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

SCHEDULE 13D

(Rule 13d-101)

INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT
TO § 240.13d-1(a) AND AMENDMENTS THERETO FILED PURSUANT TO § 240.13d-2(a)
(Amendment No.)*

Arcturus Therapeutics Ltd.

(Name of Issuer)

Ordinary Shares, par value of NIS 0.07
(Title of Class of Securities)

M1492T105
(CUSIP Number)

Jeffrey Baumel
Dentons US LLP
1221 Avenue of the Americas
New York, NY 10020-1089
(212) 768 5374
(Name, Address and Telephone Number of Person
Authorized to Receive Notices and Communications)

November 16, 2017
(Date of Event Which Requires Filing of This Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of §§ 240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box ☐.

Note: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. *See* § 240.13d-7 for other parties to whom copies are to be sent.

*The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

1	NAME OF REPORTING PERSON Joseph E. Payne		
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP		(a) ☐ (b) ☐
3	SEC USE ONLY		
4	SOURCE OF FUNDS PF		
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e)		☐
6	CITIZENSHIP OR PLACE OF ORGANIZATION Canadian		
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 1,465,097*	
	8	SHARED VOTING POWER - 0 -	
	9	SOLE DISPOSITIVE POWER 1,465,097*	
	10	SHARED DISPOSITIVE POWER - 0 -	
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 1,465,097*		
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES		☐
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 13.7%		
14	TYPE OF REPORTING PERSON IN		

*Includes 366,274 ordinary shares that are subject to repurchase pursuant to a Common Stock Purchase Agreement, dated March 4, 2013, as amended on September 27, 2017, by and between the reporting person and Arcturus Therapeutics, Inc.

Item 1. Security and Issuer.

This Schedule 13D is filed in connection with the acquisition of 1,465,097 Ordinary Shares, par value of NIS 0.07 (the "Ordinary Shares"), of Arcturus Therapeutics Ltd., an Israeli corporation (the "Issuer"). The address of the principal executive offices of the Issuer is 10628 Science Center Drive, Suite 200, San Diego, California 92121.

Item 2. Identity and Background.

(a) This Schedule 13D is filed on behalf of Joseph E. Payne (the "Reporting Person").

(b) The residence of the Reporting Person is 15907 Atkins Place, San Diego, CA 92127.

(c) The Reporting Person is the President and Chief Executive Officer of the Issuer and is a member of the board of directors of the Issuer (the "Issuer Board"). On February 2, 2018, the Issuer published a press release stating that the Reporting Person was terminated as the President and Chief Executive Officer of the Issuer. The Reporting Person disputes the legal efficacy of such termination under applicable law and the governing documents of the Issuer and reserves all legal rights with respect thereto.

(d) The Reporting Person has not, during the last five years, been convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors).

(e) The Reporting Person has not, during the last five years, been party to a civil proceeding of a judicial or administrative body of competent jurisdiction and as a result of such proceeding was or is subject to a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws.

(f) The Reporting Person is a citizen of Canada.

Item 3. Source and Amount of Funds or Other Consideration.

On March 4, 2013, the Reporting Person purchased shares of common stock of Arcturus Therapeutics, Inc. in connection with its formation for an aggregate purchase price of $10,000 pursuant to a Common Stock Purchase Agreement, dated March 4, 2013, as amended on September 27, 2017, by and between the Reporting Person and Arcturus Therapeutics, Inc. The Common Stock Purchase Agreement is attached hereto as Exhibit A. Such purchase was effected by the Reporting Person with personal funds.

The shares of Arcturus Therapeutics, Inc. were converted into 1,465,097 Ordinary Shares of the Issuer on November 16, 2017, pursuant to the terms of an Agreement and Plan of Merger and Reorganization entered into by and between the Issuer and Arcturus Therapeutics, Inc. on September 27, 2017.

On February 1, 2018, the Issuer notified the Reporting Person of its decision to exercise its repurchase right with respect to 366,274 Ordinary Shares. The Reporting Person disputes the legal efficacy of such repurchase and asserts that such Ordinary Shares continue to be legally owned by the Reporting Person.

Item 4. Purpose of Transaction.

On February 2, 2018, the Issuer published a press release stating that the Reporting Person was terminated as the President and Chief Executive Officer of the Issuer. The Reporting Person disputes the legal efficacy of such termination under applicable law and the governing documents of the Issuer and reserves all legal rights with respect thereto. Attached hereto as Exhibit B to this filing is a letter delivered to the Issuer and the individual members of the Issuer Board by the Reporting Person on February 2, 2018 to notify them that, among other things, (a) the press release announcing the Reporting Person's termination was not authorized by a proper resolution of the Issuer Board, (b) the actions taken by certain members of the Issuer Board violated applicable law and the governing documents of the Issuer and (c) that such actions violated the fiduciary duties of such directors to the Issuer and its shareholders. The letter demanded that the Issuer rescind the attempted termination and cease any further unlawful acts against the Reporting Person and the Issuer.

In response to the February 2, 2018 letter, the Chairman of the Issuer Board called a meeting of the Issuer Board, on approximately 24 hours' notice, to be held on February 5, 2018. During the second improperly called meeting, the Issuer Board inexplicably attempted to ratify the termination of the President and Chief Executive Officer that it had inappropriately and improperly attempted on Thursday, January 25, 2018 and disclosed to the public on Thursday, February 1, 2018.

Following the Issuer's unauthorized announcement on February 2, 2018 of the termination of the Reporting Person's employment, the Reporting Person was approached by certain shareholders of the Issuer (the "Supporting Shareholders"), who expressed support for his continued leadership of the Issuer.

The Reporting Person intends to discuss with the Supporting Shareholders potential changes to the composition of the Issuer Board and management of the Issuer, including the Reporting Person's immediate reinstatement as the President and Chief Executive Officer of the Issuer and election of new directors to replace the members of the Issuer Board who are responsible for the unlawful and unauthorized actions. Any such discussions shall be held in compliance with all applicable laws and regulations and will not result in the Reporting Person or the Supporting Shareholders holding 25% or more of the voting rights in the Issuer (as such term is defined in the Israeli Companies Law, 5759-1999).

Upon initiation of the contemplated discussions with the Supporting Shareholders described above, the Reporting Person and the Supporting Shareholders may be deemed to constitute a "group" under Rule 13d-5(b)(1) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Neither the filing of this Schedule 13D nor any of its contents shall be deemed to constitute an admission that the Reporting Person is a member of a group with the Supporting Shareholders for purposes of Section 13(d) of the Exchange Act or for any other purpose, and such membership is expressly disclaimed. In addition, neither the filing of this Schedule 13D nor any of its contents shall be deemed to constitute an admission that the Reporting Person is the beneficial owner of any Ordinary Shares beneficially owned by the Supporting Shareholders for purposes of Section 13(d) of the Exchange Act or for any other purpose, and such beneficial ownership is expressly disclaimed.

The Reporting Person also intends to engage in discussions with the Issuer and Issuer's management and members of the Issuer Board, other shareholders of the Issuer and other persons that may relate to the aforementioned matters and/or other matters related to governance and board composition, management, operations, business, assets, capitalization, financial condition, strategic plans and the future of the Issuer.

The Reporting Person believes that, as co-founder of the Issuer and as an inventor of the technology that forms the basis for the Issuer's foundational technology, his participation in and leadership of the Issuer is crucial for the future success of the Issuer. The Reporting Person has expressed significant concern for the lack of observation by the Issuer Board of fundamental principles of corporate governance and over the motives and qualifications of certain of the members of Issuer Board responsible for his termination. The Reporting Person will take all actions necessary and appropriate to provide the Issuer with its best opportunity to continue its mission to improve the human condition while maximizing shareholder value.

The Reporting Person may also take one or more of the actions described in subsections (a) through (j) of Item 4 of Schedule 13D, and may discuss such actions with the Issuer and the Issuer Board, other shareholders of the Issuer and other persons.

Item 5. Interest in Securities of the Issuer.

The aggregate percentage of Ordinary Shares reported owned by the Reporting Person is based upon 10,691,945 Ordinary Shares outstanding, which is the total number of Ordinary Shares outstanding as reported in the Issuer's Report of Foreign Private Issuer on Form 6-K filed with the Securities and Exchange Commission on February 5, 2018.

(a) As of the close of business on February 5, 2018, the Reporting Person directly beneficially owned 1,465,097 Ordinary Shares.*

Percentage: Approximately 13.7%*

(b) 1. Sole power to vote or direct vote: 1,465,097*
2. Shared power to vote or direct vote: 0
3. Sole power to dispose or direct the disposition: 1,465,097*
4. Shared power to dispose or direct the disposition: 0

(c) The Reporting Person has not commenced any transactions in the Ordinary Shares during the past 60 days.

(d) No person, other than the Reporting Person, is known to have the right to receive, or the power to direct the receipt of dividends from, or proceeds from the sale of, the Ordinary Shares.

(e) Not applicable.

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*See Item 3 for information relating to alleged exercise by the Issuer of the repurchase right with respect to 366,274 ordinary shares

Item 6. Contracts, Arrangements, Understandings or Relationships With Respect to Securities of the Issuer.

The Reporting Person entered into a Common Stock Purchase Agreement, dated March 4, 2013, as amended on September 27, 2017, with Arcturus Therapeutics, Inc. Arcturus Therapeutics, Inc. is now a wholly-owned subsidiary of the Issuer. The Common Stock Purchase Agreement is attached hereto as Exhibit A. The Reporting Person and the Issuer are party to a Lock-Up Agreement dated September 27, 2017. The Lock-Up Agreement is attached hereto as Exhibit C.

The information in Item 4 above is incorporated by reference herein.

Item 7. Material to be Filed as Exhibits.

Exhibit A Common Stock Purchase Agreement

Exhibit B Letter from Counsel of the Reporting Person Dated February 2, 2018

Exhibit C Lock-Up Agreement

SIGNATURES

After reasonable inquiry and to the best of his knowledge and belief, the undersigned certifies that the information set forth in this statement is true, complete and correct.

Dated: February 6, 2018

/s/ Joseph E. Payne
Joseph E. Payne

ARCTURUS THERAPEUTICS, INC.

COMMON STOCK PURCHASE AGREEMENT

This Common Stock Purchase Agreement (this "Agreement") is made as of March 4, 2013 by and between Arcturus Therapeutics, Inc., a Delaware corporation (the "Company"), and Joseph E. Payne ("Purchaser").

1. Sale of Stock. Subject to the terms and conditions of this Agreement, simultaneously with the execution and delivery of this Agreement by the parties or on such other date as the Company and Purchaser shall agree (the "Purchase Date"), the Company will issue and sell to Purchaser, and Purchaser agrees to purchase from the Company, 1,000,000 shares of the Company's Common Stock (the "Shares") at a purchase price of $0.01 per share for a total purchase price of $10,000.00 (the "Aggregate Purchase Price"). On the Purchase Date, Purchaser will deliver the Aggregate Purchase Price to the Company and the Company will enter the Shares in Purchaser's name as of such date in the books and records of the Company or, if applicable, a duly authorized transfer agent of the Company. The Company will deliver to Purchaser a stock certificate representing the Shares as soon as practicable following such date. As used elsewhere herein, the term "Shares" refers to all of the Shares purchased hereunder and all securities received in connection with the Shares pursuant to stock dividends or splits, all securities received in replacement of the Shares in a recapitalization, merger, reorganization, exchange or the like, and all new, substituted or additional securities or other property to which Purchaser is entitled by reason of Purchaser's ownership of the Shares.

2. Consideration for Shares. As consideration for the Shares, Purchaser will deliver the Aggregate Purchase Price by a check made out to the Company.

3. Limitations on Transfer. Purchaser will not assign, encumber or dispose of any interest in the Shares while the Shares are subject to the Company's Repurchase Option (as defined below). After any Shares have been released from the Repurchase Option, Purchaser shall not assign, encumber or dispose of any interest in such Shares except in compliance with the provisions below the transfer restrictions set forth in the Company's Bylaws and applicable securities laws.

(a) Repurchase Option; Vesting

(i) In the event of the voluntary or involuntary termination of Purchaser's Continuous Service Status (as defined below) for any reason (including death or Disability (as defined below)), with or without cause, the Company shall upon the date of such termination (the "Termination Date") have an irrevocable, exclusive option (the "Repurchase Option") for a period of 2 months from such date to repurchase with cash all or any portion of the Unvested Shares (as defined below) held by Purchaser as of the Termination Date at the original purchase price per Share (adjusted for any stock splits, stock dividends and the like) specified in Section 1. As used in this Agreement, "Unvested Shares" means Shares that have not yet been released from the Repurchase Option.

(ii) Unless the Company notifies Purchaser within 2 months from the Termination Date that it does not intend to exercise its Repurchase Option with respect to some or all of the Unvested Shares, the Repurchase Option shall be deemed automatically exercised by the Company as of the end of such 2-month period following such Termination Date, provided that the Company may notify Purchaser that it is exercising its Repurchase Option as of a date prior to the end of such 2-month period. Unless Purchaser is otherwise notified by the Company pursuant to the preceding sentence that the Company does not intend to exercise its Repurchase Option as to some or all of the Unvested Shares to which it applies at the time of termination, execution of this Agreement by Purchaser constitutes written notice to Purchaser of the Company's intention to exercise its Repurchase Option with respect to all Unvested Shares to which such Repurchase Option applies. The Company, at its choice, may satisfy its payment obligation to Purchaser with respect to exercise of the Repurchase Option by either (A) delivering a check to Purchaser in the amount of the purchase price for the Unvested Shares being repurchased, or (B) in the event Purchaser is indebted to the Company, canceling an amount of such indebtedness equal to the purchase price for the Unvested Shares being repurchased, or (C) by a combination of (A) and (B) so that the combined payment and cancellation of indebtedness equals such purchase price. In the event of any deemed automatic exercise of the Repurchase Option pursuant to this Section 3(a)(ii) in which Purchaser is indebted to the Company, such indebtedness equal to the purchase price of the Unvested Shares being repurchased shall be deemed automatically canceled as of the end of the 2-month period following the Termination Date unless the Company otherwise satisfies its payment obligations. As a result of any repurchase of Unvested Shares pursuant to this Section 3(a), the Company shall become the legal and beneficial owner of the Unvested Shares being repurchased and shall have all rights and interest therein or related thereto, and the Company shall have the right to transfer to its own name the number of Unvested Shares being repurchased by the Company, without further action by Purchaser.

(iii) 50% of the Shares shall initially be subject to the Repurchase Option (the "Vesting Shares"). 50% of the Vesting Shares shall be released from the Repurchase Option on the following vesting provisions unless different vesting is approved by a majority of the Board of Directors: 25% vested after obtaining suitable siRNA license, 25% vested after *in vivo* proof-of-concept achieved, 25% vested after Investigational New Drug (IND) application completed, 25% vested after in human efficacy achieved, until all Vesting Shares are released from the Repurchase Option; provided, however, that such scheduled releases from the Repurchase Option shall immediately cease as of the Termination Date. Fractional shares shall be rounded to the nearest whole share.

(iv) *Single Trigger Acceleration:* Notwithstanding the foregoing, the vesting of the Unvested Shares shall accelerate such that the Repurchase Option in Section 3(a) shall lapse as to 100% of the Unvested Shares, effective as of immediately prior to consummation of a Change of Control. As used in this Agreement, "Change of Control" means (1) a sale of all or substantially all of the Company's assets other than to an Excluded Entity (as defined below), (2) a merger, consolidation or other capital reorganization or business combination transaction of the Company with or into another corporation, limited liability company or other entity other than an Excluded Entity, or (3) the consummation of a transaction, or series of related transactions, in which any "person" (as such term is used in Sections 13(d) and 14(d) of the Exchange Act) becomes the "beneficial owner" (as defined in Rule 13d-3 of the Exchange Act), directly or indirectly, of all of the Company's then outstanding voting securities. Notwithstanding the foregoing, a transaction shall not constitute a Change of Control if its purpose is to (A) change the jurisdiction of the Company's incorporation, (B) create a holding company that will be owned in substantially the same proportions by the persons who hold the Company's securities immediately before such transaction, or (C) obtain funding for the Company in a financing that is approved by the Company's Board of Directors. An "Excluded Entity" means a corporation, limited liability company or other entity of which the holders of voting capital stock of the Company outstanding immediately prior to such transaction are the direct or indirect holders of voting securities representing at least a majority of the votes entitled to be cast by all of such corporation's, limited liability company's or other entity's voting securities outstanding immediately after such transaction.

(b) Right of First Refusal. Before any Shares held by Purchaser or any transferee of Purchaser (either being sometimes referred to herein as the "Holder") may be sold or otherwise transferred (including transfer by gift or operation of law), the Company or its assignee(s) shall have a right of first refusal to purchase the Shares on the terms and conditions set forth in this Section 3(b) (the "Right of First Refusal"). Shares held by a Purchaser may also be subject to a Right of First Refusal on terms and conditions set forth in other documents approved by the Board of Directors that supplement or supersede the terms and conditions set forth in this Section 3(b) (e.g., key person insurance policy).

(i) Notice of Proposed Transfer. The Holder of the Shares shall deliver to the Company a written notice (the "Notice") stating: (A) the Holder's bona fide intention to sell or otherwise transfer such Shares; (B) the name of each proposed purchaser or other transferee ("Proposed Transferee"); (C) the number of Shares to be transferred to each Proposed Transferee; and (D) the terms and conditions of each proposed sale or transfer, including (without limitation) the purchase price for such Shares (the "Transfer Purchase Price"). The Holder shall offer the Shares at the Transfer Purchase Price and upon the same terms (or terms as similar as reasonably possible) to the Company or its assignee(s).

(ii) Exercise of Right of First Refusal. At any time within 30 days after receipt of the Notice, the Company and/or its assignee(s) may, by giving written notice to the Holder, elect to purchase any or all of the Shares proposed to be transferred to any one or more of the Proposed Transferees, at the Transfer Purchase Price, provided that if the Transfer Purchase Price consists of no legal consideration (as, for example, in the case of a transfer by gift), the purchase price will be the fair market value of the Shares as determined in good faith by the Company's Board of Directors. If the Transfer Purchase Price includes consideration other than cash, the cash equivalent value of the non-cash consideration shall be determined by the Company's Board of Directors in good faith.

(iii) Payment. Payment of the Transfer Purchase Price shall be made, at the election of the Company or its assignee(s), in cash (by check), by cancellation of all or a portion of any outstanding indebtedness, or by any combination thereof within 60 days after receipt of the Notice or in the manner and at the times set forth in the Notice.

(iv) Holder's Right to Transfer. If any of the Shares proposed in the Notice to be transferred to a given Proposed Transferee are not purchased by the Company and/or its assignee(s) as provided in this Section 3(b), then the Holder may sell or otherwise transfer any unpurchased Shares to that Proposed Transferee at the Transfer Purchase Price or at a higher price, provided that such sale or other transfer is consummated within 120 days after the date of the Notice and provided further that any such sale or other transfer is effected in accordance with [the transfer restrictions set forth in the Company's Bylaws and] any applicable securities laws and the Proposed Transferee agrees in writing that the provisions of this Section 3 shall continue to apply to the Shares in the hands of such Proposed Transferee. The Company, in consultation with its legal counsel, may require the Holder to provide an opinion of counsel evidencing compliance with applicable securities laws. If the Shares described in the Notice are not transferred to the Proposed Transferee within such period, or if the Holder proposes to change the price or other terms to make them more favorable to the Proposed Transferee, a new Notice shall be given to the Company, and the Company and/or its assignees shall again be offered the Right of First Refusal before any Shares held by the Holder may be sold or otherwise transferred.

(v) Exception for Certain Family Transfers. Anything to the contrary contained in this Section 3(b) notwithstanding, the transfer of any or all of the Shares during Purchaser's lifetime or on Purchaser's death by will or intestacy to Purchaser's Immediate Family or to a trust for the benefit of Purchaser or Purchaser's Immediate Family shall be exempt from the provisions of this Section 3(b). "Immediate Family" as used in this Agreement shall mean lineal descendant or antecedent, spouse (or spouse's antecedents), father, mother, brother or sister (or their descendants), stepchild (or their antecedents or descendants), aunt or uncle (or their antecedents or descendants), brother-in-law or sister-in-law (or their antecedents or descendants) and shall include adoptive relationships, or any person sharing Purchaser's household (other than a tenant or an employee). In such case, the transferee or other recipient shall receive and hold the Shares so transferred subject to the provisions of this Section 3, and there shall be no further transfer of such Shares except in accordance with the terms of this Section 3.

(c) Company's Right to Purchase upon Involuntary Transfer. In the event, at any time after the date of this Agreement, of any transfer by operation of law or other involuntary transfer (including divorce or intestate transfer upon death, but excluding transfer upon death by will (to any transferee) or a transfer to Immediate Family as set forth in Section 3(b)(v) above) of all or a portion of the Shares by the record holder thereof, the Company shall have the right to purchase any or all of the Shares transferred at the fair market value of the Shares on the date of transfer (as determined by the Company). Upon such a transfer, the Holder shall promptly notify the Secretary of the Company of such transfer. The right to purchase such Shares shall be provided to the Company for a period of 30 days following receipt by the Company of written notice from the Holder.

(d) Assignment. The fight of the Company to purchase any part of the Shares may be assigned in whole or in part to any holder or holders of capital stock of the Company or other persons or organizations.

(e) Restrictions Binding on Transferees. All transferees of Shares or any interest therein will receive and hold such Shares or interest subject to the provisions of this Agreement, including, insofar as applicable, the Repurchase Option. Any sale or transfer of the Shares shall be void unless the provisions of this Agreement are satisfied.

(f) Termination of Rights. The Right of First Refusal granted the Company by Section 3(b) above and the right to repurchase the Shares in the event of an involuntary transfer granted the Company by Section 3(c) above shall terminate upon (i) the first sale of Common Stock of the Company to the general public pursuant to a registration statement filed with and declared effective by the Securities and Exchange Commission under the Securities Act of 1933, as amended (the "Securities Act") (other than a registration statement relating solely to the issuance of Common Stock pursuant to a business combination or an employee incentive or benefit plan) or (ii) any transfer or conversion of Shares made pursuant to a statutory merger or statutory consolidation of the Company with or into another corporation or corporations if the common stock of the surviving corporation or any direct or indirect parent corporation thereof is registered under the Securities Exchange Act of 1934, as amended (the "Exchange Act").

(g) Lock-up Agreement. If so requested by the Company or the underwriters in connection with an initial public offering of the Company's securities registered under the Securities Act of 1933, as amended, Purchaser shall not sell, make any short sale of, loan, grant any option for the purchase of, or otherwise dispose of any securities of the Company however or whenever acquired (except for those being registered) without the prior written consent of the Company or such underwriters, as the case may be, for 180 days from the effective date of the registration statement, plus such additional period, to the extent required by FINRA rules, up to a maximum of 216 days from the effebtive date of the registration statement, and Purchaser shall execute an agreement reflecting the foregoing as may be requested by the underwriters at the time of such offering.

4. Escrow of Unvested Shares. For purposes of facilitating the enforcement of the provisions of Section 3, Purchaser agrees, immediately upon receipt of the stock certificate or, in the case of uncertificated securities, notice of issuance, for the Shares subject to the Repurchase Option, to deliver any such stock certificate(s) as well as a Stock Power in the form attached to this Agreement as Exhibit A executed by Purchaser and by Purchaser's spouse (if required for transfer), in blank, to the Secretary of the Company, or the Secretary's designee, to hold such Shares (and stock certificate(s), if any) and Stock Power in escrow and to take all such actions and to effectuate all such transfers and/or releases as are in accordance with the terms of this Agreement. Purchaser hereby acknowledges that the Secretary of the Company, or the Secretary's designee, is so appointed as the escrow holder with the foregoing authorities as a material inducement to make this Agreement and that said appointment is coupled with an interest and is accordingly irrevocable. Purchaser agrees that said escrow holder shall not be liable to any party hereof (or to any other party). The escrow holder may rely upon any letter, notice or other document executed by any signature purported to be genuine and may resign at any time. Purchaser agrees that if the Secretary of the Company, or the Secretary's designee, resigns as escrow holder for any or no reason, the Board of Directors of the Company shall have the power to appoint a successor to serve as escrow holder pursuant to the terms of this Agreement.

5. Investment and Taxation Representations. In connection with the purchase of the Shares, Purchaser represents to the Company the following:

(a) Purchaser is aware of the Company's business affairs and financial condition and has acquired sufficient information about the Company to reach an informed and knowledgeable decision to acquire the Shares. Purchaser is purchasing the Shares for investment for Purchaser's own account only and not with a view to, or for resale in connection with, any "distribution" thereof within the meaning of the Securities Act or under any applicable provision of state law. Purchaser does not have any present intention to transfer the Shares to any other person or entity.

(b) Purchaser understands that the Shares have not been registered under the Securities Act by reason of a specific exemption therefrom, which exemption depends upon, among other things, the bona fide nature of Purchaser's investment intent as expressed herein.

(c) Purchaser further acknowledges and understands that the securities must be held indefinitely unless they are subsequently registered under the Securities Act or an exemption from such registration is available. Purchaser further acknowledges and understands that the Company is under no obligation to register the securities.

(d) Purchaser is familiar with the provisions of Rule 144, promulgated under the Securities Act, which, in substance, permits limited public resale of "restricted securities" acquired, directly or indirectly, from the issuer of the securities (or from an affiliate of such issuer), in a non-public offering subject to the satisfaction of certain conditions. Purchaser understands that the Company provides no assurances as to whether he or she will be able to resell any or all of the Shares pursuant to Rule 144, which rule requires, among other things, that the Company be subject to the reporting requirements of the Exchange Act, that resales of securities take place only after the holder of the Shares has held the Shares for certain specified time periods, and under certain circumstances, that resales of securities be limited in Volume and take place only pursuant to brokered transactions. Notwithstanding this Section 5(d), Purchaser acknowledges and agrees to the restrictions set forth in Section 5(e) below.

(e) Purchaser further understands that in the event all of the applicable requirements of Rule 144 are not satisfied, registration under the Securities Act, compliance with Regulation A, or some other registration exemption will be required; and that, notwithstanding the fact that Rule 144 is not exclusive, the Staff of the Securities and Exchange Commission has expressed its opinion that persons proposing to sell private placement securities other than in a registered offering and otherwise than pursuant to Rule 144 will have a substantial burden of proof in establishing that an exemption from registration is available for such offers or sales, and that such persons and their respective brokers who participate in such transactions do so at their own risk.

Purchaser understands that Purchaser may suffer adverse tax consequences as a result of Purchaser's purchase or disposition of the Shares. Purchaser represents that Purchaser has consulted any tax consultants Purchaser deems advisable in connection with the purchase or disposition of the Shares and that Purchaser is not relying on the Company for any tax advice.

6. Restrictive Legends and Stop-Transfer Orders.

(a) Legends. Any stock certificate or, in the case of uncertificated securities, notice of issuance, for the Shares, shall bear the following legends (as well as any legends required by applicable state and federal corporate and securities laws):

(i) "THE SECURITIES REFERENCED HEREIN HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AND HAVE BEEN ACQUIRED FOR INVESTMENT AND NOT WITH A VIEW TO, OR IN CONNECTION WITH, THE SALE OR DISTRIBUTION THEREOF. NO SUCH SALE OR DISTRIBUTION MAY BE EFFECTED WITHOUT AN EFFECTIVE REGISTRATION STATEMENT RELATED THERETO OR AN OPINION OF COUNSEL IN A FORM SATISFACTORY TO THE COMPANY THAT SUCH REGISTRATION IS NOT REQUIRED UNDER THE SECURITIES ACT OF 1933."

(ii) "THE TRANSFER OF SECURITIES REFERENCED HEREIN IS SUBJECT TO RESTRICTIONS REQUIRING APPROVAL OF THE BOARD OF DIRECTORS PURSUANT TO AND IN ACCORDANCE WITH THE COMPANY'S BYLAWS, COPIES OF WHICH MAY BE OBTAINED UPON WRITTEN REQUEST TO THE COMPANY AT ITS PRINCIPAL PLACE OF BUSINESS. THE COMPANY SHALL NOT REGISTER OR OTHERWISE RECOGNIZE OR GIVE EFFECT TO ANY PURPORTED TRANSFER OF SHARES OF STOCK THAT DOES NOT COMPLY WITH THE COMPANY'S BYLAWS."

(b) Transfer Notices. Purchaser agrees that, in order to ensure compliance with the restrictions referred to herein, the Company may issue appropriate "stop transfer" instructions to its transfer agent, if any, and that, if the Company transfers its own securities, it may make appropriate notations to the same effect in its own records.

(c) Refusal to Transfer. The Company shall not be required (i) to transfer on its books any Shares that have been sold or otherwise transferred in violation of any of the provisions of this Agreement or (ii) to treat as owner of such Shares or to accord the right to vote or pay dividends to any purchaser or other transferee to whom such Shares shall have been so transferred.

(d) Legend and Notice Removal. When all of the following events have occurred, the Shares then held by Purchaser will no longer be subject to the legend specified in Section 6(a)(ii) and the Company will remove any stop-transfer notices associated with the transfer restrictions imposed by this Agreement:

(i) the termination of the Right of First Refusal;

(ii) the expiration or exercise in full of the Repurchase Option; and

(iii) the expiration or termination of the lock-up provisions of Section 3(g) (and of any agreement entered pursuant to Section 3(g)). After such time and upon Purchaser's request, a new stock certificate or, in the case of uncertificated securities, notice of issuance, for the remaining Shares, shall be issued without the legend specified in Section 6(a)(ii) and delivered to Purchaser.

7. No Employment Rights. Nothing in this Agreement shall affect in any manner whatsoever the right or power of the Company, or a parent, subsidiary or affiliate of the Company, to terminate Purchaser's employment or consulting relationship, for any reason, with or without cause.

8. Section 83(b) Election. Purchaser understands that Section 83(a) of the Internal Revenue Code of 1986, as amended (the "Code"), taxes as ordinary income the difference between the amount paid for the Shares and the fair market value of the Shares as of the date any restrictions on the Shares lapse. In this context, "restriction" means the right of the Company to buy back the Shares pursuant to the Repurchase Option set forth in Section 3(a) of this Agreement. Purchaser understands that Purchaser may elect to be taxed at the time the Shares are purchased, rather than when and as the Repurchase Option expires, by filing an election under Section 83(b) (an "83(b) Election") of the Code with the Internal Revenue Service within 30 days from the date of purchase. Even if the fair market value of the Shares at the time of the execution of this Agreement equals the amount paid for the Shares, the election must be made to avoid income under Section 83(a) in the future. Purchaser understands that failure to file such an election in a timely manner may result in adverse tax consequences for Purchaser. Purchaser further understands that an additional copy of such election form should be filed with Purchaser's federal income tax return for the calendar year in which the date of this Agreement falls. Purchaser acknowledges that the foregoing is only a summary of the effect of United States federal income taxation with respect to purchase of the Shares hereunder, does not purport to be complete, and is not intended or written to be used, and cannot be used, for the purposes of avoiding taxpayer penalties. Purchaser further acknowledges that the Company has directed Purchaser to seek independent advice regarding the applicable provisions of the Code, the income tax laws of any municipality, state or foreign country in which Purchaser may reside, and the tax consequences of Purchaser's death, and Purchaser has consulted, and has been fully advised by, Purchaser's own tax advisor regarding such tax laws and tax consequences or has knowingly chosen not to consult such a tax advisor. Purchaser further acknowledges that neither the Company nor any subsidiary or representative of the Company has made any warranty or representation to Purchaser with respect to the tax consequences of Purchaser's purchase of the Shares or of the making or failure to make an 83(b) Election. PURCHASER (AND NOT THE COMPANY, ITS AGENTS OR ANY OTHER PERSON) SHALL BE SOLELY RESPONSIBLE FOR APPROPRIATELY FILING SUCH FORM WITH THE IRS, EVEN IF PURCHASER REQUESTS THE COMPANY, ITS AGENTS OR ANY OTHER PERSON MAKE THIS FILING ON PURCHASER'S BEHALF.

Purchaser agrees that Purchaser will execute and deliver to the Company with this executed Agreement a copy of the Acknowledgment and Statement of Decision Regarding Section 83(b) Election (the "Acknowledgment"), attached hereto as Exhibit B and, if Purchaser decides to make an 83(b) Election, a copy of the 83(b) Election, attached hereto as Exhibit C.

9. Certain Defined Terms.

(a) "Affiliate" means an entity other than a Subsidiary which, together with the Company, is under common control of a third person or entity.

(b) "Consultant" means any person, including an advisor but not an Employee, who is engaged by the Company, or any Parent, Subsidiary or Affiliate, to render services (other than capital-raising services) and is compensated for such services, and any Director whether compensated for such services or not.

(c) "Continuous Service Status" means the absence of any interruption or termination of service as an Employee or Consultant. Continuous Service Status as an Employee or Consultant shall not be considered interrupted or terminated in the case of: (i) Company approved sick leave; (ii) military leave; (iii) any other bona fide leave of absence approved by the Company, provided that such leave is for a period of not more than ninety (90) days, unless reemployment upon the expiration of such leave is guaranteed by contract or statute, or unless provided otherwise pursuant to a written Company policy. Also, Continuous Service Status as an Employee or Consultant shall not be considered interrupted or terminated in the case of a transfer between locations of the Company or between the Company, its Parents, Subsidiaries or Affiliates, or their respective successors, or a change in status from an Employee to a Consultant or from a Consultant to an Employee.

(d) "Director" means a member of the Board of Directors of the Company.

(e) "Disability" means "disability" within the meaning of Section 22(e)(3) of the Code.

"Employee" means any person employed by the Company, or any Parent, Subsidiary or Affiliate, with the status of employment determined pursuant to such factors as are deemed appropriate by the Board of Directors of the Company in its sole discretion, subject to any requirements of applicable laws, including the Code. The payment by the Company of a director's fee shall not be sufficient to constitute "employment" of such director by the Company or any Parent, Subsidiary or Affiliate.

(g) "Parent" means any corporation (other than the Company) in an unbroken chain of corporations ending with the Company if each of the corporations other than the Company owns stock possessing 50% or more of the total combined voting power of all classes of stock in one of the other corporations in such chain.

(h) "Subsidiary" means any corporation (other than the Company) in an unbroken chain of corporations beginning with the Company if each of the corporations other than the last corporation in the unbroken chain owns stock possessing 50% or more of the total combined voting power of all classes of stock in one of the other corporations in such chain.

10. Miscellaneous.

(a) Governing Law. The validity, interpretation, construction and performance of this Agreement, and all acts and transactions pursuant hereto and the rights and obligations of the parties hereto shall be governed, construed and interpreted in accordance with the laws of the state of California, without giving effect to principles of conflicts of law. For purposes of litigating any dispute that may arise directly or indirectly from this Agreement, the parties hereby submit and consent to the exclusive jurisdiction of the state of California and agree that any such litigation shall be conducted only in the courts of the Southern District of California, including state courts located within that district.

(b) Entire Agreement. This Agreement sets forth the entire agreement and understanding of the parties relating to the subject matter herein and supersedes all prior or contemporaneous discussions, understandings and agreements, whether oral or written, between them relating to the subject matter hereof.

(c) Amendments and Waivers. No modification of or amendment to this Agreement, nor any waiver of any rights under this Agreement, shall be effective unless in writing signed by the parties to this Agreement. No delay or failure to require performance of any provision of this Agreement shall constitute a waiver of that provision as to that or any other instance.

(d) Successors and Assigns. Except as otherwise provided in this Agreement, this Agreement, and the rights and obligations of the parties hereunder, will be binding upon and inure to the benefit of their respective successors, assigns, heirs, executors, administrators and legal representatives. The Company may assign any of its rights and obligations under this Agreement. No other party to this Agreement may assign, whether voluntarily or by operation of law, any of its rights and obligations under this Agreement, except with the prior written consent of the Company.

(e) Notices. Any notice, demand or request required or permitted to be given under this Agreement shall be in writing and shall be deemed sufficient when delivered personally or by overnight courier or sent by email, or 48 hours after being deposited in the U.S. mail as certified or registered mail with postage prepaid, addressed to the party to be notified at such party's address as set forth on the signature page, as subsequently modified by written notice, or if no address is specified on the signature page, at the most recent address set forth in the Company's books and records.

(f) Severability. If one or more provisions of this Agreement are held to be unenforceable tinder applicable law, the parties agree to renegotiate such provision in good faith. In the event that the parties cannot reach a mutually agreeable and enforceable replacement for such provision, then (i) such provision shall be excluded from this Agreement, (ii) the balance of the Agreement shall be interpreted as if such provision were so excluded and (iii) the balance of the Agreement shall be enforceable in accordance with its terms.

(g) Construction. This Agreement is the result of negotiations between and has been reviewed by each of the parties hereto and their respective counsel, if any; accordingly, this Agreement shall be deemed to be the product of all of the parties hereto, and no ambiguity shall be construed in favor of or against any one of the parties hereto.

(h) Counterparts. This Agreement may be executed in any number of counterparts, each of which when so executed and delivered shall be deemed an original, and all of which together shall constitute one and the same agreement.

(i) Electronic Delivery. The Company may, in its sole discretion, decide to deliver any documents related to this Agreement or any notices required by applicable law or the Company's Certificate of Incorporation or Bylaws by email or any other electronic means. Purchaser hereby consents to receive such documents and notices by such electronic delivery and agrees to participate through an on-line or electronic system established and maintained by the Company or a third party designated by the Company.

(j) California Corporate Securities Law. THE SALE OF THE SECURITIES WHICH ARE THE SUBJECT OF THIS AGREEMENT HAS NOT BEEN QUALIFIED WITH THE COMMISSIONER OF CORPORATIONS OF THE STATE OF CALIFORNIA AND THE ISSUANCE OF THE SECURITIES OR THE PAYMENT OR RECEIPT OF ANY PART OF THE CONSIDERATION THEREFOR PRIOR TO THE QUALIFICATION IS UNLAWFUL, UNLESS THE SALE OF SECURITIES IS EXEMPT FROM QUALIFICATION BY SECTION 25100, 25102 OR 25105 OF THE CALIFORNIA CORPORATIONS CODE. THE RIGHTS OF ALL PARTIES TO THIS AGREEMENT ARE EXPRESSLY CONDITIONED UPON THE QUALIFICATION BEING OBTAINED, UNLESS THE SALE IS SO EXEMPT.

[Signature Page Follows]

The parties have executed this Agreement as of the date first set forth above.

Arcturus Therapeutics, Inc.

By: /s/ Joseph E. Payne
Name: Joseph E. Payne
Title: President & CEO
Address:
3210 Merryfield Row
San Diego, CA
92121

PURCHASER:

By: /s/ Joseph E. Payne
Name: Joseph E. Payne
Address:
4810 Milano Way
Oceanside, CA
92057

BARN EA

Without Prejudice

By email

Re: Arcturus Therapeutics Ltd.
Dear Sirs,

This letter is sent to you on behalf of our client, Mr. Joseph Payne, a shareholder, a member of the board of directors (the **"Board")** and the President and Chief Executive Officer (the **"Position")** of Arcturus Therapeutics Ltd. (formerly, Alcobra Ltd), Israeli company number 514098995 (the **"Company").**

Our client is also one of the founders of Arcturus Therapeutics, Inc. **("ATI"),** which as of the completion of the merger transaction on November 16, 2017, became a wholly owned subsidiary of the Company.

Our client has instructed us to advise the Board and each of its members, as follows:

1. The Company was incorporated and is registered as an Israeli public company, and as such is subject to the Israeli Companies Law, 5759-1999 (the **"Companies Law")** and the regulation promulgated thereunder.

2. This morning, on February 2, 2018, the Company disseminated a press release to the public which states that effective February 1, 2018, our client was terminated as President and Chief Executive Officer of the Company, and that the Board appointed Mark R. Herbert as Interim President, effective immediately.

3. Our client, though a member of the Board, is not aware of any resolution of the Board affecting his termination from the Position or the appointment of Mr. Herbert in his place.

4. However, our client is aware of some of the happenings at a meeting of the Board held on January 25, 2018. At that meeting, four members of the Board — Messrs. Col linson, Willett, Geffken and Shapiro (the **"Four Directors") —** have attempted to pass a resolution removing our client from the Position, and had our client physically removed from the building. If the Board intends to argue that the actions were approved by a committee comprised of the Four Directors, we note that any such "committee" has never been formed or approved by the Board and any such "committee" has no authority to act for the Board. Moreover, any delegation to such "committee" without proper approval and resolution violates the Companies Law and the Articles.

5. The acts of omissions of the Four Directors, and the Board itself if and to the extent represented by the Four Directors, with regard to the attempted termination of our client from the Position, are in material breach of the Companies Law and of the Articles of Association of the Company (the **"Articles"),** and are null and void.

6. Moreover, our client believes that in attempting to terminate his service in the Position the Four Directors are not acting in the best interests of the Company, and are in fact acting to seize control of the Company and thus advance their personal and conflicting interests.

7. Without derogating from the generality of the foregoing, the relevant acts and omissions of the Four Directors, and through them of the Board, include (but are not limited to):

   (a) Bringing before the Board a resolution for the termination of our client from the Position, while such resolution was not on the agenda of the meeting. Therefore, and in accordance with section 109 to the Companies Law, any resolution pertaining to have been adopted by the Board with regard to our client, is hereby annulled; and

   (b) Excluding our client, as well as Dr. Pad Chivukula - another member of the Board and the Company's CSO and COO - from participation in Board discussions and votes — through what appears to be a gross misuse of the concept of "personal interest" and the provisions of section 278 to the Companies Law. As a consequence, any resolution adopted while our client is excluded, is hereby annulled; and

   (c) Failing to disclose their "personal interest" and "negative personal interest" regarding, *inter alia*, the matter of the termination of our client's service in the Position. Pursuant to the Companies Law, a resolution adopted while in violation of director's duty to disclose his "personal interest", and with the participation of such director, is voidable if not voided. The severity of this failure is further exasperated by the election by the Four Directors to exclude our client (as well as Dr. Chivukula) from the Board meeting, while they allow themselves to participate in the discussion, and ignore the provisions of section 278(b) to the Companies Law; and

   (d) Holding further meetings of the Board without inviting our client; and

   (e) Making false and misleading public announcement of our client's termination.

8. All of the foregoing clearly demonstrates that any action taken by the Board and/or at its instructions in connection with the termination of our client is null and void. This includes any public announcement made with regard to such termination and any attempt to repurchase any of his shares in the Company.

9. It should be noted that the above acts and omissions, with regard to the attempted termination of our client from the Position, are symptomatic to the poor corporate governance demonstrated in recent months (since the completion of the merger of the Company and ATI) by the Board, under the leadership of Stuart Collinson, the Executive Chairman of the Board. Such poor corporate governance includes, *inter alia*, failure by Board committees to report to the Board and failure to produce minutes of Board meetings.

10. In light of the above, our client hereby demands that by no later than end-of-business Monday, February 5, 2018, the Board will take the following actions:

   (a) Confirm to our client that any resolution purported to be taken by the Board, effecting his termination from the Position, is null and void; and

   (b) Issue a new announcement, confirming our client remains the Company's President and CEO; and

   (c) Refrain from any further action intended to terminate our client's service in the Position; and

(d) Safeguard our client's rights as a director, including but not limited to inviting our client to any and all meetings of the Board, providing him with all relevant information and allowing him to participate and vote at all Board meetings.

11. Note that in the event that the Board does not fully comply with our client's demand our client will seek any and all remedies available to him under applicable law, including by seeking relief from the competent Israeli courts, and by convening an extraordinary meeting of the shareholders of the Company and bringing before such meeting resolutions to change the composition of the Board.

12. In addition to all of the above, it appears that the foregoing acts and omissions may also constitute material violations of the fiduciary duties of each of the Four Directors towards the Company. As aforementioned, our client is deeply concerned that in terminating his service as President and CEO of the Company the Four Directors have failed to act in the best interests of the Company, and are in fact acting to seize control of the Company and thus advance their personal and conflicting interests. Such violations of the fiduciary duties of the Four Directors will disqualify the Four Directors from continuing to serve as members of the Board, and will impose personal liabilities on each of them.

13. Our client hereby demands that the Company take any action required to ensure that the Four Directors will comply with all of their duties towards the Company (including their fiduciary duties and their duty to disclose their personal interests and negative personal interests, within the meaning of the Companies Law), and indemnify the Company for any damage or loss incurred by the Company as a result of any breach of their duties. In the event that the Company fails to do so, our client reserves his right to act accordingly in its place.

14. Finally, nothing in this letter may be considered a waiver of any right or claim available to our client under the Companies Law, the Articles, or any other applicable law, regulation or contract. Without derogating from the generality of the foregoing, this letter only addresses our client's rights as a director and shareholder of the Company, under Israeli law, and nothing herein relates to, or addresses, our client's rights as an employee of the Company and/or ATI, and such rights are fully reserved and protected.

Sincerely,

/s/ Michael Barnea
Michael Barnea, Adv.

/s/ Noa H dala
Noa H dala, Adv.

Barnea, Jaffa, Lande & Co, Law Offices

Copies to: Joseph Payne
Jeffrey A. Baumel, Dentons US LLP

Lock-Up Agreement
September 27, 2017

Ladies and Gentlemen:

The undersigned (the "***Shareholder***") understands that: (i) Alcobra Ltd., an Israeli company ("***Alcobra***"), has entered into an Agreement and Plan of Merger and Reorganization, dated as of September 27, 2017 (the "***Merger Agreement***"), with Arcturus Therapeutics, Inc., a Delaware corporation ("***Arcturus***") and Aleph MergerSub, Inc., a Delaware corporation and wholly-owned subsidiary of Alcobra ("***Merger Sub***"), pursuant to which Merger Sub will be merged with and into Arcturus (the "***Merger***") and the separate corporate existence of Merger Sub will cease and Arcturus will continue as the surviving corporation and (ii) in connection with the Merger, stockholders of Arcturus will receive shares of Alcobra Ordinary Shares (the "***Merger Shares***"). Capitalized terms used but not otherwise defined in this letter agreement will have the meanings ascribed to such terms in the Merger Agreement.

As a material inducement to the willingness of each of Arcturus and Alcobra to enter into the Merger Agreement, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Shareholder hereby agrees that the Shareholder will not, subject to the exceptions set forth in this letter agreement, without the prior written consent of Alcobra and during the period commencing at the Effective Time and ending 180 days after the Closing Date (the "***Restricted Period***"), directly or indirectly (a) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of any Alcobra Ordinary Shares, or any securities convertible into or exercisable or exchangeable for Alcobra Ordinary Shares, whether now owned or hereinafter acquired, including without limitation, Alcobra Ordinary Shares or such other securities which may be deemed to be beneficially owned by the Shareholder in accordance with the rules and regulations of the Securities and Exchange Commission and securities of Arcturus which may be issued upon exercise of a stock option or warrant (collectively, the "***Shareholder's Shares***"), (b) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the Alcobra Ordinary Shares or such other securities, whether any such transaction described in clause (a) or (b) above is to be settled by delivery of Alcobra Ordinary Shares or such other securities, in cash or otherwise, in each case other than (i) transfers of the Shareholder's Shares as charitable gifts or donations, (ii) transfers or dispositions of the Shareholder's Shares to any trust for the direct or indirect benefit of the Shareholder or the immediate family of the Shareholder, (iii) transfers or dispositions of the Shareholder's Shares by will, other testamentary document or intestate succession to the legal representative, heir, beneficiary or a member of the immediate family of the Shareholder, (iv) transfers of the Shareholder's Shares to stockholders, direct or indirect affiliates (within the meaning set forth in Rule 405 under the Securities Act of 1933, as amended), current or former partners (general or limited), members or managers of the Shareholder, as applicable, or to the estates of any such stockholders, affiliates, partners, members or managers, or to another corporation, partnership, limited liability company or other business entity that controls, is controlled by or is under common control with the Shareholder, (v) transfers that occur by operation of law pursuant to a qualified domestic order or in connection with a divorce settlement, (vi) transfers or dispositions not involving a change in beneficial ownership, and (vii) if the Shareholder is a trust, transfers or dispositions to any beneficiary of the Shareholder or the estate of any such beneficiary; *provided* that, in each case, the transferee agrees in writing to be bound by the terms and conditions of this letter agreement and either the Shareholder or the transferee provides Arcturus with a copy of such agreement promptly upon consummation of any such Transfer; and *provided*, *further*, that in each case, no filing by any party (donor, donee, transferor or transferee) under the Exchange Act or other public announcement shall be required or shall be made voluntarily in connection with such transfer or distribution (other than filings made in respect of involuntary transfers or dispositions or a filing on a Form 5 made after the expiration of the Restricted Period) and any such transfer or distribution shall not involve a disposition for value. For purposes of this letter agreement, "immediate family" shall mean any relationship by blood, marriage or adoption, not more remote than first cousin.

Notwithstanding the restrictions imposed by this letter agreement, the Shareholder may (a) exercise an option (including a net or cashless exercise of an option) to purchase shares of Alcobra Ordinary Shares, and transfer shares of Alcobra Ordinary Shares to Arcturus to cover tax withholding obligations of the Shareholder in connection with any such option exercise, provided that the underlying shares of Alcobra Ordinary Shares shall continue to be subject to the restrictions on transfer set forth in this letter agreement, (b) establish a trading plan pursuant to Rule 10b5-1 under the Exchange Act for the transfer of Alcobra Ordinary Shares, provided that such plan does not provide for any transfers of Alcobra Ordinary Shares during the Restricted Period, and (c) transfer or dispose of shares of Alcobra Ordinary Shares acquired on the open market following the Closing Date, provided that, with respect to (a) above, any filing under the Exchange Act, if required, shall include a footnote disclosure explaining that such exercise and sale was to cover tax withholding obligations of such Shareholder, and with respect to (b) above, no filing under the Exchange Act or other public announcement shall be required or shall be made voluntarily in connection with the establishment of such a plan, ***provided*** that reasonable notice shall be provided to Arcturus prior to any such filing, and ***provided further*** that, for the avoidance of doubt, the underlying shares of Alcobra Ordinary Shares shall continue to be subject to the restrictions on transfer set forth in this letter agreement).

An attempted transfer in violation of this letter agreement will be of no effect and null and void, regardless of whether the purported transferee has any actual or constructive knowledge of the transfer restrictions set forth in this letter agreement, and will not be recorded on the stock transfer books of Alcobra. In order to ensure compliance with the restrictions referred to herein, the Shareholder agrees that Alcobra may issue appropriate "stop transfer" certificates or instructions. Alcobra may cause the legend set forth below, or a legend substantially equivalent thereto, to be placed upon any certificate(s) or other documents or instruments evidencing ownership of the Shareholder's Shares:

THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO AND MAY ONLY BE TRANSFERRED IN COMPLIANCE WITH A LOCK-UP AGREEMENT, A COPY OF WHICH IS ON FILE AT THE PRINCIPAL OFFICE OF THE COMPANY.

The Shareholder hereby represents and warrants that the Shareholder has full power and authority to enter into this letter agreement. All authority conferred or agreed to be conferred and any obligations of the Shareholder under this letter agreement will be binding upon the successors, assigns, heirs or personal representatives of the Shareholder.

Upon the release of any of the Shareholder's Shares from this letter agreement, Alcobra will cooperate with the Shareholder to facilitate the timely preparation and delivery of certificates representing the Shareholder's Shares without the restrictive legend above or the withdrawal of any stop transfer instructions.

The Shareholder understands that each of Alcobra and Arcturus is relying upon this letter agreement in proceeding toward consummation of the Merger. The Shareholder further understands that this letter agreement is irrevocable and is binding upon the Shareholder's heirs, legal representatives, successors and assigns.

This letter agreement and any claim, controversy or dispute arising under or related to this letter agreement shall be governed by and construed in accordance with the laws of the State of Delaware, without regard to the conflict of laws principles thereof.

The Shareholder understands that if the Merger Agreement is terminated in accordance with its terms, the Shareholder will be released from all obligations under this letter agreement.

This letter agreement may be executed by facsimile or electronic (i.e., PDF) transmission, which is deemed an original.

[*Signature Page Follows*]

Very truly yours,

Print Name of Shareholder: Joseph E. Payne

Signature (for individuals):

/s/ Joseph E. Payne

Signature (for entities):

By: _____

Name: _____

Title: _____

[SIGNATURE PAGE TO LOCK-UP AGREEMENT]

Acknowledged and accepted:

Alcobra Ltd.

By: /s/ Yaron Daniely
Name: Yaron Daniely
Title: Chair

By: /s/ David Baker
Name: David Baker
Title: Interim CEO