meaning set forth in Section 14.2.1.

1.22 "**Collaboration Tumor Type**" means (a) Brain Neoplasms, (b) Breast Neoplasms or (c) Ovarian Neoplasms.

1.23 "**Combination Product**" means a Product that is sold in a finished dosage form containing a Collaboration Compound in combination with one or more Other Actives.

1.24 "**Commercialization**" or "**Commercialize**" means the conduct of any and all activities directed to marketing, advertising, promoting, detailing, distributing, importing, exporting and selling any Product, including manufacturing, making, having made, using, offering for sale, selling, importing, exporting or otherwise exploiting a Product. Cognates of the word "**Commercialize**" shall have correlative meanings.

1.25 "**Commercialization Expenses**" shall have the meaning provided in **Exhibit B**.

1.26 "**Commercially Reasonable Efforts**" means, with respect to a Party's efforts to perform any of its obligations with respect to the discovery, research, development or

commercialization of Collaboration Compounds and Products under this Agreement, those diligent and sustained efforts and reasonable resources commensurate with the efforts and resources that a similarly-situated pharmaceutical or biotechnology company in the exercise of its reasonable business judgment would commonly devote to a compound or product of similar market potential or profit potential at a similar stage in development or product life resulting from its own research efforts, taking into account issues of safety and efficacy, the proprietary position of the product, the regulatory status and approval process, Regulatory Authority-approved labeling, product profile, the competitiveness of alternative products in the marketplace, and other relevant technical, legal, scientific or medical factors.

1.27 "**Confidential Information**" shall have the meaning provided in Section 13.1.1.

1.28 "**Confidentiality Agreement**" means that certain Confidential Disclosure Agreement between the Parties dated June 26, 2015.

1.29 "**Control**" or "**Controlled**" means, with respect to any Know-How, Patent Right or other intellectual property right, the possession by a Party of the ability (whether by ownership, license or other right, other than pursuant to a license or right granted to such Party by the other Party under this Agreement) to grant access to, or a license or sublicense of, such Know-How, Patent Right or other intellectual property right without violating the terms of any agreement or other arrangement with any Third Party, and without becoming obligated to pay any royalties or milestone payments to such Third Party with respect to compounds or products that use or are covered by such Know-How, Patent Right or other intellectual property right. Notwithstanding the foregoing, if Arcturus determines in good faith that a particular item of After-Acquired IP may be necessary or useful for the Development or Commercialization of Collaboration Compounds or Products in the Licensed Field, Arcturus shall promptly provide to Providence a reasonable description of such item of After-Acquired IP (provided that Arcturus need not disclose any information that would enable Providence to practice such item of After-Acquired IP) and shall disclose to Providence in writing Arcturus' royalty and/or milestone payment obligations to the applicable Third Party with respect to such item of After-Acquired IP. At Providence's written request made within thirty (30) days of Arcturus' provision of such description and disclosure of payment obligations to Providence, the Parties shall discuss the possibility of including such item of After-Acquired IP in the Arcturus Technology licensed to Providence hereunder; provided, however, that such item of After-Acquired IP shall not be deemed to be within the "Control" of Arcturus for purposes of this Agreement except upon the mutual written agreement of the Parties on a case-by-case basis (it being understood that neither Party shall have any obligation to give such written agreement).

1.30 "**Controlled Affiliate**" means, with respect to a Party, any corporation or other business entity that is controlled by such Party. For the purposes of this definition, the term "controlled by" has the meaning provided in Section 1.2.

1.31 "**Designated Executive Officers**" means the Chief Executive Officer of Arcturus and the Chief Executive Officer of Providence, or their duly authorized respective designees with decision-making authority within the applicable Party with respect to the relevant matters.

1.32 "**Development**" and "**Develop**" means the conduct of all non-clinical (such as, but not limited to, IND-enabling toxicology and production of GMP quality Collaboration Compound or Product) and clinical development activities with respect to a Collaboration Compound or Product necessary or useful to obtain and maintain Regulatory Approvals of a Product, including, without limitation, chemical synthesis, process development, manufacturing scale up, test method development and stability testing, toxicology and pharmacology studies, clinical trials (including post-Regulatory Approval clinical trials), formulation development and statistical analysis. Cognates of the word "**Develop**" shall have correlative meanings.

1.33 "**Disclosing Party**" shall have the meaning set forth in Section 13.1.1.

1.34 "**Dollars**" means U.S. Dollars, and "**$**" shall be interpreted accordingly.

1.35 "**Effective Date**" means March 16, 2016.

1.36 "**EMA**" means the European Medicines Agency or any successor entity thereto.

1.37 "**FDA**" means the United States Food and Drug Administration or any successor entity thereto.

1.38 "**Formulation Budget**" shall have the meaning set forth in Section 3.5.2.

1.39 "**Formulation Plan**" shall have the meaning set forth in Section 3.3.

1.40 "**Formulation Program**" shall have the meaning set forth in Section 3.3.

1.41 "**Governmental Authority**" means any court, agency, department, authority or other instrumentality of any national, state, county, city or other political subdivision.

1.42 "**ICH**" means the International Conference on Harmonization of Technical Requirements for Registration of Pharmaceuticals for Human Use.

1.43 "**IND**" shall mean an Investigational New Drug Application filed with the FDA, or the equivalent application or filing filed with any equivalent Regulatory Authority outside the U.S. (including any supra-national agency such as in the EU) necessary to commence human clinical trials in such jurisdiction.

1.44 "**Individual Epitopes**" means, with respect to a particular patient with an Individual Neoplasm of a particular Collaboration Tumor Type, patient-specific Epitopes identified through genetic analysis of a biopsy of such patient's Individual Neoplasm. These may include, but are not limited to, tumor-specific RNA mutations, common mutations, or over expressed antigens.

1.45 "**Individual Neoplasm**" means, with respect to a particular patient with a tumor of a particular Collaboration Tumor Type, such patient's Brain Neoplasm, Breast Neoplasm or Ovarian Neoplasm (as applicable).

1.46 "**Infringe**" or "**Infringement**" means any infringement as determined by Law, including, without limitation, direct infringement, contributory infringement or any inducement to infringe.

1.47 "**Initiation**" means, with respect to a clinical trial, the first dosing in the first human subject in such clinical trial.

1.48 "**Invention**" means any invention, whether or not patentable, made in the course and as a result of Research Plan activities.

1.49 "**Joint Invention**" means any Invention made jointly by one or more employees, consultants or contractors of Arcturus and one or more employees, consultants or contractors of Providence; but excluding any Arcturus Platform Improvement.

1.50 "**Joint Patents**" means all Patent Rights that claim any Joint Invention.

1.51 "**Joint Product-Specific Patent**" shall have the meaning provided in Section 10.2.2.

1.52 "**Joint Steering Committee**" or "**JSC**" shall have the meaning set forth in Section 2.2.1.

1.53 "**Joint Technology**" means Joint Inventions and Joint Patents.

1.54 "**Joint Venture**" shall have the meaning set forth in Section 2.1.

1.55 "**Know-How**" means techniques, technology, trade secrets, inventions (whether patentable or not), methods, know-how, ideas, works of authorship, materials (including biological and chemical materials), data and results (including pharmacological, toxicological and clinical data and results), analytical and quality control data and results, regulatory documents, and other information, including documents and other media (including paper, notebooks, books, files, ledgers, records, tapes, discs, diskettes, trays and containers and any other media) containing or storing any of the foregoing, and whether stored or transmitted in oral, documentary, electronic or other form.

1.56 "**Law**" means, individually and collectively, any and all laws, ordinances, rules, directives, administrative circulars and regulations of any kind whatsoever of any Governmental Authority within the applicable jurisdiction.

1.57 "**License**" shall have the meaning set forth in Section 4.1.

1.58 "**Licensed Field**" means, with respect to a particular Collaboration Tumor Type, the treatment, prevention and diagnosis of a patient's Individual Neoplasm of such Collaboration Tumor Type using an mRNA Vaccine personalized for such patient's Individual Neoplasm.

1.59 "**Licensed LUNAR Formulation**" shall have the meaning set forth in Section 3.3.

1.60 "**LUNAR Formulation**" is a proprietary multi-lipid component based delivery system that can efficiently encapsulate and effectively deliver nucleic acid medicines including but not limited to messenger RNA, siRNA, miRNA, antisense, DNA and mixture thereof to clinically important cell types and tissues including hepatocytes, stellate cells, myocytes, lung cells, cells of the eye via various routes of administration.

1.61 "**Manufacture**" means all activities associated with the production, manufacture, processing, filling, finishing and packaging, as applicable, of a Product as part of its Development or Commercialization, as the case may be, including process development, manufacturing scale-up, quality stability testing, impurity characterization, assurance and quality control. Cognates of the word "**Manufacture**" shall have correlative meanings.

1.62 "**Manufacturing Plan**" shall have the meaning set forth in Section 6.2.2.

1.63 "**mRNA**" means an RNA molecule referred to as "mRNA" or "messenger RNA," which conveys genetic information from DNA to the ribosome, where it codes for the protein expressed by a particular gene.

1.64 "**mRNA Vaccine**" shall mean a personalized (i.e., patient-specific) mRNA-based cancer vaccine coding for one or more Individual Epitopes from an individual patient's Collaboration Neoplasm.

1.65 "**NDA**" means: (a) a New Drug Application, as more fully defined in 21 C.F.R. 314.5 et seq. (or any successor regulation thereto); or (b) the equivalent application filed with any equivalent Regulatory Authority outside the U.S.; including, in each case, all amendments and supplements thereto.

1.66 "**Net Sales**" shall have the meaning set forth in **Exhibit B**.

1.67 "**Other Active**" means any active pharmaceutical ingredient that is not a Collaboration Compound.

1.68 "**Other Approved Operating Expenses**" shall have the meaning set forth in Section 9.6.1.

1.69 "**Other Product Revenue**" shall have the meaning set forth in **Exhibit B**.

1.70 "**Ovarian Neoplasm**" means a neoplasm that is located in, and the primary origin of which is, the ovary(ies) or fallopian tubes. For clarity, a neoplasm that is metastatic to the ovary(ies) or fallopian tubes but originated outside the ovary(ies) or fallopian tubes does not constitute an Ovarian Neoplasm for purposes of this Agreement.

1.71 "**Patent Rights**" means any provisional and non-provisional patents and patent applications, together with all additions, divisions, continuations, continuations-in-part, substitutions, and reissues claiming priority thereto, as well as any re-examinations, extensions, registrations, patent term extensions, supplemental protection certificates, renewals and the like with respect to any of the foregoing and all foreign counterparts thereof.

1.72 "**Person**" means any corporation, limited or general partnership, limited liability company, joint venture, trust, unincorporated association, Governmental Authority, any other entity or body, or an individual.

1.73 "**Phase 1 Clinical Trial**" means any human clinical trial that would satisfy the requirements for a Phase 1 study as defined in 21 C.F.R. § 312.21(a) or a Phase I study as defined in the ICH E8 Guideline (or, in either case, any amended or successor regulation or guideline), or, except for purposes of Section 8.3.2, a similar clinical study prescribed by the Regulatory Authorities in any other country or regulatory jurisdiction.

1.74 "**Phase 2 Clinical Trial**" means any human clinical trial that would satisfy the requirements for a Phase 2 study as defined in 21 C.F.R. § 312.21(b) or a Phase II study as defined in the ICH E8 Guideline (or, in either case, any amended or successor regulation or guideline), or a similar clinical study prescribed by the Regulatory Authorities in any other country or regulatory jurisdiction.

1.75 "**Phase 3 Clinical Trial**" means any human clinical trial that would satisfy the requirements for a Phase 3 study as defined in 21 C.F.R. § 312.21(c) or a Phase III study as defined in the ICH E8 Guideline (or, in either case, any amended or successor regulation or guideline), or a similar clinical study prescribed by the Regulatory Authorities in any other country or regulatory jurisdiction.

1.76 "**Pivotal Study**" shall have the meaning provided in Section 9.4.

1.77 "**Post-Phase 2 Development Activities**" means, with respect to any Collaboration Program, all Phase 3 Clinical Trials of Products from such Collaboration Program and all stages and activities of the Development of Collaboration Compounds and Products from such Collaboration Program in the Licensed Field that would normally be undertaken in connection with Phase 3 Clinical Trials and/or after initiation of the first Phase 3 Clinical Trial, in each case as set forth in the applicable Product Plan approved by the JSC; but excluding, in any event, any and all Phase 2 Clinical Trials (except to the extent specified in Section 9.4 with respect to any Phase 2 Clinical Trial that is or becomes a Pivotal Study).

1.78 "**Post-Phase 2 Development Expenses**" means, with respect to any Collaboration Program, the documented direct costs and expenses incurred by Providence or its Affiliate in conducting or having a Third Party subcontractor conduct on its behalf, Post-Phase 2 Development Activities in accordance with this Agreement and the applicable Product Plan, to the extent consistent with the applicable Product Budget. Post-Phase 2 Development Expenses shall in any event exclude all direct and indirect overhead costs of Providence and its Affiliates, except to the extent that certain direct overhead costs are (i) included in the applicable Providence FTE Rate; or (ii) Other Approved Operating Expenses.

1.79 "**Product**" means a personalized mRNA Vaccine for an individual patient with a Collaboration Neoplasm, which mRNA Vaccine (a) contains or comprises a Collaboration Compound derived from such patient's Collaboration Neoplasm and (b) is encapsulated in the Licensed LUNAR Formulation (alone or with Other Active(s), *provided* that the Licensed

LUNAR Formulation is not used to encapsulate or deliver any Other Active), in all dosage strengths.

1.80 "**Product Budget**" shall have the meaning set forth in Section 9.6.1.

1.81 "**Product Plan**" shall have the meaning set forth in Section 9.6.1.

1.82 "**Product Revenue**" shall have the meaning set forth in **Exhibit B**.

1.83 "**Product-Specific Patent**" means any Arcturus Patent or Joint Patent that claims: (i) the composition or formulation of a Collaboration Compound; or (ii) any method of using or making a Collaboration Compound. Notwithstanding the foregoing, Product-Specific Patents shall *exclude* any Arcturus Patent or Joint Patent that claims:

(a) any RNA oligotherapeutic (including, without limitation, any mRNA oligotherapeutic) that is not a Collaboration Compound;

(b) subject matter broadly applicable to RNA oligotherapeutics (including, without limitation, mRNA oligotherapeutics) beyond compositions, formulations or method of using or making a Collaboration Compound;

(c) any mRNA oligotherapeutic that is not a Collaboration Compound; or

(d) Arcturus Platform Technology.

1.84 "**Providence FTE Rate**" shall have the meaning specified in Section 9.6.1.

1.85 "**Providence Invention**" means any Invention made solely by one or more employees, consultants or contractors of Providence, but excluding any Arcturus Platform Improvement.

1.86 "**Receiving Party**" shall have the meaning set forth in Section 13.1.1.

1.87 "**Regulatory Approval**" means any and all approvals, licenses, registrations or authorizations of any Regulatory Authority in a country or other regulatory jurisdiction necessary for the development, manufacturing, use, storage, import, marketing and full commercial sale of a product in such country or other regulatory jurisdiction, including any necessary pricing and reimbursement approval.

1.88 "**Regulatory Authority**" means any national, supranational or other regulatory agency, department, bureau or other governmental or regulatory authority having the administrative authority to regulate the development or marketing of pharmaceutical products in any country or other jurisdiction, including the FDA and EMA.

1.89 "**Regulatory Filing**" means any IND, NDA, drug dossier or master file filed, or Regulatory Approval obtained, with respect to a Collaboration Compound or Product, including

all amendments, supplements, annual reports and the like filed or otherwise provided to the applicable Regulatory Authority.

1.90 "**Representatives**" of a Party shall mean such Party's officers, directors, employees, consultants, contractors, or agents.

1.91 "**Research Budget**" shall have the meaning set forth in Section 3.5.2.

1.92 "**Research Plan**" shall have the meaning set forth in Section 3.2.

1.93 "**Research Program**" shall have the meaning set forth in Section 3.2.

1.94 "**Shared D&C Costs**" shall have the meaning set forth in Section 9.6.1.

1.95 "**Statement of Work**" shall have the meaning set forth in Section 5.2.

1.96 "**Sublicensee**" shall mean any Third Party that is granted a sublicense under this Agreement, whether such sublicense is granted to such Third Party directly by Providence or its Affiliate or indirectly through multiple tiers of sublicense.

1.97 "**Term**" shall have the meaning set forth in Section 14.1.

1.98 "**Territory**" means the entire world.

1.99 "**Third Party**" means a Person other than (a) Providence or any of its Affiliates and (b) Arcturus or any of its Affiliates.

1.100 "**Third Party Challenge**" shall have the meaning set forth in Section 10.5.2.

ARTICLE 2

JOINT VENTURE AND GOVERNANCE

2.1 Scope of Joint Venture. The Parties have entered into this joint venture (such enterprise, the "***Joint Venture***") to identify and optimize Collaboration Compounds and the Licensed LUNAR Formulation, and for Arcturus to grant Providence the exclusive rights to Develop and Commercialize Collaboration Compounds and Products in the Licensed Field throughout the Territory as set forth in, and pursuant to the terms of, this Agreement.

2.2 Management.

2.2.1 Overview. The Parties have established a joint steering committee (the "***Joint Steering Committee***" or the "***JSC***") which shall oversee the Joint Venture between the Parties.

2.2.2 Alliance Managers. Each of Providence and Arcturus shall appoint one representative who possesses a general understanding of development, regulatory, manufacturing and commercialization matters to act as its respective manager(s) for this relationship (an "***Alliance Manager***"). As of the Restatement Date, the Alliance Manager appointed by

Providence is Natalia Martin Orozco and the Alliance Manager appointed by Arcturus is Jared Davis. Each Party may replace its respective Alliance Manager at any time upon written notice to the other in accordance with this Agreement. Each Alliance Manager will be responsible for:

(a) providing a primary single point of communication responsible for the flow of communication and for seeking consensus both within the respective Party's organization on matters requiring the Parties' agreement or coordination under this Agreement;

(b) ensuring awareness of the governance procedures and rules set forth herein and monitoring compliance therewith;

(c) identifying and raising disputes to the JSC for discussion in a timely manner; and

(d) planning and coordinating internal and external communications in accordance with the terms of this Agreement.

The Alliance Managers shall have the right to attend all subcommittee meetings in a non-voting capacity. Consistent with Section 2.2.3(c), each Alliance Manager may bring any matter to the attention of the JSC where such Alliance Manager reasonably believes that such matter requires attention of the JSC.

2.2.3 Joint Steering Committee.

(a) Composition. The Joint Steering Committee shall be comprised of two (2) named representatives of each Party (or such other number as the Parties may agree) in addition to each Party's Alliance Manager who are members ex-officio. The JSC will be led by two (2) co-chairs, one (1) appointed by each of the Parties. Each Party may replace one or more of its representatives, in its sole discretion, effective upon written notice to the other Party of such change.

(b) Function and Powers of the JSC. The JSC shall, in accordance with the terms and conditions set forth in the Agreement:

(i) Review, approve, and approve changes to, the Research Plan, Research Budget, Formulation Plan, Formulation Budget, Statement of Work, Manufacturing Plan, Product Plan and Product Budget;

(ii) review progress of the Joint Venture against its goals;

(iii) establish, direct and oversee any subcommittees, as appropriate;

(iv) discuss and attempt to address scientific or technical issues arising in the course of Research Program and Formulation Program activities; and

(v) perform any and all tasks and responsibilities that are expressly delegated to the JSC under the Agreement.

Each Party shall be responsible for ensuring that, at all times, its JSC representatives act reasonably and in good faith in carrying out their respective responsibilities hereunder.

(c) Frequency of Meetings. The Joint Steering Committee shall meet at least once per quarter or more or less often as otherwise agreed by the Parties, and such meetings may be conducted by telephone, videoconference or in person as determined by the co-chairs. Each Party may also call for special meetings of the Joint Steering Committee with reasonable prior written notice (it being agreed that at least five (5) business days shall constitute reasonable notice) to resolve particular matters requested by such Party and within the decision-making responsibility of the Joint Steering Committee. Each co-chair shall ensure that its Joint Steering Committee members receive adequate notice of such meetings. Each Party shall be responsible for all of its own expenses incurred in connection with participating in all such meetings.

(d) Minutes. Responsibility for preparing definitive minutes of each JSC meeting shall alternate between the Parties. The responsible Party shall circulate a draft of the minutes of each meeting to all JSC members for comments within ten (10) days after such meeting. Such minutes shall provide a description, in reasonable detail, of the discussions at the meeting and shall document all actions and determinations approved by the JSC at such meeting. The Parties shall promptly discuss any comments on such minutes and finalize the minutes no later than the date of the next JSC meeting.

(e) Subcommittees. The JSC may establish and disband subcommittees as deemed necessary by the JSC. Each subcommittee shall report to the JSC and may make recommendations to the JSC, but no subcommittee shall have any decision-making authority. Each Party shall be responsible for all of its own expenses incurred in connection with participating in all such meetings.

2.2.4 Cooperation. Each Party shall provide the JSC such information as reasonably requested by the other Party and reasonably available, relating to the progress of the goals or performance of activities under the Joint Venture.

2.2.5 Decisions. Decisions of the JSC shall be made by unanimous vote, with each Party's representatives on the JSC collectively having one vote. No vote of the JSC may be taken unless at least one of each Party's representatives is present for the vote.

(a) Dispute Resolution If the JSC cannot reach consensus with regard to any matter within its authority within fifteen (15) days after such matter has been brought to the JSC's attention, the co-chair of either Party may cause such dispute to be referred to the Designated Executive Officers, who shall promptly meet and attempt in good faith to resolve such issue within thirty (30) days from the date upon which such matter is referred to them. In the event that the Designated Executive Officers are unable to resolve such issue within thirty (30) days of the issue being referred to them, then Providence shall have the tie-breaking vote; *provided, however,* that, in each case, Providence shall give good faith consideration to Arcturus' position and make reasonable efforts to take Arcturus' position into account in making its decision; and *provided, further,* that the unanimous vote of the JSC (without resort to Providence's tie-breaking vote) will be required:

(i) to approve any proposed amendment to the Research Plan that, individually or in the aggregate with preceding amendments, would alter or increase in a material manner Arcturus' Research Program commitment;

(ii) to approve, and to approve changes to, (A) the Manufacturing Plan that, individually or in the aggregate with preceding amendments, would alter or increase in a material manner Arcturus' commitment thereunder, (B) any Statement of Work, and (C) the applicable Providence FTE Rate under any Product Budget.

2.2.6 Authority. The JSC shall have only such rights, powers and authorities as are expressly assigned under this Agreement. Each Party shall retain the rights, powers and discretion granted to it under this Agreement and no such rights, powers or discretion shall be delegated or vested in the JSC or subcommittee. Notwithstanding any other provision of this Agreement to the contrary, neither the JSC nor any subcommittee shall have any right, power or authority:

(a) to determine any issue in a manner that would conflict with the express terms and conditions of this Agreement; or

(b) to modify or amend the terms and conditions of this Agreement.

2.2.7 Discontinuation of JSC. The JSC shall continue to exist until the Parties mutually agree to disband the JSC.

ARTICLE 3

RESEARCH COLLABORATION

3.1 Scope of Collaboration. Subject to the terms and conditions of this Agreement the Parties agree to conduct a collaborative research project directed to the discovery and optimization of Collaboration Compounds for each Collaboration Tumor Type and the design and synthesis of a LUNAR Formulation suitable for encapsulation and delivery of Collaboration Compounds of all Collaboration Tumor Types.

3.2 Research Programs. For each Collaboration Tumor Type, the Parties, via the JSC, shall: (a) promptly (but no later than sixty (60) days) following the Restatement Date (if not already approved prior to the Restatement Date), approve a written plan describing the research activities to be conducted by Arcturus to identify and optimize Collaboration Compounds for such Collaboration Tumor Type (each, a "***Research Program***"); and (b) consider and approve appropriate amendments and modifications to each such plan (each such plan, as so amended, a "***Research Plan***"). Prior to the Restatement Date, the Parties have agreed upon the initial Research Plan for the Research Program directed to Brain and Ovarian Neoplasms which initial Research Plan is deemed approved by the JSC hereunder. Upon JSC approval of the Research Plan for any other Collaboration Tumor Type, or upon JSC approval of any amendment or modification to any Research Plan, the JSC will attach such Research Plan, or such amendment or modification (as applicable), to the minutes of the JSC meeting at which the same is approved.

3.3 Formulation Program. Promptly (but no later than sixty (60) days) following the Restatement Date, the Parties, via the JSC, shall approve a written plan describing the research activities to be conducted by Arcturus to design and synthesize a LUNAR Formulation (the "***Licensed LUNAR Formulation***") suitable for encapsulation and delivery of Collaboration Compounds of all Collaboration Tumor Types (the "***Formulation Program***"). From time to time, consider and approve appropriate amendments and modifications to such plan (such plan, as so amended, the "***Formulation Plan***"). Upon JSC approval of the Formulation Plan, or upon JSC approval of any amendment or modification to the Formulation Plan, the JSC will attach such Formulation Plan, or such amendment or modification (as applicable), to the minutes of the JSC meeting at which the same is approved.

3.4 Performance Standards. On a Collaboration Tumor Type-by-Collaboration Tumor Type basis, Arcturus shall use Commercially Reasonable Efforts to perform the Research Program for each Collaboration Tumor Type in an expeditious manner. In addition, Arcturus shall use Commercially Reasonable Efforts to perform the Formulation Plan in an expeditious manner. Arcturus shall perform each Research Program and the Formulation Program in accordance with the applicable Research Plan and the Formulation Program, respectively, and the terms and conditions of this Agreement. In addition, Arcturus shall use Commercially Reasonable Efforts to perform all Research Plan and Formulation Plan activities in good scientific manner and in compliance with all applicable Laws. Arcturus may engage subcontractors to perform certain of its Research Plan or Formulation Plan obligations, subject to Section 5.5 (*mutatis mutandis*).

3.5 Costs of Performance of Research Program.

3.5.1 Providence Activities. Providence shall be responsible for bearing all its costs associated with its performance of its responsibilities under the Research Program for each Collaboration Tumor Type. Providence acknowledges and agrees that it shall not have any right to reimbursement or credit from Arcturus for the cost and expenses associated with such Research Program activities.

3.5.2 Arcturus Activities. Promptly (but no later than sixty (60) days) following the Restatement Date, the Parties shall mutually agree in writing upon a written budget for Research Program activities to be conducted by or on behalf of Arcturus under each Research Plan (each, a "***Research Budget***") and Formulation Program activities to be conducted by or on behalf of Arcturus under the Formulation Plan (the "***Formulation Budget***").

3.6 Disclosure of Results. During the Research Period, Arcturus shall keep Providence regularly informed, primarily via the JSC and the Alliance Managers, of the progress and results of Research Program activities. Without limiting the generality of the foregoing, Arcturus shall provide to Providence written reports of the Research Program activities performed by or on behalf of Arcturus, and all data and results generated or achieved in such activities, reasonably in advance of each regularly-scheduled meeting of the JSC. Arcturus will only disclose composition and sequence of the Licensed LUNAR Formulation.

3.7 Research Program Records. Arcturus shall maintain, and use Commercially Reasonable Efforts to cause its employees, subcontractors and consultants to maintain, complete

and accurate records of all Research Program activities conducted by or on behalf of Arcturus, and of all results, data, inventions and developments made in the performance of such activities, in sufficient detail and in good scientific manner appropriate for regulatory and patent purposes. Such records shall fully and properly reflect all work done, data and developments made, and results achieved. Upon reasonable prior written notice, Arcturus shall permit Providence to inspect such records, and shall provide copies of requested records, for each Research Program, to the extent reasonably required for Providence's commercialization of the applicable Collaboration Tumor Type; *provided, however,* that in no event shall Arcturus be obligated to permit Providence to inspect, or to provide Providence with copies of, any records or information relating to the Arcturus Platform Technology or the use thereof; and *provided, further,* that if it is not feasible to provide Providence with access to Arcturus' original records of Research Plan activities without revealing information relating to the Arcturus Platform Technology or the use thereof, then Arcturus shall instead make available for Providence's inspection redacted copies of such Research Plan activity records that do not disclose such Arcturus Platform Technology-related information. Providence shall maintain all such records and the information contained therein in confidence in accordance with Article 13 hereof and shall not use such records or information except to the extent permitted by this Agreement.

3.8 Biological Materials. Arcturus may from time to time provide to Providence samples of Collaboration Compounds ("***Arcturus Materials***"). Except as otherwise provided under this Agreement, such transfer shall convey no rights in such Arcturus Materials. All such Arcturus Materials delivered shall remain the sole property of Arcturus. Except as otherwise authorized under this Agreement, such Arcturus Materials shall not be used for any purpose other than the commercialization of the applicable Collaboration Tumor Type, and shall not be used by, delivered to or used for the benefit of, any Third Party (other than its subcontractors pursuant to Section 4.1) without the prior written consent of Arcturus, and shall not be used in research or testing involving human subjects. Because not all of their characteristics may be known, the Arcturus Materials supplied under this Section 3.8 must be used with prudence and appropriate caution in any experimental work. THE ARCTURUS MATERIALS ARE PROVIDED "AS IS" AND WITHOUT ANY REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTY OF DESIGN, MERCHANTABILITY, MERCHANTABLE QUALITY, DURABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON-INFRINGEMENT OF THE INTELLECTUAL PROPERTY RIGHTS OF THIRD PARTIES.

ARTICLE 4

LICENSE GRANTS

4.1 Research, Development and Commercialization License to Providence. Subject to the terms and conditions of this Agreement, on a Collaboration Tumor Type-by-Collaboration Tumor Type basis, Arcturus hereby grants to Providence, an exclusive (subject to Section 4.5 and except as expressly set forth below in this Section 4.1), royalty-bearing, non-transferable (except as provided in Section 15.4) license, with the right to sublicense through multiple tiers of sublicense (subject to Section 4.2), under the Arcturus Technology and Arcturus' interest in Joint Technology, to Research, Develop and Commercialize Collaboration Compounds for such Collaboration Tumor Type and Products containing such Collaboration

Compounds, in the Licensed Field in the Territory; *provided, however,* that (a) the Arcturus Platform Technology and Arcturus Platform Improvements shall be included in the Arcturus Technology licensed to Providence solely to the extent they are incorporated into such Collaboration Compounds or the Licensed LUNAR Formulation, and (b) the license granted with respect to any such Arcturus Platform Technology or Arcturus Platform Improvement shall be non-exclusive.

4.2 Sublicenses. Providence shall be entitled, without the prior consent of Arcturus, to sublicense under any license granted to Providence under Section 4.1 in full or in part, to any Affiliate or to one or more Third Parties through multiple tiers of sublicense, whether such sublicense or license is granted to such Third Party directly by Arcturus or its Affiliate or indirectly through multiple tiers of sublicense; *provided, however,* that any such sublicense shall be (a) in writing and (b) consistent with, and subject and subordinate in all respects to, the terms and conditions of this Agreement. Providence shall continue to be responsible for full performance of Providence's obligations under the Agreement and shall be responsible and liable for any failure of any Sublicensee to comply with this Agreement (or the corresponding provisions of the applicable sublicense agreement) to the same extent as Providence would be for its own failure to comply with this Agreement. Providence shall provide Arcturus with a copy of any sublicense agreement entered into by Providence or its Affiliate, and any amendment thereto, within five (5) days of its execution, provided that Providence may redact from such copy any confidential or proprietary information contained therein that is not reasonably necessary or appropriate for Arcturus to ascertain Providence's compliance with this Agreement.

4.3 Availability of Arcturus Know-How. As promptly as practicable Arcturus shall make available to Providence all Arcturus Know-How that is available in written, graphic, electronic or other recorded form (or true and complete copies thereof), that is reasonably necessary or useful for Providence to exercise its rights and perform its obligations under this Agreement with respect to Collaboration Compounds for such Collaboration Tumor Type and Products containing such Collaboration Compounds.

4.4 Exclusivity. On a Collaboration Tumor Type-by-Collaboration Tumor Type basis, for so long as Providence's License under Section 4.1 with respect to such Collaboration Tumor Type remains effective, Arcturus shall: (a) not conduct research to identify or optimize, or develop or commercialize mRNA Vaccine as defined in Section 1.64 for such Collaboration Tumor Type by itself or its Affiliates or in collaboration with any Third Party, except pursuant to this Agreement; and (b) not grant any Third Party a license to research to identify or optimize, or develop or commercialize mRNA Vaccine as defined in Section 1.64 for such Collaboration Tumor Type. For the avoidance of any doubt, this Section 4.4 shall not shall not prohibit or restrict any Third Party Acquirer or its affiliated companies from developing or commercializing any Product *so long as* such Product is: (i) covered by Patent Rights Controlled by the Third Party Acquirer prior to consummation of the Sale Transaction or (ii) acquired by the Third Party Acquirer from another Third Party after consummation of the Sale Transaction.

4.5 Negative Covenants. Providence hereby covenants not to practice, and not to permit or cause any Affiliate, Sublicensee or other Third Party to practice, any Arcturus Technology for any purpose other than as expressly authorized in this Agreement. Without limiting the foregoing, Providence shall not, and shall not permit or cause any Affiliate,

Sublicensee or other Third Party to, use any Arcturus Technology with or for, or apply any Arcturus Technology to, any active therapeutic ingredient that is not a Collaboration Compound or any product that is not a Product.

4.6 No Other Rights. Each Party acknowledges that the rights and licenses granted to it under this Article 4 and elsewhere in this Agreement are limited to the scope expressly granted. Accordingly, except for the rights expressly granted under this Agreement, no right, title, or interest of any nature whatsoever is granted whether by implication, estoppel, reliance, or otherwise, by the other Party to such Party. All rights that are not specifically granted herein are reserved to the possessing Party.

ARTICLE 5

DEVELOPMENT

5.1 Development. On a Collaboration Tumor Type-by-Collaboration Tumor Type basis, for so long thereafter as Providence's license under Section 4.1 for such Collaboration Tumor Type remains in effect (during which period such Collaboration Tumor Type shall be a "***Licensed Collaboration Tumor Type***"), Providence shall be responsible in its sole discretion for the Development of Collaboration Compounds and Products for such Licensed Collaboration Tumor Type in the Licensed Field in the Territory (other than the activities assigned to Arcturus under Section 5.2).

5.2 Arcturus Services. If requested by Providence and acceptable to Arcturus, Arcturus may perform certain research or other Development activities ("***Arcturus Services***") with respect to Collaboration Compounds and/or Products for a Licensed Collaboration Tumor Type, such as *in vitro* and *in vivo* efficacy and proof-of-concept studies, including in animal disease models, subject to mutual written agreement of the Parties. The specific Arcturus Services shall be set forth in a written statement of work, research plan, or the like on terms and in a form mutually agreeable to the Parties, and unanimously approved by the JSC, without resort to Providence's tie-breaking authority (each, a "***Statement of Work***"). Each Statement of Work shall be signed by both Parties and shall set forth at a minimum the following:

5.2.1 the specific activities to be undertaken;

5.2.2 any materials or information to be provided by Providence to Arcturus for use in the performance of such Arcturus Services;

5.2.3 the deliverables to be provided to Providence;

5.2.4 the budgeted costs for such Statement of Work and the applicable payment schedule for payments to Arcturus; and

5.2.5 the anticipated timeline for performance of such Arcturus Services.

Each Statement of Work shall be subject to all of the terms and conditions of this Agreement, in addition to the specific details set forth in such Statement of Work. To the extent any terms of a Statement of Work conflict with the terms of this Agreement, the terms of this

Agreement shall control, unless and only to the extent that such Statement of Work expressly states the intent of the Parties that the Statement of Work supersede this Agreement with respect to a specific matter. Each fully-executed Statement of Work shall be deemed incorporated herein by reference, and a copy thereof shall be attached to this Agreement. Any changes to a Statement of Work shall be in writing, executed by an authorized representative of each Party, attached to the original Statement of Work, and incorporated herein and therein by reference.

5.3 Performance of Development. Each Party shall commence and conduct its respective Development activities under this Agreement, in good scientific manner and in accordance with all applicable Laws.

5.4 Biological Materials. In order to facilitate the Development activities by the Parties pursuant to this Agreement, and the Development and Commercialization of Collaboration Compounds and Products in the Licensed Field by Providence under this Agreement, each of the Parties may from time to time provide to the other biological or other materials owned by or licensed to a Party ("***Biological Materials***"). Except as otherwise provided under this Agreement, such transfer shall convey no rights in such Biological Materials, except for the Development activities by the Parties pursuant to this Agreement, and the Development and Commercialization of Collaboration Compounds and Products in the Licensed Field by Providence under this Agreement. All such Biological Materials delivered shall remain the sole property of the delivering Party. Except as otherwise authorized under this Agreement, such Biological Materials shall not be used for any purpose other than the Development activities by the Parties pursuant to this Agreement, and the Development and Commercialization of Collaboration Compounds and Products in the Licensed Field by Providence under this Agreement, as the case may be, and shall not be used by, delivered to or used for the benefit of, any Third Party (excluding any Sublicensee or subcontractor (including contract research organizations and contract manufacturing organizations) relating to the Development and Commercialization of the Collaboration Compound or Product) without the prior written consent of the delivering Party, and shall not be used in research or testing involving human subjects. Because not all of their characteristics may be known, the Biological Materials supplied under this Section 5.4 must be used with prudence and appropriate caution in any experimental work. THE BIOLOGICAL MATERIALS ARE PROVIDED "AS IS" AND WITHOUT ANY REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTY OF DESIGN, MERCHANTABILITY, MERCHANTABLE QUALITY, DURABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON-INFRINGEMENT OF THE INTELLECTUAL PROPERTY RIGHTS OF THIRD PARTIES.

5.5 Subcontracting. Either Party may engage its Affiliates, or Third-Party subcontractors (including contract research organizations and contract manufacturing organizations) to perform certain of its obligations under this Article 5; provided that Arcturus shall obtain Providence's prior written consent (which may be included in the applicable Statement of Work) for any such subcontractor of Arcturus to perform any Development activities under this Agreement. Any Third-Party subcontractor to be engaged by a Party to perform its obligations set forth in this Agreement will meet the qualifications typically required by such Party for the performance of work similar in scope and complexity to the subcontracted activity. The activities of any of each Party's Third-Party subcontractors will be considered

activities of such Party under this Agreement. Each Party will be responsible for ensuring compliance by any of its Third-Party subcontractors with the terms of this Agreement, as if such Third Party(ies) are such Party hereunder.

5.6 Development Records. Each Party shall maintain, and cause its employees, subcontractors and consultants to maintain, complete and accurate records of all Development activities conducted by or on behalf of such Party, and of all results, data, inventions and developments made in the performance of such activities, in sufficient detail and in good scientific manner appropriate for regulatory and patent purposes. Such records shall fully and properly reflect all work done, data and developments made, and results achieved.

5.7 Disclosure of Results. Each Party shall keep the other Party regularly informed, primarily via the JSC and the Alliance Managers, of the progress and results of Development activities, including a detailed written quarterly report of its progress.

5.8 Data Sharing. Arcturus shall, at Providence's written request, promptly make available to Providence all data generated by Arcturus and its Affiliates or on their behalf under each Statement of Work and allow Providence to inspect and, to the extent necessary or useful for regulatory or intellectual property protection purposes, copy such records. Providence shall maintain all such records and the information contained therein in confidence in accordance with Article 13 hereof and shall not use such records or information except to the extent permitted by this Agreement.

ARTICLE 6

MANUFACTURE AND SUPPLY

6.1 Manufacture and Supply. Providence shall be solely responsible for the Manufacture and supply, at its sole cost and expense, of all Collaboration Compounds and Products required for Development or Commercialization of Products including, without limitation, formulation, labeling and packaging, in accordance with the requirements of applicable Regulatory Authorities.

6.2 Manufacturing Plan and Arrangements.

6.2.1 Providence acknowledges that Arcturus has unique experience and know-how relating to non-cGMP and cGMP manufacturing of UNA-RNA products and in preparing the relevant CMC regulatory document necessary to obtain FDA approval.

6.2.2 Providence and Arcturus shall jointly develop through the JSC a Manufacturing plan (a "***Manufacturing Plan***") for the Manufacture and supply of Products. It is understood that the components of the Manufacturing Plan will evolve and change as the applicable Product moves through the development, regulatory, and commercialization life cycle, with the amendments, changes, modifications, additions and updates to the Manufacturing Plan being discussed and established by agreement of the JSC. The Manufacturing Plan shall set forth at a minimum the following: (a) the activities to be undertaken for scale-up manufacturing; (b) the Parties' responsibilities for Manufacturing; (c) deliverables, and (d) timelines.

6.2.3 Any arrangement for Arcturus to Manufacture and supply Products would be subject to negotiation on commercially reasonable and customary terms and conditions to be agreed by the Parties in good faith, and would include reasonable provisions permitting Providence to establish a second source of supply and providing for manufacturing technology transfer by Arcturus to Providence or a Third Party contract manufacturing organization in connection therewith.

6.2.4 Providence may contract for the Manufacture and supply of Products (including materials and components thereof) with one or more Third Party contract manufacturing organizations having the ability and facilities for the Manufacture of Products in accordance with applicable Laws and the requirements of applicable Regulatory Authorities.

ARTICLE 7

REGULATORY MATTERS

7.1 Regulatory.

7.1.1 Providence Right. Providence will own all right, title and interest in and to all Regulatory Filings and Regulatory Approvals for Collaboration Compounds and for Products and all such Regulatory Filings and Regulatory Approvals will be held in the name of Providence. All decisions concerning the Regulatory Approval of Collaboration Compounds or Products including the clinical and regulatory strategy of Products covered under this Agreement shall be within the sole discretion of Providence.

7.1.2 Cooperation. At Providence's request and sole cost and expense, Arcturus will cooperate reasonably with Providence and provide reasonable assistance to Providence in preparing, submitting and maintaining any Regulatory Filings and/or Regulatory Approvals for Products. If Arcturus or its Controlled Affiliate is Manufacturing or having Manufactured any Collaboration Compound or Product on behalf of Providence or its Affiliates or Sublicensees and maintains any drug master file(s) with respect to such Collaboration Compound or Product anywhere in the world, Providence and its Affiliates and Sublicensees shall have a right of reference to such drug master file(s) solely for purposes of obtaining and maintaining Regulatory Approvals for Products.

ARTICLE 8

COMMERCIALIZATION AND DILIGENCE

8.1 Commercialization. Providence shall be responsible in its sole discretion for the Commercialization of Collaboration Compounds and Products in the Licensed Field, including the distribution, marketing and sales activities with respect to Collaboration Compounds and Products.

8.2 Diligence. On a Licensed Collaboration Tumor Type-by-Licensed Collaboration Tumor Type basis, Providence (directly or through its Affiliates or Sublicensees) shall use Commercially Reasonable Efforts to Develop, obtain Regulatory Approval for, and

Commercialize at least one Product for each Licensed Collaboration Tumor Type in the Licensed Field in each of the Major Markets.

8.3 Diligence Milestones. For purposes of determining whether Providence, its Affiliates or Sublicensees have satisfied Providence's diligence obligations under Section 8.2, the Parties agree that the following milestone events and timeframes shall apply:

8.3.1 Providence shall have completed cumulative equity financing of not less than $10,000,000 U.S. Dollars within eighteen (18) months after the Restatement Date;

8.3.2 Providence shall have initiated at least one IND-enabling preclinical study within two (2) years after the Restatement Date and initiated at least one Phase 1 Clinical Trial in any country or regulatory jurisdiction within three (3) years after the Restatement Date.

8.4 Diligence Failure. In the event that Providence breaches the diligence requirements set forth in Section 8.2 or Section 8.3, at Arcturus' option this Agreement shall terminate in whole or in part; *provided, however,* that (a) with respect to any failure to Develop any Collaboration Compound or Product, the termination of Licenses will be on a Licensed Collaboration Tumor Type-by-Licensed Collaboration Tumor Type basis, and (b) prior to any termination, the Parties will meet and discuss in good faith extending Providence's timeframes for performance deadlines for meeting such milestones within a reasonable term, which will not exceed six (6) months absent Arcturus's sole consent, if the Parties mutually agree that such extension will enable completion of such milestones in such reasonable term. If there is a good faith dispute between the Parties as whether Providence has breached its diligence requirements set forth in Section 8.2 or Section 8.3, then any termination by Arcturus under this Section will be stayed until a final determination pursuant to Section 15.1.

ARTICLE 9

FINANCIAL TERMS

9.1 Upfront Payment. As partial consideration for the rights granted to Providence by Arcturus under this Agreement, Providence has paid to Arcturus a one-time payment of Five Hundred Thousand U.S. Dollars (US$500,000.00) .

9.2 Material Costs. Arcturus acknowledges that up to 25% of agreed upon FTE rates covers incidental material costs. Arcturus will provide Providence records of costs of materials used on the Joint Venture at each JSC and Providence will reimburse Arcturus for all material costs over the 25% of the FTE rate for the period. With respect to dedicated equipment and 3rd party work orders (such as lipid orders, mRNA, and GXP formulation batches), Providence will be solely responsible to purchase those items directly. All costs and expenses pertaining to mRNA synthesized by Arcturus and formulations prepared by Arcturus are pass-through.

9.3 Development Costs Through to Completion of Phase 2 Clinical Trials. On a Collaboration Program-by-Collaboration Program basis, Providence shall be responsible for and shall pay one hundred percent (100%) of the costs and expenses for all stages and activities of the Development of Collaboration Compounds and Products in the Licensed Field leading up to

or necessary for the completion of all Phase 2 Clinical Trials (including all Phase 2 Clinical Trials-related costs, whenever incurred).

9.4 Sharing of Development Costs Post-Phase 2 Clinical Trials. Subject to Section 9.6, on a Collaboration Program-by-Collaboration Program basis, the Parties shall share all of the costs and expenses for all Phase 3 Clinical Trials of Products and the costs and expenses for all stages and activities of the Development of Collaboration Compounds and Products in the Licensed Field that would normally be undertaken in connection with Phase 3 Clinical Trials and/or after initiation of the first Phase 3 Clinical Trial (collectively, "***Post-Phase 2 Activities***"), provided that Post-Phase 2 Activities shall in any event exclude any and all Phase 2 Clinical Trials (except to the extent specified below in this Section 9.4 with respect to any Phase 2 Clinical Trial that is or becomes a Pivotal Study), on the following basis:

9.4.1 Providence: seventy-five percent (75%); and

9.4.2 Arcturus: twenty-five percent (25%).

For clarity, the costs and expenses shared under this Section 9.4 shall include the costs and expenses of all Phase 3 Clinical Trials, as well as any other human clinical trial that the applicable Regulatory Authority has agreed, whether before first dosing of the first patient in such trial (*e.g.*, pursuant to a special protocol assessment agreement with the FDA) or after first dosing of the first patient in such trial (*e.g.*, based on an interim data analysis), is sufficient to form the primary basis of an efficacy claim in an NDA submission, regardless of whether the sponsor of such trial characterizes or refers to such trial as a "Phase 3," "Phase 2b" or "Phase 2b/3" trial (or otherwise) in the applicable protocol, on clinicaltrials.gov, or in any other context (each, a "***Pivotal Study***"). If a human clinical trial does not constitute a Pivotal Study at the time of first dosing of the first patient in such trial, but is later determined by the applicable Regulatory Authority to be sufficient to form the primary basis of an efficacy claim in an NDA submission, then, for purposes of this Section 9.4, such clinical trial will be deemed to be a Pivotal Study only upon such determination by the applicable Regulatory Authority.

9.5 Sharing of Commercialization Expenses. Subject to Section 9.6, on a Collaboration Program-by-Collaboration Program basis, the Parties shall share all Commercialization Expenses (as defined in **Exhibit B** hereto) with respect to Collaboration Compounds and Products in the Licensed Field on the following basis:

9.5.1 Providence: seventy-five percent (75%); and

9.5.2 Arcturus: twenty-five percent (25%).

9.6 Authorization and Payment of Shared Development and Commercialization Costs.

9.6.1 Product Plan and Product Budget. Promptly after it becomes certain to the Parties that costs will be incurred for Post-Phase 2 Activities with respect to a particular Collaboration Program, Providence and Arcturus shall jointly develop, through the JSC, and implement a written plan for the Post-Phase 2 Development Activities and Commercialization activities to be conducted with respect to such Collaboration Program (each a "***Product Plan***"),

including a budget (each a "***Product Budget***") for all shared Post-Phase 2 Development Expenses and Commercialization Expenses pursuant to Section 9.4 and Section 9.5, respectively ("***Shared D&C Costs***"). Each Product Budget shall specify a mutually agreeable and commercially reasonable FTE rate to be used by each Party in determining such Party's and its Affiliates' internal costs of performing Post-Phase 2 Development Activities and Commercialization activities for purposes of calculating Post-Phase 2 Development Expenses and Commercialization Expenses, respectively, as such FTE rate may be updated by unanimous vote of the JSC or mutual written agreement of the Parties from time to time (such rate, as applicable to Providence, the "***Providence FTE Rate***"). Each Product Budget may also include any other internal expense incurred by Providence or its Affiliates in connection with an activity of Providence or its Affiliates under this Agreement that is considered and approved by the JSC as an expense relating directly to Commercialization of Products ("***Other Approved Operating Expenses***"). It is understood that the components of each Product Plan and Product Budget will evolve and change as the applicable Collaboration Program moves through the development, regulatory, manufacture, pre-launch, launch and commercialization life cycle, with the amendments, changes, modifications, additions and updates to the Product Plan and Product Budget being discussed and established by agreement of the JSC in accordance with Article 2.

9.6.2 Providence Statement of Shared D&C Costs. Within forty-five (45) days from the end of a quarter, on a Collaboration Program-by-Collaboration Program basis, Providence shall provide to Arcturus quarterly detailed written statements of the Shared D&C Costs expended by Providence for Product Plan activities conducted for each Collaboration Program in each quarter. Shared D&C Costs (including the components thereof) may not exceed the amount set forth in the applicable Product Budget with respect to the Development or Commercialization activities set forth in the applicable Product Plan by more than ten percent (10%) without the unanimous approval of the JSC (without resort to Providence's tie-breaking vote). Subject to Section 9.7.2, within thirty (30) days after delivery to Arcturus of each quarterly Shared D&C Cost report, the Parties shall make payments or adjustment as between them so that each shall share such Shared D&C Costs according to their respective shares pursuant to Section 9.4 and Section 9.5, for such quarter for each Product.

9.6.3 Arcturus Right to Opt-Out of Sharing of Development Costs Post-Phase 2 Clinical Trials. On a Collaboration Program-by-Collaboration Program basis, Arcturus shall have the onetime right, at any time, and for any reason, to opt-out of contributing its share of the Shared Development Costs Post-Phase 2 Clinical Trials under Section 9.4, upon written notice to Providence. No exercise by Arcturus of such opt-out right for any Collaboration Program shall constitute a breach of this Agreement by Arcturus, but in the case of any such exercise, Arcturus' and Providence's respective shares in Product Revenues and Commercialization Expenses from such Collaboration Program under Section 9.5 and Section 9.7.1 shall be adjusted in accordance with Section 9.7.2.

9.7 Sharing of Product Revenue.

9.7.1 Parties' Share of Product Revenue. On a Collaboration Program-by-Collaboration Program basis, the Parties shall share all the Product Revenue under this Agreement with respect to each Collaboration Program on the following basis:

(a) Providence: seventy-five percent (75%); and

(b) Arcturus: twenty-five percent (25%).

9.7.2 Opting-Out by Arcturus from Sharing of Development Costs Post-Phase 2 Clinical Trials. On a Collaboration Program-by-Collaboration Program basis, in the event of any exercise by Arcturus of its opt-out right under Section 9.6.3 with respect to sharing of Development Costs Post-Phase 2 Clinical Trials for a Collaboration Program, Arcturus' share in Commercialization Expenses and Product Revenue from such Collaboration Program under Section 9.5 and Section 9.7.1 shall be proportionally reduced according to the formula set out below, and Providence's share in such Commercialization Expenses and Product Revenue shall be correspondingly increased; *provided that* in no case shall Arcturus' share of Commercialization Expenses and Product Revenue from any Collaboration Program be adjusted below fifteen percent (15%):

$$\frac{\text{Arcturus' share of Product Revenue}}{} = \frac{(25\% \times A) + B}{A + C}$$

Where:

A = all Development costs through to completion of Phase 2 Clinical Trials (for the avoidance of doubt, not including any Post-Phase 2 Development Expenses)

B = Arcturus' paid contribution to Development Costs Post-Phase 2 Clinical Trials to date

C = total Shared Development Costs Post-Phase 2 Clinical Trials paid by both Parties to date

9.7.3 Payment of Shared Product Revenue. Within forty-five (45) days after the end of each quarter in which Product Revenue is received by Providence: (a) Providence shall provide Arcturus with a statement detailing its Product Revenue for each Collaboration Program for such quarter on a Product-by-Product basis, which statement shall set forth in reasonable detail the calculation of Product Revenue (including its components) with respect to such Collaboration Program; and (b) Subject to Section 9.7.2, within thirty (30) days after delivery of the statement of Product Revenue, Providence shall make payments to Arcturus of its share of Product Revenue so that each shall share Product Revenue according to the provisions set forth above, as applicable, for such quarter for each Collaboration Program.

9.8 No Other Compensation. Except as expressly set forth in this Agreement, neither Party will be obligated to pay any additional fees, milestone payments, royalties or other payments of any kind to the other hereunder.

9.9 Method of Payment. Unless otherwise specified in this Agreement or agreed by the Parties, all payments due by one Party under this Agreement shall be paid in U.S. Dollars by wire transfer or electronic funds transfer of immediately available funds to an account designated by the receiving Party.

9.10 Currency Conversion. In the case of Product Revenue, including Net Sales outside the United States, payments received by Providence or its Affiliate will be expressed in the U.S. Dollar equivalent calculated on a quarterly basis in the currency of the non-United States country and converted to their U.S. Dollar equivalent using the average rate of exchange over the applicable calendar quarter to which the sales relate, in accordance with applicable Accounting Standards and the then current standard methods of Providence or the applicable Sublicensee, to the extent reasonable and consistently applied; *provided, however,* that if, at such time, Providence does not use a rate for converting into U.S. Dollar equivalents that is maintained in accordance with applicable Accounting Standards, then Providence shall use a rate of exchange which corresponds to the rate of exchange for such currency reported in The Wall Street Journal, Internet U.S. Edition at www.wsj.com, as of the last day of the applicable reporting period (or, if unavailable on such date, the first date thereafter on which such rate is available). Providence will inform Arcturus as to the specific exchange rate translation methodology used for a particular country or countries. If at any time legal restrictions prevent the prompt remittance of any Product Revenue share in any jurisdiction, Providence may notify Arcturus and make such payments by depositing the amount thereof in local currency in a bank account or other depository in such country in the name of the Arcturus or its designee, and Providence shall have no further obligations under this Agreement with respect thereto.

9.11 Late Payments. In the event that any payment due hereunder is not made when due, the payment shall accrue interest beginning on the day following the due date thereof, calculated at the annual rate equal to the prime interest rate quoted by The Wall Street Journal, Internet U.S. Edition at www.wsj.com on the date said payment is due, the interest being compounded on the last day of each calendar quarter; *provided, however,* that in no event shall said annual interest rate exceed the maximum rate permitted by Law. Each such payment when made shall be accompanied by all interest so accrued.

9.12 Records and Audits. Providence will keep complete and accurate records of the underlying revenue and expense data relating to the calculations of Product Revenue and Shared D&C Costs generated in the then current calendar year and during the preceding three (3) calendar years. Arcturus will keep complete and accurate records of the underlying expense data relating to any amounts payable by Providence hereunder for Arcturus Services during the then current calendar year and during the preceding three (3) calendar years. Arcturus or Providence (the "***Auditing Party***") will have the right, once annually at its own expense, to have a nationally recognized, independent, certified public accounting firm, selected by it and subject to the other Party's prior written consent (which shall not be unreasonably withheld), review any such records of the other Party and their Affiliates (the "***Audited Party***") in the location(s) where such records are maintained by the Audited Party upon reasonable written notice (which shall be no less than thirty (30) days' prior written notice) and during regular business hours and under obligations of strict confidence, for the sole purpose of verifying the basis and accuracy of the any payments due hereunder within the thirty-six (36) month period preceding the date of the request for review. No calendar year will be subject to audit under this Section 9.12 more than once. The Audited Party will receive a copy of each such report concurrently with receipt by the Auditing Party. Should such inspection lead to the discovery of a discrepancy to the Auditing Party's detriment, the Audited Party will, within forty-five (45) days after receipt of such report from the accounting firm, pay any undisputed amount of the discrepancy together with interest at the rate set forth in Section 9.11. The Auditing Party will pay the full cost of the review unless

the underpayment of amounts due to the Auditing Party is greater than five percent (5%) of the amount due for the entire period being examined, in which case the Audited Party will pay the cost charged by such accounting firm for such review. Should the audit lead to the discovery of a discrepancy to the Audited Party's detriment, the Audited Party may credit the amount of the discrepancy, without interest, against future payments payable to the Auditing Party under this Agreement, and if there are no such payments payable, then the Auditing Party shall pay to the Audited Party the amount of the discrepancy, without interest, within forty-five (45) days of the Auditing Party's receipt of the report.

9.13 Taxes.

9.13.1 Withholding. In the event that any Law requires either Party to withhold taxes with respect to any payment to be paid by the paying Party to the receiving Party pursuant to this Agreement, the paying Party will notify the receiving Party of such withholding requirement prior to making the payment to the receiving Party and provide such assistance to the receiving Party, including the provision of such standard documentation as may be required by a tax authority, as may be reasonably necessary in the receiving Party's efforts to claim an exemption from or reduction of such taxes. The paying Party will, in accordance with such Law, withhold taxes from the amount due, remit such taxes to the appropriate tax authority, and furnish the receiving Party with proof of payment of such taxes within thirty (30) days following the payment. If taxes are paid to a tax authority, the paying Party shall provide reasonable assistance to the receiving Party to obtain a refund of taxes withheld or obtain a credit with respect to taxes paid.

9.13.2 VAT. All payments paid by the paying Party to the receiving Party pursuant to this Agreement shall be paid exclusive of any value-added, goods or services, or sales tax (which, if applicable, shall be payable by the paying Party upon receipt of a valid invoice). If Party receiving payment determines that it is required to report any such tax, the paying Party shall promptly provide the receiving Party with applicable receipts and other documentation necessary or appropriate for such report. For clarity, this Section 9.13.2 is not intended to limit Providence's right to deduct value-added taxes in determining Net Sales.

9.14 Arcturus Opportunity to Participate in Providence Financings. During the Term, Providence will advise Arcturus of, and Arcturus will be given the opportunity to participate in, issuances of equity or debt securities of Providence in connection with a financing or series of financings by Providence, such participation by Arcturus to be up to 49% of any such offering .

9.15 Arcturus Right to Appoint Director. During the Term and so long as Providence is a privately held company Arcturus shall have the right (the "***Arcturus Appointment Right***") to appoint one representative designated by Arcturus from time to time and acceptable to Providence, acting reasonably, to serve as a member of Providence's Board of Directors (the "***Arcturus Representative***"), exercisable upon written notice thereof to Providence, and in such capacity, the Arcturus Representative shall be entitled to receive, and Providence shall provide to the Arcturus Representative, all notices, minutes, consents and other materials, financial or otherwise, which Providence provides to other members of its Board of Directors.

ARTICLE 10

INTELLECTUAL PROPERTY AND PATENT RIGHTS

10.1 Ownership of Inventions. Inventorship of Inventions shall be determined in accordance with the rules of inventorship under U.S. patent laws. Arcturus shall solely own all Arcturus Inventions and all Arcturus Platform Improvements, and Providence hereby assigns to Arcturus all right, title and interest in and to all Arcturus Platform Improvements. Providence shall solely own all Providence Inventions. The Parties shall jointly own all Joint Inventions. Subject to the rights, obligations, and licenses granted under this Agreement, including Arcturus' obligations under Section 4.4, each Party shall have the right to use, and grant licenses to use, any Joint Invention and Joint Patent Right without the other Party's consent and shall have no duty to account to the other Party for such use or license, and each Party hereby waives any right it may have under the laws of any country to require any such consent or accounting.

10.2 Prosecution and Maintenance. For purposes of this Section 10.2, the terms "prosecution" and "maintenance" (including variations such as "prosecute" and "maintain") shall mean, with respect to a Patent Right, the preparation, filing, prosecution and maintenance of such Patent Right, in the applicable jurisdiction.

10.2.1 Arcturus Product-Specific Patents. On a Licensed Collaboration Tumor Type-by-Licensed Collaboration Tumor Type basis and for so long as the license granted to Providence under Section 4.1 for such Collaboration Tumor Type remains in effect, Providence shall have the first right, but not the obligation, to control the prosecution and maintenance of Arcturus Patents that are Product-Specific Patents ("***Arcturus Product-Specific Patents***") directed to Collaboration Compounds for such Licensed Collaboration Tumor Type and Products containing such Collaboration Compounds, at Providence's sole expense and by counsel of its choice. Providence shall consult with Arcturus as to the prosecution and maintenance of Arcturus Product-Specific Patents reasonably prior to, and in any event at least thirty (30) days prior to, any deadline or action with any patent office and shall furnish to Arcturus copies of all relevant drafts and documents reasonably in advance of such consultation. Providence shall keep Arcturus reasonably informed of progress with regard to the prosecution and maintenance of Arcturus Product-Specific Patents and shall provide to Arcturus copies of all material patent office submissions promptly following submission thereof by Providence. In the event that Providence desires to abandon or cease prosecution or maintenance of any Arcturus Product-Specific Patent, Providence shall provide written notice to Arcturus of such intention to abandon promptly after Providence makes such determination (which notice shall be given no later than ninety (90) days prior to the next deadline for any action that must be taken with respect to such Arcturus Product-Specific Patent in the relevant patent office). In such case, Arcturus shall have the right, in its discretion, exercisable upon written notice to Providence delivered no later than thirty (30) days after receipt of notice from Providence, to assume responsibility for prosecution and maintenance of such Arcturus Product-Specific Patent, at its sole cost and expense and by counsel of its own choice, and if Arcturus assumes such responsibility, Providence's license under Section 4.1 with respect to such Arcturus Product-Specific Patent shall terminate and be of no further force or effect.

10.2.2 Joint Product-Specific Patents. On a Licensed Collaboration Tumor Type-by-Licensed Collaboration Tumor Type basis and for so long as the license granted to Providence under Section 4.1 for such Collaboration Tumor Type remains in effect, Providence shall have the first right, but not the obligation, to control the prosecution and maintenance of Joint Patents that are Product-Specific Patents ("***Joint Product-Specific Patents***") directed to Collaboration Compounds for such Licensed Collaboration Tumor Type and Products containing such Collaboration Compounds, at Providence's sole expense and by counsel of its choice. Providence shall consult with Arcturus as to the prosecution and maintenance of Joint Product-Specific Patents reasonably prior to any deadline or action with any patent office and shall furnish to Arcturus copies of all relevant drafts and documents reasonably in advance of, and in any event at least thirty (30) days prior to, such consultation. Providence shall keep Arcturus reasonably informed of progress with regard to the prosecution and maintenance of Joint Product-Specific Patents and shall provide to Arcturus copies of all material patent office submissions promptly following submission thereof by Providence. In the event that Providence desires to abandon or cease prosecution or maintenance of any Joint Product-Specific Patent, Providence shall provide written notice to Arcturus of such intention to abandon promptly after Providence makes such determination (which notice shall be given no later than ninety (90) days prior to the next deadline for any action that must be taken with respect to such Joint Product-Specific Patent in the relevant patent office). In such case, Arcturus shall have the right, in its discretion, exercisable upon written notice to Providence delivered no later than thirty (30) days after receipt of notice from Providence, to assume responsibility for prosecution and

maintenance of such Joint Product-Specific Patent, at its sole cost and expense and by counsel of its own choice, and if Arcturus assumes such responsibility, Providence's license under Section 4.1 with respect to Arcturus' interest in such Joint Product-Specific Patent shall terminate and be of no further force or effect but, for clarity, Providence shall retain all its ownership rights as a co-owner in and to such Joint Product-Specific Patent.

10.2.3 Other Arcturus Patents. At all times, Arcturus shall have the sole right, but not the obligation, to control the prosecution and maintenance of Arcturus Patents other than Arcturus Product-Specific Patents, at Arcturus' sole expense and by counsel of its choice.

10.2.4 Other Providence Patents. At all times, Providence shall have the sole right, but not the obligation, to control the prosecution and maintenance of all Patents Rights that are Controlled by Providence or any of its Controlled Affiliates, other than any Joint Patents.

10.2.5 Other Joint Patents. Arcturus shall have the first right, but not the obligation, to control the prosecution and maintenance of Joint Patents other than Joint Product-Specific Patents, at Arcturus' sole expense and by counsel of its choice, in such countries or jurisdictions as Arcturus determines to be appropriate. If Providence requests in writing that Arcturus prosecute and maintain any such Joint Patent in any country or jurisdiction in which Arcturus has not elected to do so, Arcturus shall prosecute and maintain such Joint Patent in such country or jurisdiction, provided that Providence shall be solely responsible for the reasonable and documented costs and expenses thereof. Arcturus shall consult with Providence as to the prosecution and maintenance of such Joint Patents reasonably prior to any deadline or action with any patent office and shall furnish to Providence copies of all relevant drafts and documents reasonably in advance of such consultation. Arcturus shall keep Providence reasonably informed of progress with regard to the prosecution and maintenance of such Joint Patents and shall provide to Providence copies of all material patent office submissions promptly following submission thereof by Arcturus. In the event that Arcturus desires to abandon or cease prosecution or maintenance of any such Joint Patent, Arcturus shall provide written notice to Providence of such intention to abandon promptly after Arcturus makes such determination (which notice shall be given no later than ninety (90) days prior to the next deadline for any action that must be taken with respect to such Joint Patent in the relevant patent office). In such case, Providence shall have the right, in its discretion, exercisable upon written notice to Arcturus delivered no later than thirty (30) days after receipt of notice from Arcturus, to assume responsibility for prosecution and maintenance of such Joint Patent, at its sole cost and expense and by counsel of its own choice.

10.3 Patent Term Extensions.

10.3.1 Product-Specific Patents. On a Licensed Collaboration Tumor Type-by-Licensed Collaboration Tumor Type basis and for so long as the license granted to Providence under Section 4.1 for such Collaboration Tumor Type remains in effect, Providence shall have the right to determine the Product-Specific Patents for which it will apply for patent extension in any country and/or region for any Product in the Licensed Field. Providence shall file for any such extension at Providence's cost and expense. Arcturus shall provide all reasonable assistance to Providence in connection with such filings, provided that Providence shall pay or reimburse any out-of-pocket costs incurred by Arcturus in providing such assistance.

10.3.2 Other Arcturus Patents. Except as expressly set forth in Section 10.3.1 as applicable to Product-Specific Patents, Arcturus shall have the sole right to apply for extension of any Arcturus Patent, at Arcturus' sole cost and expense.

10.3.3 Other Joint Patents. Except as expressly set forth in Section 10.3.1 as applicable to Joint Product-Specific Patents, if either Party wishes to apply for extension of any Joint Patent other than a Joint Product-Specific Patent, any such application for extension will require the mutual written agreement of the Parties.

10.4 Cooperation. Each Party agrees to cooperate fully in the prosecution and maintenance of, and in the obtaining and maintenance of patent term extensions with respect to, Patent Rights in accordance with this Article 10. Such cooperation includes, but is not limited to: (i) executing all papers and instruments, or requiring its employees or contractors to execute such papers and instruments, so as to effectuate the ownership of Arcturus Platform Improvements, Joint Inventions and Joint Patent Rights set forth in Section 10.1, and to enable the other Party to apply for and to prosecute patent applications in any country in accordance with Section 10.2 and to file for patent term extensions in accordance with Section 10.3.1 or Section 10.3.3; and (ii) promptly informing the other Party of any matters coming to such Party's attention that may affect the preparation, filing, prosecution or maintenance of any such patent applications.

10.5 Defense and Settlement of Third Party Claims.

10.5.1 Notice of Third Party Infringement Claim. During the Term, each Party shall bring to the attention of the other Party all information regarding potential infringement or any claim of infringement of Third Party intellectual property rights in connection with the development, manufacture, production, use, importation, offer for sale, or sale of Products in the Territory. The Parties shall discuss such information and decide how to handle such matter. Subject to Article 12, each Party shall be solely responsible for defending any claim, suit or action brought against it alleging infringement of Third Party intellectual property rights in connection with its activities under this Agreement, at such Party's sole expense.

10.5.2 Notice of Third Party Challenge. If a declaratory judgment action is brought by a Third Party naming either Party as a defendant and alleging non-infringement, invalidity or unenforceability of any Product-Specific Patent or Joint Patent (a "***Third Party Challenge***"), the Party first having notice of the Third Party Challenge shall promptly notify the other Party, and the Parties shall promptly confer to consider the claim or assertion and the appropriate course of action. If a declaratory judgment action is brought by a Third Party naming Providence as a defendant and alleging non-infringement, invalidity or unenforceability of any Arcturus Patent other than a Product-Specific Patent (an "***Arcturus Patent Challenge***"), Providence shall promptly notify Arcturus, and Arcturus shall have the sole right, but not the obligation, to defend such Arcturus Patent Challenge, at Arcturus' sole cost and expense using patent counsel of its choice. Arcturus shall have the sole right to enter into any settlement of such Arcturus Patent Challenge in Arcturus' sole and absolute discretion; provided that any term or condition of such settlement that would impose any financial liability on Providence, limit or

restrict the ability of Providence to sell Products anywhere in the Territory, or impose any other restrictions or obligations on Providence, would require the prior written consent of Providence.

10.5.3 Responsibility for Defense. On a Licensed Collaboration Tumor Type-by-Licensed Collaboration Tumor Type basis and for so long as the license granted to Providence under Section 4.1 for such Collaboration Tumor Type remains in effect:

(a) to the extent the Third-Party Challenge relates to a Product-Specific Patent or Joint Patent that Covers any Collaboration Compound or Product being Developed or Commercialized by or on behalf of Providence, then Providence shall have the right to defend such Third-Party Challenge; and

(b) to the extent the Third-Party Challenge relates to a Product-Specific Patent or Joint Patent that does not Cover any Collaboration Compound or Product being Developed or Commercialized by or on behalf of Providence, then Arcturus shall have the right to defend such Third-Party Challenge.

10.5.4 Settlement. Neither Party shall enter into any settlement of any Third-Party Challenge that admits to the invalidity or unenforceability of any Patent Right Controlled by the other Party (or that otherwise affects the scope, validity or enforceability of any such Patent Right), incurs any financial liability on the part of the other Party or requires an admission of liability, wrongdoing or fault on the part of the other Party without such other Party's written consent. In any event, the other Party shall reasonably assist the defending Party and cooperate in any such litigation at the defending Party's request and expense. Additionally, if the defending Party is not the Party that Controls the Patent Right in question, then the other Party has the right to join any such action.

10.6 Infringement by Third Parties. Each Party shall promptly notify the other Party in writing of any existing or threatened infringement of any Product-Specific Patent or Joint Patent anywhere in the Territory of which it becomes aware, and the Parties will consult with each other regarding any actions to be taken with respect to any infringing activity that involves the manufacture, use, import, offer for sale or sale of any Product in the Territory (a "***Product Infringement***"). In addition, Providence shall promptly notify Arcturus in writing of any existing or threatened Product Infringement of any Arcturus Patent other than an Arcturus Product-Specific Patent of which it becomes aware.

10.6.1 Product-Specific Patents.

(a) Right to Enforce Product Infringement. On a Licensed Collaboration Tumor Type-by-Licensed Collaboration Tumor Type basis and for so long as the license granted to Providence under Section 4.1 for such Collaboration Tumor Type remains in effect, Providence shall have the first right, but not the obligation, to bring and control any action or proceeding with respect to Product Infringement of any Product-Specific Patent in the Territory, at its own expense and by counsel of its own choice, and Arcturus shall have the right, at its own expense, to be represented in any such action by counsel of its own choice. If Providence fails to bring any such action or proceeding within (A) 120 days following the notice of alleged infringement or (B) 15 days before the time limit, if any, set forth in the appropriate

laws and regulations for the filing of such actions, whichever comes first, then Arcturus shall have the right to bring and control any such action at its own expense and by counsel of its own choice, and Providence shall have the right, at its own expense, to be represented in any such action by counsel of its own choice.

(b) Right to Enforce Other Infringements. At all times, Arcturus shall have the first right, but not the obligation, to bring and control any action or proceeding with respect to infringement (other than Product Infringement) of any Product-Specific Patent in the Territory, at its own expense and by counsel of its own choice, and, on a Licensed Collaboration Tumor Type-by-Licensed Collaboration Tumor Type basis and for so long as the license granted to Providence under Section 4.1 for such Collaboration Tumor Type remains in effect, Providence shall have the right, at its own expense, to be represented in any such action by counsel of its own choice. On a Licensed Collaboration Tumor Type-by-Licensed Collaboration Tumor Type basis and for so long as the license granted to Providence under Section 4.1 for such Collaboration Tumor Type remains in effect, if Arcturus fails to bring any such action or proceeding within (A) 120 days following the notice of alleged infringement or (B) fifteen (15) days before the time limit, if any, set forth in the appropriate laws and regulations for the filing of such actions, whichever comes first, then Providence shall have the right to bring and control any such action at its own expense and by counsel of its own choice, and Arcturus shall have the right, at its own expense, to be represented in any such action by counsel of its own choice.

10.6.2 Other Arcturus Patents. Arcturus shall have the sole right, but not the obligation, to bring and control any action or proceeding with respect to any infringement (including, without limitation, Product Infringement) of any Arcturus Patent other than an Arcturus Product-Specific Patent, at Arcturus' sole cost and expense using patent counsel of its choice.

10.6.3 Other Joint Patents. Arcturus shall have the first right, but not the obligation, to bring and control any action or proceeding with respect to any infringement (including, without limitation, Product Infringement) of any Joint Patent other than a Joint Product-Specific Patent, at Arcturus' sole cost and expense using patent counsel of its choice, and Providence shall have the right, at its own expense, to be represented in any such action by counsel of its own choice. If Arcturus fails to bring any such action or proceeding within (A) one hundred and twenty (120) days following the notice of alleged infringement or (B) fifteen (15) days before the time limit, if any, set forth in the appropriate laws and regulations for the filing of such actions, whichever comes first, then Providence shall have the right to bring and control any such action at its own expense and by counsel of its own choice, and Arcturus shall have the right, at its own expense, to be represented in any such action by counsel of its own choice.

10.6.4 Cooperation. In the event a Party brings an infringement action in accordance with this Section 10.6, the other Party shall cooperate fully, including, if required to bring such action, the furnishing of a power of attorney or being named as a party. The Party bringing an infringement action under Section 10.6.1 or Section 10.6.3 shall keep the other Party regularly informed of the status and progress of such enforcement efforts and shall reasonably consider the other Party's comments on any such efforts.

10.6.5 Settlement. Without the prior written consent of the other Party, neither Party shall settle any claim, suit or action that it brought under this Section 10.6 that admits the invalidity or unenforceability of any Product-Specific Patent or Joint Patent, requires abandonment or limits the scope of any such Product-Specific Patent or Joint Patent, or would limit or restrict the ability of either Party to sell Products anywhere in the Territory or admits any liability of or imposes any other restrictions or obligations on the other Party, without the written consent of such other Party (which shall not be unreasonably withheld or delayed).

10.6.6 Expenses and Recoveries. Except as otherwise agreed to by the Parties as part of a cost-sharing arrangement, any recovery realized as a result of any action under this Section 10.6, whether by way of settlement or otherwise, after reimbursement of any litigation expenses of the Parties, shall be applied first to reimburse the documented out-of-pocket legal expenses of the Party that brought and controlled such action or proceeding incurred in connection with such action or proceeding, and second to reimburse the documented out-of-pocket legal expenses of the other Party incurred in connection with such action or proceeding (to the extent not previously reimbursed by the first Party), and any remaining amounts shall be retained by the Party that brought and controlled such action; *provided, however,* that:

(a) any recovery realized by Providence as a result of any action or proceeding brought and controlled by Providence pursuant to Section 10.6.1 (after reimbursement of the Parties' documented out-of-pocket legal expenses relating to the action or proceeding) shall be treated as Product Revenue for purposes of Section 9.7 and **Exhibit B**;

(b) any recovery realized by Arcturus as a result of any action or proceeding brought and controlled by Arcturus pursuant to Section 10.6.2 (after reimbursement of the Parties' documented out-of-pocket legal expenses relating to the action or proceeding) shall be allocated as follows:

(i) to the extent the recovery is attributable to Product Infringement, 50% to Arcturus and 50% to Providence; and

(ii) any remaining portion, 100% to Arcturus;

(c) any recovery realized by Arcturus as a result of any action or proceeding brought and controlled by Arcturus pursuant to Section 10.6.3 (after reimbursement of the Parties' documented out-of-pocket legal expenses relating to the action or proceeding) shall be allocated as follows:

(i) to the extent the recovery is attributable to Product Infringement, it shall be treated as Product Revenue for purposes of Section 9.7 and **Exhibit B**; and

(ii) any remaining portion, 60% to Arcturus and 40% to Providence; and

(d) any recovery realized by Providence as a result of any action or proceeding brought and controlled by Providence pursuant to Section 10.6.3 (after

reimbursement of the Parties' documented out-of-pocket legal expenses relating to the action or proceeding) shall be allocated as follows:

(i) to the extent the recovery is attributable to Product Infringement, it shall be treated as Product Revenue for purposes of Section 9.7 and **Exhibit B**; and

(ii) any remaining portion, 60% to Providence and 40% to Arcturus.

ARTICLE 11

REPRESENTATIONS AND WARRANTIES

11.1 Mutual Warranties. As of the Effective Date, each of Providence and Arcturus represent and warrant that:

(a) it is duly organized and validly existing under the Law of the jurisdiction of its incorporation, and has full corporate power and authority to enter into this Agreement and to carry out the provisions hereof;

(b) it is duly authorized to execute and deliver this Agreement and to perform its obligations hereunder, and the individual executing this Agreement on its behalf has been duly authorized to do so by all requisite corporate action; and

(c) this Agreement is legally binding upon it and enforceable in accordance with its terms. The execution, delivery and performance of this Agreement by it does not conflict with any agreement, instrument or understanding, oral or written, to which it is a party or by which it may be bound, nor violate any material applicable Law.

11.2 Additional Arcturus Warranties. As of the Effective Date, Arcturus warrants to Providence that:

(a) **Exhibit A** is a complete and accurate list of all Arcturus Patents existing as of the Effective Date;

(b) Arcturus is the sole owner, or where expressly noted on **Exhibit A** the joint owner, of the Arcturus Patents existing on the Effective Date;

(c) Arcturus has the right to license the Arcturus Technology to Providence for the purposes expressly set forth herein and has not granted, and during the Term will not grant, to any Third Party any license or other right with respect to any Arcturus Technology that conflicts with the option or licenses granted to Providence hereunder;

(d) Arcturus has not received any written communication from any Third Party asserting that: (i) a Third Party has any right or interest in or to Arcturus Patents listed on **Exhibit A**; (ii) the practice of the Arcturus Technology infringes any Patent Right or

other intellectual property right of any Third Party; or (iii) any issued patent in the Arcturus Patents listed on **Exhibit A** is invalid or unenforceable;

(e) to Arcturus' knowledge, no reexamination, interference, invalidity, opposition, nullity or similar claim or proceeding is pending or threatened with respect to any Arcturus Patent listed on **Exhibit A**; and

(f) Arcturus (i) is not a party to any legal action, suit or proceeding relating to the Arcturus Technology; and (ii) has not received any written communication from any Third Party threatening any action, suit or proceeding relating to the Arcturus Technology.

11.3 Debarment. Each Party hereby represents, warrants and covenants to the other Party as of the Effective Date that no such Party nor any of its Affiliates has been debarred or is subject to debarment and neither such Party nor any of its Affiliates will use in any capacity, in connection with the activities to be performed under this Agreement any party who has been debarred pursuant to Section 306 of the Federal Food, Drug, and Cosmetic Act, as amended, or who is the subject of a conviction described in such section. Each Party will inform the other Party in writing immediately if it or any party who is performing activities hereunder is debarred or is the subject of a conviction described in Section 306, or if any action, suit, claim, investigation or legal or administrative proceeding is pending or, to such Party's knowledge, is threatened, relating to the debarment or conviction of such Party or any party performing activities hereunder.

11.4 Disclaimer. Except as expressly set forth in this Agreement, THE ARCTURUS TECHNOLOGY IS PROVIDED "AS IS." EXCEPT AS OTHERWISE EXPRESSLY SET FORTH IN THIS AGREEMENT, NEITHER PARTY MAKES ANY REPRESENTATIONS OR EXTENDS ANY WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, QUALITY, FITNESS FOR A PARTICULAR PURPOSE, NON-INFRINGEMENT OF THE INTELLECTUAL PROPERTY RIGHTS OF THIRD PARTIES, VALIDITY OR ENFORCEABILITY OF PATENT CLAIMS, OR ARISING FROM A COURSE OF DEALING, USAGE OR TRADE PRACTICES. NOTHING IN THIS AGREEMENT SHALL BE CONSTRUED AS A REPRESENTATION MADE OR WARRANTY GIVEN BY EITHER PARTY THAT EITHER PARTY WILL BE SUCCESSFUL IN OBTAINING ANY PATENT RIGHTS, OR THAT ANY PATENTS WILL ISSUE BASED ON A PENDING APPLICATION. WITHOUT LIMITING THE RESPECTIVE RIGHTS AND OBLIGATIONS OF THE PARTIES EXPRESSLY SET FORTH HEREIN, EACH PARTY SPECIFICALLY DISCLAIMS ANY GUARANTEE THAT THE PRODUCTS WILL BE SUCCESSFUL, IN WHOLE OR IN PART.

11.5 Limitation of Liability. EXCEPT FOR LIABILITY FOR BREACH OF ARTICLE 13, NEITHER PARTY SHALL BE ENTITLED TO RECOVER FROM THE OTHER PARTY ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES IN CONNECTION WITH THIS AGREEMENT OR ANY LICENSE GRANTED HEREUNDER; *provided, however,* that this Section 11.5 shall not be construed to limit either Party's indemnification obligations under Article 12.

ARTICLE 12

INDEMNIFICATION

12.1 Indemnity.

12.1.1 By Providence. Providence will indemnify, hold harmless and defend Arcturus, its Affiliates, and its and their respective, officers, directors, employees, subcontractors, consultants, and agents (collectively, the "***Arcturus Indemnified Parties***") from and against any and all losses, damages, liabilities, judgments, fines, amounts paid in settlement, expenses and costs of defense, including without limitation reasonable attorneys' fees and witness fees ("***Losses***"), to which any Arcturus Indemnified Party may become subject as a result of any claim, action or proceeding brought or initiated by a Third Party ("***Third Party Claim***") to the extent that such Losses arise out of: (a) the gross negligence or willful misconduct of any Providence Indemnified Party, (b) the breach by Providence of any representation, warranty, covenant or agreement made by Providence under this Agreement, or (c) the Development or Commercialization of any Collaboration Compound or Product by or on behalf of Providence, its Affiliates, or their respective Sublicensees (including product liability and intellectual property infringement claims arising out of such Development or Commercialization); except, in each case, to the extent such Losses result from the gross negligence or willful misconduct of any Arcturus Indemnified Party or the breach by Arcturus of any warranty, representation, covenant or agreement made by Arcturus in this Agreement.

12.1.2 By Arcturus. Arcturus will indemnify, hold harmless and defend Providence, its Affiliates, and its and their respective, officers, directors, employees, subcontractors, consultants, and agents (collectively, the "***Providence Indemnified Parties***") from and against any and all Losses to which any Providence Indemnified Party may become subject as a result of any Third Party Claim to the extent that such Losses arise out of: (a) the gross negligence or willful misconduct of any Arcturus Indemnified Party, (b) the breach by Arcturus of any warranty, representation, covenant or agreement made by Arcturus in this Agreement, (c) the exercise of any license granted by Providence to Arcturus pursuant to Section 14.4.1(c), or (d) the development and commercialization of Arcturus Technology, Arcturus Platform Technology, or Arcturus Platform Improvements outside of this Agreement by or on behalf of Arcturus or its Affiliates, licensees or sublicensees; except, in each case, to the extent such Losses result from the gross negligence or willful misconduct of any Providence Indemnified Party or the breach by Providence of any warranty, representation, covenant or agreement made by Providence in this Agreement.

12.1.3 Procedure. Promptly after receipt by any of the Providence Indemnified Parties or the Arcturus Indemnified Parties (together or individually, an "***Indemnified Party***") of notice of any pending or threatened Third Party Claim for which the Indemnified Party intends to seek indemnity hereunder (an "***Indemnity Claim***"), such Indemnified Party shall give written notice of the same to the other Party (the "***Indemnifying Party***"). The Indemnifying Party shall be entitled to assume the defense thereof, with counsel selected by the Indemnifying Party and reasonably satisfactory to the Indemnified Party. The Indemnifying Party shall not be liable for any damages with respect to any Indemnity Claim that is settled or compromised by the Indemnified Party without the Indemnifying Party's prior written consent. No offer of

settlement, compromise or settlement by the Indemnifying Party shall be binding on an Indemnified Party without the Indemnified Party's prior written consent, unless such settlement or compromise (a) fully releases the Indemnified Party without any liability, loss, cost or obligation, and (b) admits no liability, wrongdoing or other admission against interest on the part of the Indemnified Party. In the event that the Parties cannot agree as to the application of Sections 12.1.1 and 12.1.2 to any Loss or Third Party Claim, the Parties may conduct separate defenses of such Third Party Claim. In such case, each Party further reserves the right to claim indemnity from the other in accordance with Sections 12.1.1 and 12.1.2 upon resolution of such underlying Third Party Claim.

12.2 Insurance. Each of the Parties will, at their own respective expense (and not subject to cost sharing hereunder) procure and maintain during the Term, insurance policies in commercially reasonable amounts in light of their obligations hereunder and consistent with the normal business practices of prudent biopharmaceutical companies of similar size and scope (or reasonable self-insurance sufficient to provide materially the same level and type of protection). Such insurance will not create a limit to or increase either Party's liability hereunder. Each Party shall provide the other with written notice at least thirty (30) days prior to the cancellation, non-renewal or material change in such insurance or self-insurance which materially adversely affects the rights of the other Party hereunder.

ARTICLE 13

CONFIDENTIALITY

13.1 Confidential Information.

13.1.1 Confidential Information. "***Confidential Information***" of a Party shall mean, subject to the exceptions set forth in Section 13.1.3, any confidential or proprietary information, including all Know-How, that is disclosed or made available by or on behalf of such Party (the "***Disclosing Party***") to the other Party (the "***Receiving Party***") or any of the Receiving Party's or its Affiliates' Representatives in connection with this Agreement, whether in writing, orally, visually or otherwise, including, without limitation, all "Confidential Information" (as such term is defined in the Confidentiality Agreement) disclosed or made available by or on behalf of such Party to the other Party or any of its Representatives pursuant to the Confidentiality Agreement. Notwithstanding the foregoing, the Parties agree that: (a) all Arcturus Platform Improvements shall be considered the Confidential Information of Arcturus for purposes of this Agreement, and Arcturus and Providence shall be considered the Disclosing Party and the Receiving Party, respectively, with respect thereto; and (b) all Joint Inventions shall be considered the Confidential Information of both Parties for purposes of this Agreement, and each Party shall be considered both a Disclosing Party and a Receiving Party with respect thereto.

13.1.2 Restrictions. Except to the extent expressly authorized by this Agreement, during the Term and for seven (7) years thereafter (or, in the case of any trade secrets, for so long as they remain secret), Receiving Party will keep all Disclosing Party's Confidential Information in confidence and will not use any of Disclosing Party's Confidential Information for any purpose other than as expressly permitted by this Agreement. Receiving

Party shall use at least the same standard of care as it uses to protect proprietary or confidential information of its own (but in no event less than reasonable care) to ensure that its and its Affiliates' Representatives do not disclose or make any unauthorized use of Disclosing Party's Confidential Information. Receiving Party shall promptly notify Disclosing Party upon discovery of any loss, unauthorized use or unauthorized disclosure of Disclosing Party's Confidential Information. Receiving Party will use diligent efforts to cause its Affiliates, and its and their respective Representatives, to comply with this Article 13. The failure of any Representative of Receiving Party or its Affiliates to comply with the terms and conditions of this Article 13 shall be considered a breach of this Agreement by Receiving Party.

13.1.3 Exceptions. Disclosing Party's Confidential Information shall not include information that Receiving Party can demonstrate by competent evidence: (a) was known to Receiving Party or any of its Affiliates prior to the time of disclosure (provided that the exception in this clause (a) shall not apply to Arcturus Platform Improvements or Joint Inventions); (b) is or becomes public knowledge through no breach of this Agreement by Receiving Party, any of its Affiliates or any of its or their respective Representatives; (c) is obtained by Receiving Party or any of its Affiliates, without restriction on disclosure, from a Third Party under no obligation of confidentiality to Disclosing Party; or (d) has been independently developed by Representatives of Receiving Party or any of its Affiliates without the use of, reference to, or reliance upon Disclosing Party's Confidential Information and without any breach of this Agreement, as evidenced by Receiving Party's contemporaneously-maintained written records.

13.1.4 Permitted Disclosures. Receiving Party may disclose Disclosing Party's Confidential Information as expressly permitted by this Agreement (including as reasonably necessary for the Receiving Party's performance of its obligations under this Agreement), or to the extent (and only to the extent) such disclosure is reasonably necessary in the following instances:

(a) complying with applicable court orders, applicable laws, rules or regulations, or the listing rules of any exchange on which the Receiving Party's or its Affiliate's securities are traded;

(b) prosecuting or defending litigation as permitted by this Agreement;

(c) enforcing Receiving Party's rights under this Agreement;

(d) filing or prosecuting Patent Rights as permitted by this Agreement;

(e) disclosure in Regulatory Submissions with respect to a Collaboration Compound or Product that Receiving Party has the right to make under this Agreement;

(f) disclosure to the Receiving Party's Affiliates, to actual and potential licensees and sublicensees, and to the Receiving Party's and its Affiliates' Representatives who have a need to know such information in order for the Receiving Party to exercise its rights or fulfill its obligations under this Agreement, provided, in each case, that any

such Affiliate, actual or potential licensee or sublicensee or Representative agrees to be bound by terms of confidentiality and non-use at least as stringent as those set forth in this Article 13; and

(g) disclosure to Third Parties in connection with due diligence or similar investigations by such Third Parties, and disclosure to potential Third-Party investors in confidential financing documents, provided, in each case, that any such Third Party agrees to be bound by reasonable obligations of confidentiality and non-use.

Notwithstanding the foregoing, in the event Receiving Party is required to make a disclosure of Disclosing Party's Confidential Information pursuant to Section 13.1.4(a) or Section 13.1.4(b), Receiving Party will, where reasonably possible, notify Disclosing Party of Receiving Party's intent to make any disclosure pursuant thereto sufficiently prior to making such disclosure so as to allow Disclosing Party adequate time to take whatever action it may deem appropriate to protect the confidentiality of the information to be disclosed, and, at Disclosing Party's request and expense, Receiving Party will cooperate with Disclosing Party's efforts to secure confidential treatment of such Confidential Information.

13.2 Confidentiality of Terms of Agreement. The terms of this Agreement shall be considered the Confidential Information of both Parties (*i.e.*, each Party shall be considered both the Disclosing Party and the Receiving with respect thereto) for purposes of this Article 13.

13.3 Publicity.

13.3.1 Press Releases. It is acknowledged that each Party may desire or be required to issue subsequent press releases relating to this Agreement or activities hereunder. The Parties agree to consult with each other reasonably and in good faith with respect to the text and timing of subsequent press releases prior to the issuance thereof, provided that a Party may not withhold consent to such releases that the other Party may determine, based on advice of counsel, are reasonably necessary to comply with applicable Laws, including disclosure requirements of the U.S. Securities and Exchange Commission, or with the requirements of any stock exchange on which securities issued by a Party or its Affiliates are traded. In the event of a required public announcement, to the extent there is sufficient time while still being able to comply with applicable Laws, including disclosure requirements of the U.S. Securities and Exchange Commission, or with the requirements of any stock exchange on which securities issued by a Party or its Affiliates are traded, the Party making such announcement shall provide the other Party with a copy of the proposed text of such announcement sufficiently in advance of the scheduled release to afford such other Party a reasonable opportunity to review and comment upon the proposed text. Each Party may make public statements regarding this Agreement in response to questions by the press, analysts, investors or those attending industry conferences or financial analyst calls, or issue press releases, so long as the contents of any such public statement or press release are contained in a prior public disclosure or public statement approved by the other Party pursuant to this Section 13.3.1 or permitted by Section 13.1.4 and do not reveal non-public information about the other Party.

13.3.2 Filing of this Agreement. The Parties shall coordinate in advance with each other in connection with the filing of this Agreement (including redaction of certain provisions of this Agreement) with any securities authority or with any stock exchange on which

securities issued by a Party or its Affiliate are traded, and each Party will use reasonable efforts to seek and obtain confidential treatment for the terms proposed to be redacted; provided that each Party will ultimately retain control over what terms are disclosed to any securities authority or stock exchange, as the case may be, to the extent such Party determines, on the advice of legal counsel, that disclosure is reasonably necessary to comply with applicable Laws, including disclosure requirements of the U.S. Securities and Exchange Commission, or with the requirements of any stock exchange on which securities issued by a Party or its Affiliates are traded, and provided further that the Parties will use their reasonable efforts to file redacted versions with any governing bodies which are consistent with redacted versions previously filed with any other governing bodies.

13.4 Publications.

13.4.1 Publication. For purposes of this Section 13.4, the terms "publish" and "scientific presentation" (including variations such as "publication" and "presentation") shall mean any public disclosure in the nature of a published paper, article, manuscript, report, poster, internet posting, presentation slides, abstract, outline, video, instructional material, presentation, or the like, in printed, electronic, or oral form.

13.4.2 Publication of Results. On a Licensed Collaboration Tumor Type-by-Licensed Collaboration Tumor Type basis and for so long as the license granted to Providence under Section 4.1 for such Collaboration Tumor Type remains in effect, Providence shall have the sole right to publish and make scientific presentations with respect to the results of Development and Commercialization activities, including clinical trials, of Collaboration Compounds for such Licensed Collaboration Tumor Type and Products containing such Collaboration Compounds. Arcturus shall have the right to review and comment on any material proposed for publication by Providence (such as by oral presentation, manuscript or abstract) that includes results of Development of any such Collaboration Compound or Product. Providence shall deliver to Arcturus a copy of any proposed written publication or outline of presentation to be made by Providence at least thirty (30) days in advance of submission for publication or presentation (or, where a copy of such publication or presentation is not available at such time, a draft or outline of such publication or a description of such presentation), and Arcturus will have the right to: (i) require a delay in submission of not more than sixty (60) days to enable patent applications protecting any Collaboration Compound or Product; and (ii) require Providence to delete any disclosure of Arcturus' Confidential Information from any such proposed publication or presentation prior to submission for publication or presentation.

ARTICLE 14

TERM & TERMINATION

14.1 Term. The term of this Agreement (the "***Term***") shall commence on the Effective Date, and unless terminated earlier as provided in this Article 14, shall continue in full force and effect until either, as applicable:

14.1.1 such time as there is no longer any Collaboration Compound and/or Product being Developed or Commercialized hereunder by Providence, its Affiliates and/or Sublicensees.

14.2 Termination for Breach.

14.2.1 Subject to Section 14.2.2, each Party shall have the right, in the event of material breach of this Agreement by the other Party, to terminate this Agreement upon written notice to the other Party if such other Party is in material breach of this Agreement and has not cured such breach within ninety (90) days after notice from the terminating Party requesting cure of the breach. Any such termination shall become effective at the end of such 90-day period unless the breaching Party has cured such breach prior to the end of such period. Notwithstanding the foregoing, in the event of any such uncured material breach affecting only a particular Collaboration Tumor Type or Collaboration Compounds or Products directed to such Collaboration Tumor Type (collectively, a "***Collaboration Program***"), such termination shall apply only to the affected Collaboration Program, and this Agreement shall otherwise remain in full force and effect.

14.2.2 Any right to terminate this Agreement, in its entirety or with respect to a particular Collaboration Program, as applicable, under Section 14.2.1 shall be stayed and the cure period tolled in the event that, during the applicable cure period, the Party alleged to have been in material breach shall have initiated dispute resolution in accordance with Section 15.1 with respect to the alleged breach, which stay and tolling shall continue until such dispute has been resolved in accordance with Section 15.1. It is understood and agreed that during the pendency of such dispute, all of the terms and conditions of this Agreement shall remain in effect and the Parties shall continue to perform all of their respective obligations hereunder.

14.3 Providence Discretionary Termination. Providence shall have the right to terminate this Agreement either in its entirety or with respect to a particular Collaboration Program upon sixty (60) days' written notice to Arcturus.

14.4 Effect of Termination.

14.4.1 Termination of this Agreement. In the event of any termination of this Agreement in its entirety, or termination of this Agreement as to any Collaboration Program, then, in each case:

(a) all rights and licenses granted by Arcturus to Providence (including the license granted under Section 4.1) with respect to any such Collaboration Program (a "***Terminated Program***") under this Agreement shall automatically terminate and revert to Arcturus;

(b) solely in the event of termination of this Agreement with respect to a particular Collaboration Program, but not this Agreement in its entirety, if Providence's license under Section 4.1 was in effect with respect to any Collaboration Program that is not a Terminated Program immediately prior to such termination (a "***Non-Terminated Program***"), this Agreement shall continue in full force and effect with respect to such Non-Terminated Program, subject to all terms and conditions hereof; *provided, however,* that if there is no Non-Terminated

Program immediately prior to termination with respect to a Terminated Program, this Agreement will be deemed to have been terminated in its entirety;

(c) Providence shall, and it hereby does, grant to Arcturus a non-exclusive, perpetual, royalty-free, non-transferable (except as provided in Section 15.4) license, including the right to sublicense through multiple tiers, under Patent Rights and Know-How that in each case are Controlled by Providence and that are necessary or useful for the Development and Commercialization of Collaboration Compounds and Products for any Terminated Program ("***Providence Technology***"), solely to Develop, make, have made, use, sell, have sold, offer for sale and import Collaboration Compounds and Products for such Terminated Program in the Territory. Notwithstanding the foregoing, to the extent the Providence Technology includes Patent Rights or other intellectual property rights licensed to Providence by a Third Party that are subject to royalty or milestone payment obligations to such Third Party with respect to Collaboration Compounds and Products for any Terminated Program, then Providence shall so notify Arcturus, together with a true, complete and correct description of such royalty and milestone payment obligations, and the inclusion of such Patent Rights or other intellectual property rights in the license granted to Arcturus under this Section 14.4.1(c) for such Terminated Program shall be subject to Arcturus' agreeing in writing to pay, and promptly paying, all royalty and milestone payments that become due to such Third Party by reason of the Development or Commercialization of such Collaboration Compounds and Products by or on behalf of Arcturus or any of its Affiliates or Sublicensees in the Territory;

(d) Right of First Negotiation and Right

(i) Providence shall, and it hereby does, grant to Arcturus a right of first negotiation, during the applicable ninety (90) day period (each, a "***Negotiation Period***") after termination of this Agreement (with respect to each Terminated Program), to obtain an exclusive, royalty-bearing license, including the right to sublicense through multiple tiers, under Providence Technology associated with such Terminated Program, solely to Develop, make, have made, use, sell, have sold, offer for sale and import Collaboration Compounds and Products for such Terminated Program in the Territory, upon commercially reasonable terms and conditions to be negotiated in good faith by the Parties;

(ii) if Providence and Arcturus are unable to negotiate reasonable terms and conditions during any applicable Negotiation Period with respect to Providence Technology associated with a Terminated Program, Providence hereby agrees that if Providence thereafter intends to accept any offer from a Third Party with respect to Providence Technology associated with the applicable Terminated Program, Providence shall promptly notify Arcturus in writing of the proposed terms and conditions of such proposed license, and Arcturus shall have the right, exercisable within thirty (30) days, to enter into an exclusive, royalty-bearing license agreement (including the right to sublicense through multiple tiers) with Providence with respect to the Providence Technology associated with a Terminated Program on materially the same terms and conditions of such Third Party offer;

(e) Providence shall at Providence's expense (unless such termination is by Providence for uncured material breach by Arcturus pursuant to Section 14.2, in which case at Arcturus' request and at its expense): (i) disclose to Arcturus as soon as reasonably practicable

such Providence Technology (including all preclinical and clinical data) with respect to any Terminated Program as may be necessary or useful to enable Arcturus to practice the license granted under Section 14.4.1(c); (ii) deliver to Arcturus true, correct and complete copies of all Regulatory Filings and associated correspondence with Regulatory Authorities with respect to Collaboration Compounds and Products for such Terminated Program in the Territory, whether held in the name of Providence or its Affiliate ; (iii) as promptly as reasonably practicable, transfer and assign to Arcturus all of its and its Affiliates' right, title and interest in and to all Regulatory Filings and associated correspondence with Regulatory Authorities with respect to Collaboration Compounds and Products for such Terminated Program in the Territory (or, if applicable Law prevents or delays the transfer of ownership of any such Regulatory Filing to Arcturus, Providence shall grant, and does hereby grant, to Arcturus an exclusive and irrevocable right of access and reference to such Regulatory Filing for Collaboration Compounds and Products for such Terminated Program, and shall cooperate fully to make the benefits of such Regulatory Filings available to Arcturus or its designee); and (iv) take such other actions and execute such other instruments, assignments and documents as may be necessary to effect, evidence, register and record the transfer, assignment or other conveyance of rights under this Section 14.4.1(e) to Arcturus;

(f) any sublicense granted by Providence to any Sublicensee with respect to any Terminated Program that was in effect prior to such termination shall continue in full force and effect and shall automatically be deemed a direct license by Arcturus to such Sublicensee under this Agreement effective as of the date of termination, provided that such Sublicensee (i) is not in material breach of its sublicense and (ii) agrees in writing to comply with all of the terms of this Agreement to the extent applicable to the rights originally sublicensed to it by Providence. Any such sublicense that survives as a direct license by Arcturus pursuant to the preceding sentence shall be subject to the terms and conditions of this Agreement, except that the scope of the direct license shall be the same as that of the sublicense granted by Providence to such Sublicensee;

(g) at Providence's expense (unless such termination is by Providence for uncured material breach by Arcturus pursuant to Section 14.2, in which case at Arcturus' request and at its expense), Providence shall either promptly and diligently wind down, according to good clinical practice, any clinical trials that are ongoing with respect to any Terminated Program at the time of notice of such termination, or reasonably cooperate with Arcturus and its designees to facilitate a smooth, orderly and prompt transition of such clinical trials to Arcturus or its designees; and

(h) Providence shall, and, effective as of such termination, hereby does, assign to Arcturus all of Providence's right, title and interest in and to any and all Product-specific trademarks used by Providence and its Affiliates in the Territory with respect to Products for any Terminated Program, including all goodwill therein, and Providence shall promptly take such actions and execute such instruments, assignments and documents as may be necessary to effect, evidence, register and record such assignment, at Arcturus' cost.

14.4.2 Return of Confidential Information. In the event of termination of this Agreement in its entirety or with respect to a particular Collaboration Program, each Party shall return (or destroy, as directed by the other Party) all data, files, records and other materials

containing or comprising the other Party's Confidential Information, except to the extent such Confidential Information is necessary or useful for the practice of any license granted to Providence under Section 4.1 that remains in effect with respect to any Non-Terminated Program (if applicable) or of any license granted to Arcturus pursuant to Section 14.4.1(c). Notwithstanding the foregoing, each Party will be permitted to retain one copy of Confidential Information of the other Party as necessary to comply with applicable Law and for the purpose of determining any continuing obligations hereunder.

14.4.3 Accrued Rights and Obligations: Survival. Neither expiration nor any termination of this Agreement shall relieve either Party of any obligation or liability accruing prior to such expiration or termination, nor shall expiration or any termination of this Agreement preclude either Party from pursuing all rights and remedies it may have under this Agreement, at law or in equity, with respect to breach of this Agreement. The provisions of Article 1 (to the extent defined terms are contained in the following surviving Articles and Sections), Article 12 and Article 15 and Sections 9.11, 9.12, 9.13, 10.1, 11.4, 11.5, 13.1, 13.2, and 14.4 shall survive expiration or termination of this Agreement for any reason.

ARTICLE 15

MISCELLANEOUS

15.1 Dispute Resolution. It is the objective of the Parties to establish procedures to facilitate the resolution of disputes arising under this Agreement in an expedient manner by mutual cooperation and without resort to litigation. In the event of any disputes, controversies or differences which may arise between the Parties out of or in relation to or in connection with this Agreement, including, without limitation, any alleged failure to perform, or breach, of this Agreement, or any issue relating to the interpretation, application, enforcement, termination or validity of this Agreement (each, a "**Dispute**"), then upon the request of either Party by written notice, the Parties agree to first meet and discuss in good faith a possible resolution thereof, which good faith efforts shall include at least one in-person meeting between the Parties' respective Designated Executive Officers. If the matter is not resolved within thirty (30) days following the written request for discussions, either Party may refer the Dispute to be resolved by arbitration in accordance with the International Arbitration Rules (the "***Rules***") of the International Centre for Dispute Resolution. The arbitration shall be conducted in San Diego, California by one (1) arbitrator appointed in accordance with the Rules. Notwithstanding the foregoing, either Party will have the right to apply to any court of competent jurisdiction for a temporary restraining order, a preliminary injunction or other equitable relief to preserve the status quo or prevent irreparable harm.

15.2 Governing Law. This Agreement and its effect are subject to and shall be construed and enforced in accordance with the law of the State of California, without regard to its conflicts of laws. The United Nations Convention on Contracts for the International Sale of Goods will not apply in any way to this Agreement or to the transactions contemplated by this Agreement or otherwise to create any rights or to impose any duties or obligations on any Party to this Agreement.

15.3 Entire Agreement; Amendment. This Agreement and all Exhibits attached to this Agreement constitute the entire agreement between the Parties as to the subject matter hereof. All prior and contemporaneous negotiations, representations, warranties, agreements, statements, promises and understandings with respect to the subject matter of this Agreement are hereby superseded and merged into, extinguished by and completely expressed by this Agreement, including the Confidentiality Agreement (it being understood that information disclosed thereunder shall be subject to the terms of this Agreement). Neither Party shall be bound by or charged with any written or oral agreements, representations, warranties, statements, promises or understandings not specifically set forth in this Agreement. No amendment, supplement or other modification to any provision of this Agreement shall be binding unless in writing and signed by the Parties.

15.4 Successors and Assigns. Neither this Agreement nor any of the rights or obligations created herein may be assigned by either Party, in whole or in part, without the prior written consent of the other Party, not to be unreasonably withheld or delayed; *provided, however,* that either Party shall be free to assign this Agreement and its rights and obligations hereunder without the other Party's consent:

(a) to an Affiliate of such Party, provided that such Party shall remain liable and responsible to the other Party for the performance and observance of all such duties and obligations by such Affiliate; or

(b) to a successor of such Party pursuant to a *bona fide* business reorganization if such Party changes its corporate domicile or jurisdiction of incorporation, or performs a continuation to continue its corporate existence under the laws of another jurisdiction as if it had been incorporated under the laws of that other jurisdiction, provided that such successor assumes all obligations from such Party under this Agreement; or

(c) in connection with the transfer or sale of all or substantially all of the business of such Party to which this Agreement relates to a Third Party ("***Third Party Acquirer***"), whether by sale of stock, sale of assets, merger, reorganization, amalgamation or other combination (whether by plan of arrangement or by other means whatsoever) or otherwise (each, a "***Sale Transaction***"), provided that in the event of a Sale Transaction (whether this Agreement is actually assigned or is assumed by the Third Party Acquirer or the surviving corporation resulting from such Sale Transaction by operation of law (*e.g.*, in the context of a reverse triangular merger)) intellectual property rights of the Third-Party Acquirer (i) existing prior to the Sale Transaction, or (ii) developed after the Sale Transaction without use of such Party's intellectual property, shall not be included in the technology licensed hereunder or otherwise subject to this Agreement.

This Agreement shall bind and inure to the benefit of the successors and permitted assigns of the Parties hereto, and the name of a Party appearing herein will be deemed to include the name of such Party's successors and permitted assigns to the extent necessary to carry out the intent of this section. Any assignment of this Agreement in contravention of this Section 15.4 shall be null and void.

15.5 Rights Upon Bankruptcy. All rights and licenses granted under or pursuant to any section of this Agreement are, and shall otherwise be deemed to be, for purposes of Section 365(n) of the U.S. Bankruptcy Code and other similar laws in any jurisdiction outside the U.S. including Section 65.11(7) of the *Bankruptcy and Insolvency Act* (Canada), and Section 32(6) of the *Companies Creditors Arrangement Act* (Canada) (collectively, the "***Bankruptcy Laws***"), licenses of rights to "intellectual property" as defined under the Bankruptcy Laws. The Parties shall retain and may fully exercise all of their respective rights and elections under the Bankruptcy Laws. Upon the bankruptcy of any Party, the non-bankrupt Party shall further be entitled to a complete duplicate of (or complete access to, as appropriate) any such intellectual property, and such, if not already in its possession, shall be promptly delivered to the non-bankrupt Party, unless the bankrupt Party elects to continue, and continues, to perform all of its obligations under this Agreement.

15.6 Independent Contractors. The relationship between Arcturus and Providence created by this Agreement is solely that of independent contractors. This Agreement does not create any agency, distributorship, employee-employer, partnership, joint venture or similar business relationship between the Parties. Neither Party is a legal representative of the other Party, and neither Party can assume or create any obligation, representation, warranty or guarantee, express or implied, on behalf of the other Party for any purpose whatsoever. Each Party shall use its own discretion and shall have complete and authoritative control over its employees and the details of performing its obligations under this Agreement.

15.7 Notice. All notices or communication required or permitted to be given by either Party hereunder shall be deemed sufficiently given if delivered in person, mailed by registered mail or certified mail, return receipt requested, or sent by overnight courier, such as Federal Express, to the other Party at its respective address set forth below or to such other address as one Party shall give notice of to the other from time to time hereunder. Mailed notices shall be deemed to be received on the sixth (6th) business day following the date of mailing. Notices sent by overnight courier shall be deemed received the day delivered by the courier (provided it maintains a record tracking the date of delivery). Notices delivered in person shall be deemed received as of the date of delivery.

If to Providence:	Providence Therapeutics Inc. c/o 1600, 421 – 7th Avenue SW Calgary, Alberta T2P 4K9 Canada Attn: Bradley T. Sorenson, President & CEO
If to Arcturus:	Arcturus Therapeutics, Inc. 10628 Science Center Drive, Suite 250 San Diego, CA 92121 USA Attn: Joseph E. Payne, President & CEO

15.8 Compliance With Law; Severability. Nothing in this Agreement shall be construed to require the commission of any act contrary to Law. If any one or more provisions of this Agreement is held to be invalid, illegal or unenforceable, the affected provisions of this

Agreement shall be curtailed and limited only to the extent necessary to bring it within the applicable legal requirements and the validity, legality and enforceability of the remaining provisions of this Agreement shall not in any way be affected or impaired thereby.

15.9 Non-Use of Names. Providence shall not use the name, trademark, logo, or physical likeness of Arcturus or any of its officers, directors or employees, or any adaptation of any of them, in any advertising, promotional or sales literature, without such Arcturus' prior written consent. Providence shall require its Affiliates to comply with the foregoing. Arcturus shall not use the name, trademark, logo, or physical likeness of Providence or any of its officers, directors or employees, or any adaptation of any of them, in any advertising, promotional or sales literature, without Providence's prior written consent. Arcturus shall require its Affiliates to comply with the foregoing.

15.10 Waivers. A Party's consent to or waiver, express or implied, of any other Party's breach of its obligations hereunder shall not be deemed to be or construed as a consent to or waiver of any other breach of the same or any other obligations of such breaching Party. A Party's failure to complain of any act, or failure to act, by the other Party, to declare the other Party in default, to insist upon the strict performance of any obligation or condition of this Agreement or to exercise any right or remedy consequent upon a breach thereof, no matter how long such failure continues, shall not constitute a waiver by such Party of its rights hereunder, of any such breach, or of any other obligation or condition. A Party's consent in any one instance shall not limit or waive the necessity to obtain such Party's consent in any future instance. In any event no consent or waiver shall be effective for any purpose hereunder unless such consent or waiver is in writing and signed by the Party granting such consent or waiver.

15.11 Remedies not Exclusive. The remedies provided to the Parties under this Agreement are cumulative and not exclusive to each other, and any such remedy will not be deemed or construed to affect any right which any of the Parties is entitled to seek at law, in equity or by statute (other than as provided in Section 15.1).

15.12 Force Majeure. Each Party shall be excused from liability for the failure or delay in performance of any obligation under this Agreement by reason of any event beyond such Party's reasonable control including but not limited to Acts of God, fire, flood, explosion, earthquake, or other natural forces, war, civil unrest, acts of terrorism, accident, destruction or other casualty, any lack or failure of transportation facilities, any lack or failure of supply of raw materials, any strike or labor disturbance, or any other event similar to those enumerated above. Such excuse from liability shall be effective only to the extent and duration of the event(s) causing the failure or delay in performance and provided that the Party has not caused such event(s) to occur. Notice of a Party's failure or delay in performance due to force majeure must be given to the other Party within ten (10) days after its occurrence. All delivery dates under this Agreement that have been affected by force majeure shall be tolled for the duration of such force majeure. In no event shall any Party be required to prevent or settle any labor disturbance or dispute.

15.13 Headings; Exhibits. Article and Section headings used herein are for convenient reference only and are not a part of this Agreement. All Exhibits are incorporated herein by this reference.

15.14 Interpretation. Except where the context otherwise requires, wherever used, the singular shall include the plural, the plural the singular, the use of any gender shall be applicable to all genders and the word "***or***" is used in the inclusive sense (and/or). The term "***including***" as used herein shall mean including, without limiting the generality of any description preceding such term. All references to a "***business day***" or "***business days***" in this Agreement means any day other than a day which is a Saturday, a Sunday or any day banks are authorized or required to be closed in the United States or Canada. All references to a "***quarter***" or "***quarterly***" in this Agreement means a period of three (3) calendar months ending on each of March 31, June 30, September 30, and December 31. The language in all parts of this Agreement shall be deemed to be the language mutually chosen by the Parties. The Parties and their counsel have cooperated in the drafting and preparation of this Agreement, and this Agreement therefore shall not be construed against any Party by virtue of its role as the drafter thereof. This Agreement has been prepared in the English language, and the English language shall control its interpretation. In addition, all notices required or permitted to be given hereunder, and all written, electronic, oral or other communications between the Parties regarding this Agreement shall be in the English language.

15.15 Counterparts. This Agreement may be executed in counterparts by a single Party, each of which when taken together shall constitute one and the same agreement and may be executed through the use of facsimiles or .pdf documents.

[Signature page follows]

In Witness Whereof, the Parties have executed this Agreement as of the Restatement Date.

Providence Therapeutics Inc.	**Arcturus Therapeutics, Inc.**
By: /s/ Bradley T. Sorenson	By:/s/ Joseph E. Payne
Name: Bradley T. Sorenson	Name: Joseph E. Payne
Title: Chief Executive Officer	Title: Chief Executive Officer

EXHIBIT A
ARCTURUS PATENTS

[REDACTED][1]

[1] Confidential Treatment Requested.

EXHIBIT B
FINANCIAL DEFINITIONS

1. "***Net Sales***" means the gross amounts invoiced for sales or other dispositions of Product by or on behalf of Providence, any of its Affiliates or any Sublicensee (each, a "***Selling Party***") to Third Parties (other than to a Sublicensee for resale), less the following deductions, to the extent specifically and solely allocable to such Product and actually incurred, taken, paid, accrued or allowed by the Selling Party (if not previously deducted in calculating the amount invoiced):

(a) normal and customary trade discounts, including trade, cash and quantity discounts, rebates or credits, actually allowed or taken;

(b) credits, refunds or allowances actually granted or made for rejection or return of previously sold Product, including recalls, or for retroactive price reductions and billing errors;

(c) compulsory payments and cash rebates related to the sales of Product paid to a Governmental Authority (or agent thereof) pursuant to governmental regulations, including government levied fees as a result of healthcare reform policies;

(d) rebates, chargebacks, and discounts (or the equivalent thereof) to managed health care organizations, pharmacy benefit managers (or the equivalent thereof), federal, state, provincial, local or other governments, or their agencies or purchasers, reimbursers, or trade customers;

(e) charges separately invoiced to customers for outbound freight, insurance, transportation, postage and handling;

(f) non-recoverable sales taxes, excise taxes, use taxes, value-added taxes, custom duties and other equivalent governmental charges levied on or measured by the billing amount for Product, as adjusted for rebates and refunds, to the extent separately itemized on the invoice (but specifically excluding, for clarity, any income taxes assessed against the income arising from such sale);

(g) wholesaler inventory management fees; and

(h) any other similar and customary deductions which are in accordance with Accounting Standards.

In no event shall any particular amount identified above be deducted more than once in calculating Net Sales (*i.e.*, no "double counting" of deductions). Net Sales will be determined from books and records of the Selling Party maintained in accordance with applicable Accounting Standards.

For clarification, sale of Product by a Selling Party to another Selling Party for resale by such entity to a Third Party (other than a Selling Party) shall not be deemed a sale for purposes

of this definition of "Net Sales," provided that the subsequent resale is included in the computation of Net Sales. Further, transfers or dispositions of Product, without consideration: (A) in connection with patient assistance programs; (B) for charitable or promotional purposes; (C) for preclinical, clinical, regulatory or governmental purposes or under so-called "named patient" or other limited access programs; or (D) for use in any tests or studies reasonably necessary to comply with Applicable Law, regulation or request by a Regulatory Authority, shall not be deemed sales of such Product for purposes of this definition of "Net Sales."

1A. ***Calculation of Net Sales of Combination Products.*** On a country-by-country basis, if a Product under this Agreement is sold in the form of a Combination Product in a country, Net Sales for the purpose of determining any payment hereunder shall be calculated as follows:

(a) Where both Product containing the Collaboration Compound as its sole active pharmaceutical ingredient ("***Single-Agent Product***") and all Other Active(s) in such Combination Product are sold separately in such country, Net Sales shall be calculated by multiplying actual Net Sales of such Combination Product in such country (as determined in accordance with paragraph 1 of this **Exhibit B**) by the fraction A/(A+B), where A is the net invoice price of Single-Agent Product in such country, and B is the sum of the net invoice prices of the Other Active(s) in the combination when sold separately in such country.

(b) If a Single-Agent Product is sold in such country, but none of the Other Active(s) is sold separately in such country, Net Sales shall be calculated by multiplying actual Net Sales of such Combination Product in such country (as determined in accordance with paragraph 1 of this **Exhibit B**) by the fraction A/C, where A is the net invoice price of such Single-Agent Product in such country, and C is the net invoice price of the Combination Product in such country.

(c) If no Single-Agent Product is sold separately in such country, but the Other Active(s) are sold separately in such country, Net Sales shall be calculated by multiplying actual Net Sales of such Combination Product in such country (as determined in accordance with paragraph 1 of this **Exhibit B**) by the fraction (C-D)/C, where C is the net invoice price of the Combination Product in such country, and D is the sum of the net invoice prices charged for the Other Active(s) in the Combination Product when sold separately in such country.

(d) If neither Single-Agent Product nor the Other Active(s) are sold separately in such country, Net Sales for the Combination Product shall be determined by mutual agreement of the Parties in good faith taking into account the relative value contributions of the Collaboration Compound portion of the Combination Product and the Other Active(s) in the Combination Product; *provided, however,* that in no event shall the relative value contribution of the Collaboration Compound portion of the Combination Product be less than 50%. In case of disagreement, an independent expert agreed upon by both Parties or, failing such agreement, designated by the International Centre for Dispute Resolution located in New York City, NY, shall determine such relative value contributions and such determination shall be final and binding upon the Parties.

2. "***Product Revenue***" means, with respect to any Product: (a) the sum of (x) Net Sales of such Product by Providence or its Affiliates (but excluding Net Sales by Providence's

Sublicensees) and (y) Other Product Revenue with respect to such Product; less (b) royalties and milestone payments actually paid by a Party or its Affiliates to a Third Party under a Third Party License with respect to a Sublicensee's Development or Commercialization of Product, except to the extent such Sublicensee is obligated to reimburse a Party or its Affiliates for such milestone or royalty payments. Product Revenue will be determined from books and records maintained by a Party or its Affiliate in accordance with applicable Accounting Standards, consistently applied throughout the organization and across all products of such Party or its Affiliate.

3. "***Commercialization Expenses***" means the following costs of Commercialization activities actually performed by Providence or its Affiliates or their Third-Party subcontractors (but not by or on behalf of Sublicensees) with respect to a Product (to the extent not already deducted in calculating Net Sales), as approved by the JSC in the applicable Product Budget. Commercialization Expenses will be determined from books and records maintained in accordance with applicable Accounting Standards, consistently applied throughout the organization and across all products of the entity whose sales of Products are giving rise to Commercialization Expenses.

(a) "***Costs of Sales***": (i) the supply price paid by Providence or its Affiliates for Product for commercial distribution by or on behalf of Providence or its Affiliates; and (ii) to the extent not included in such supply price or reimbursed by a Third Party: (A) any other direct costs and expenses incurred by Providence or its Affiliates of Manufacturing, or having Manufactured, a Product, including costs of freight, customs, duty and shipping insurance for in-bound Product for commercial distribution by or on behalf of Providence or its Affiliates; (B) actual inventory write-offs with respect to Product for commercial distribution by or on behalf of Providence or its Affiliates; and (C) in the event that the Parties mutually agree in writing that a license under Patent Rights of a Third Party is reasonably necessary for the manufacture, use or sale of a Product in a country (a "***Third Party License***"), such royalties and milestone payments that are mutually agreed by the Parties to be included in "Costs of Sales" and that are actually paid to such Third Party under such Third Party License by a Party or its Affiliates with respect to Providence's or its Affiliates' (but not a Sublicensee's) Development or Commercialization of such Product in such country.

Notwithstanding the foregoing definition or any other provision of this Agreement (including this **Exhibit B**) to the contrary, Commercialization Expenses (including, but not limited to, Costs of Sales) shall in all events <u>*exclude*</u>: (1) any and all amounts paid or payable by Providence or its Affiliate to a Third Party pursuant to a license agreement entered into by Providence or its Affiliate in settlement or compromise of any claim that the development, manufacture, production, use, importation, offer for sale, or sale of Products by or on behalf of Providence or its Affiliates or Sublicensees infringes the intellectual property rights of such Third Party; (2) any and all damages awarded to a Third Party against Providence or its Affiliates (or against a Sublicensee and paid, reimbursed or indemnified by Providence or its Affiliate) in any infringement action or claim brought by or on behalf of such Third Party with respect to development, manufacture, production, use, importation, offer for sale, or sale of Products by or on behalf of Providence or its Affiliates or Sublicensees; and (3) any and all Losses to which any Arcturus Indemnified Party may become subject as a result of a Third Party Claim and against which Providence is obligated to indemnify Arcturus under Section 12.1.1.

(b) "***Distribution Costs***": the direct costs and expenses incurred by Providence or its Affiliates that are specifically identifiable to the distribution of a Product by Providence or its Affiliates, including customer services, collection of data about sales to hospitals and other end users, order entry, billing, shipping, credit and collection and other such activities, but in any case, not including any costs or expenses which are (i) reimbursed by any Third Party or (ii) deducted in calculating Net Sales of such Product by Providence and its Affiliates.

(c) "***Marketing Costs***": with respect to a Product, the direct costs and expenses incurred by Providence or its Affiliates for marketing, promotion, advertising, promotional materials, professional education, product-related public relations, relationships with opinion leaders and professional societies, market research (before and after Regulatory Approval of a Product), healthcare economics studies, post-marketing studies required to maintain or expand Regulatory Approvals of such Product and other similar activities related to such Product and approved by the JSC. Such costs and expenses will include both internal costs (*e.g.*, salaries, benefits, supplies and materials) and costs of outside services and expenses (*e.g.*, consultants, agency fees and meeting costs). Marketing Costs shall also include costs and expenses incurred by Providence or its Affiliates that are directly related to obtaining reimbursement from payers and the cost of obtaining sales and marketing data (to the extent allocable to such Product and to the extent not included in the Distribution Costs or Sales Costs or deducted in calculating Net Sales). Notwithstanding anything to the contrary in the foregoing, Marketing Costs shall specifically exclude the cost and expense of activities that promote Providence's or its Affiliates' business as a whole without being specific to a Product (*e.g.*, corporate image advertising).

(d) "***Sales Costs***": with respect to a Product, direct costs and expenses incurred by Providence or its Affiliates for its account and specifically identifiable to the sales efforts for such Product in all markets in the Territory including the managed care market. Sales Costs shall include costs and expenses associated with sales representatives for a Product, including the cost of compensation, benefits, travel, supervision, training, sales meetings, and other sales expenses for such sales representatives. Notwithstanding anything to the contrary in the foregoing, Sales Costs shall exclude costs and expenses associated with the start-up of a Party's sales force, including recruiting, relocation and other similar costs and expenses.

(e) "***Other Approved Operating Expenses***": as may be approved by the JSC pursuant to Section 9.6.1.

4. "***Other Product Revenue***" means all payments and other consideration (including the fair market value of any non-cash consideration) received by Providence or its Affiliates from Third Parties, including Sublicensees, with respect to the commercialization of a Product, including any license fees, milestone payments, royalties (including on sales of Products by Sublicensees and other Third Parties) and other payments in connection with the grant of a license, sublicense, or option to license or sublicense, or the assignment or transfer, of rights with respect to such Product, but excluding: (i) payments for equity or debt securities of Providence or its Affiliate that are at or below the fair market value of such securities on the date of receipt, as determined in good faith by Providence's or its Affiliates (as applicable) Board of Directors, if such securities are not then traded on a public securities exchange, or as determined by the closing

price of such securities of Providence or its Affiliate (as applicable) on the date of receipt, if such securities are then traded on a public securities exchange; (ii) *bona fide* research and development funding received by Providence or its Affiliate from a Sublicensee for Providence's or its Affiliate's employees' performance of specified research and development work with respect to such Product (*e.g.*, FTE funding) after the date of the applicable sublicense, and reimbursement by such Sublicensee of documented external costs incurred by Providence or its Affiliate after the date of the sublicense for specified research and development work with respect to such Product contracted by Providence or its Affiliate to Third Party service providers, in each case, specifically for such specified research and development work; *provided, however,* that any such research and development funding received by Providence or its Affiliate for Post-Phase 2 Development Costs that are included in the Post-Phase 2 Development Expenses shared by Parties in accordance with Section 9.4 and Section 9.6 of this Agreement shall be treated as "Other Product Revenue"; and (iii) payments and reimbursements by any Sublicensee of patent prosecution and maintenance costs actually incurred by Providence or its Affiliate after the date of the sublicense in the prosecution and maintenance of Providence-Controlled Patent Rights (for the avoidance of doubt, specifically excluding Product-Specific Patents) covering such Product that are licensed or sublicensed by Providence or its Affiliate to such Sublicensee.

Exhibit 31.1

CERTIFICATION PURSUANT TO RULES 13a-14(a)

I, Joseph E. Payne, certify that:

1. I have reviewed this Amendment to Annual Report on Form 10-K of Arcturus Therapeutics Ltd.; and

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.

Date: April 10, 2019

By: /s/ Joseph E. Payne

Joseph E. Payne
President, Chief Executive Officer and Director
(principal executive officer)

Exhibit 31.2

CERTIFICATION PURSUANT TO RULES 13a-14(a)

I, Andrew Sassine, certify that:

1. I have reviewed this Amendment to Annual Report on Form 10-K of Arcturus Therapeutics Ltd.; and

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.

Date: April 10, 2019

By: /s/ Andrew Sassine

Andrew Sassine
Director and Chief Financial Officer
(principal financial officer)