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

Form 6-K

Report of Foreign Private Issuer
Pursuant to Rule 13a-16 or 15d-16
under the Securities Exchange Act of 1934

For the month of: October 2017

Commission file number: 001-35932

ALCOBRA LTD.

(Translation of registrant's name into English)

Azrieli Triangle Building
132 Derech Menachem Begin 39th Floor
Tel Aviv 6701101 Israel
(Address of principal executive offices)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F.

Form 20-F Form 40-F

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulations S-T Rule 101(b)(1): _____

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulations S-T Rule 101(b)(7): _____

CONTENTS

On September 28, 2017, the Registrant provided notice of an Extraordinary General Meeting of Shareholders to be held on November 2, 2017 (the “**Meeting**”), for the purpose of approving certain resolutions required in connection with the proposed issuance of a majority interest in the Registrant’s share capital to the owners of Arcturus Therapeutics, Inc. in consideration for 100% of the equity securities of Arcturus Therapeutics, Inc., which will merge with a wholly-owned subsidiary of the Registrant and become a wholly-owned subsidiary of the Registrant.

Attached hereto and incorporated by reference herein is the Registrant’s Amendment to Notice of the Meeting which reschedules the Meeting from November 2, 2017 to November 12, 2017. The agenda for the Meeting as well as the record date for the Meeting will not change. In addition, attached hereto and incorporated by reference herein are the Registrant’s Proxy Statement and Proxy Card for the Meeting.

Only shareholders of record who hold Ordinary Shares, nominal value NIS 0.01, of the Registrant at the close of trading on the Nasdaq Global Market on October 3, 2017, will be entitled to vote at the Meeting and any postponements or adjournments thereof.

The exhibits attached to this Form 6-K of the Registrant are incorporated by reference into the Registration Statements on Form F-3 (File No. 333-209960) and Forms S-8 (File No. 333-194875, File No. 333-202394, File No. 333-209947 and File No. 333-217556) of the Registrant, filed with the Securities and Exchange Commission, to be a part thereof from the date on which this report is submitted, to the extent not superseded by documents or reports subsequently filed or furnished.

Exhibit No.

- 99.1 Amended Notice of the Meeting.
 - 99.2 Proxy Statement for the Meeting.
 - 99.3 Proxy Card for the Meeting.
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SIGNATURES

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

Alcobra Ltd.
(Registrant)

By: /s/ Dr. Tomer Berkovitz
Name: Dr. Tomer Berkovitz
Chief Financial Officer and Chief Operating Officer

Date: October 20, 2017



**ALCOBRA LTD.
AMENDED NOTICE OF EXTRAORDINARY GENERAL MEETING OF SHAREHOLDERS**

Background

On October 28, 2017, Alcobra Ltd. (the “**Company**”) furnished to the Securities and Exchange Commission (“**SEC**”) a notice of extraordinary general meeting of shareholders (the “**Original Notice**”). This amended notice of extraordinary general meeting of shareholders amended and restates the Original Notice and is provided for the purpose of rescheduling the meeting from November 2, 2017 to November 12, 2017. The record date and agenda for the shareholders meeting are the same as provided for in the Original Notice and do not change.

General

Notice is hereby given that an Extraordinary General Meeting of the Shareholders of the Company will be held on November 12, 2017, at 10:00 am (Israel Time), at the offices of the Company’s counsel (Zysman, Aharoni, Gayer & Co.) at “Beit Zion”, 41-45 Rothschild Blvd., 8th Fl., Tel Aviv 6578401, Israel (the “**Meeting**”), for the sole purpose of approving certain resolutions required in connection with the proposed issuance of a majority interest in the Company’s share capital to the owners of Arcturus Inc. in consideration for 100% of the equity securities of Arcturus Inc., which will merge with a wholly-owned subsidiary of the Company and become a wholly-owned subsidiary of the Company (the “**Transaction**”)¹. Such resolutions include: (i) to approve a reverse split of the Company’s share capital at a ratio of seven-for-one and to amend the Company’s Amended and Restated Articles of Association (the “**Articles**”) accordingly; (ii) to approve an increase of the Company’s share capital by NIS 1,600,000, to NIS 2,100,000, and to amend the Articles accordingly, so that after items (i) and (ii) take effect, Article 2.1.1 of the Articles will be replaced in its entirety with the following: “The registered capital of the Company is NIS 2,100,000 divided into 30,000,000 ordinary shares with a par value of NIS 0.07 each.”; (iii) to approve a change of the Company’s name to “ARCTURUS THERAPEUTICS, LTD.”; and (iv) to approve the purchase by the Company of a “run-off” directors’ and officers’ liability insurance policy for a period of seven years following the effective time of the Transaction.

¹ The Transaction was announced on September 27, 2017. A copy of the merger agreement relating to the Transaction was attached as Exhibit 99.2 to the Company’s Report of Foreign Private Issuer on Form 6-K that was furnished to the U.S. Securities and Exchange Commission on September 28, 2017.

The resolutions above are to be voted on as one proposal. The Transaction will not be completed if this proposal is not approved.

OUR BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS THAT YOU VOTE “FOR” THE PROPOSAL ON THE AGENDA

Record Date and Right to Vote

Subject to the provisions of Israeli law and the Articles, only shareholders of record as of the close of trading on the Nasdaq Global Market on October 3, 2017 (“**Record Date**”) are entitled to attend and vote at the Meeting and any adjournments or postponements thereof. You are also entitled to notice of the Meeting and to vote at the Meeting if you held ordinary shares of the Company, par value NIS 0.01 per share (“**Ordinary Shares**”), through a bank, broker or other nominee that was one of the Company’s shareholders of record at the close of business on the Record Date.

A shareholder whose Ordinary Shares are held for his, her, or its benefit with a bank, broker or other nominee and that are included in the Ordinary Shares registered in the register of shareholders of the Company under the name of such nominee, may attend the Meeting and vote in person only if providing proof of ownership of such Ordinary Shares as of the Record Date. Such proof of ownership must consist of a bank or broker statement listing the beneficial owner as the underlying owner of the shares, issued by the bank, broker or other nominee, along with a copy of the shareholder’s Identification Card, passport, or Incorporation Certificate.

If a shareholder is registered in the register of shareholders of the Company, it is sufficient to present a copy of the shareholder’s Identification Card, passport, or Incorporation Certificate in order to vote in person at the Meeting.

Legal Quorum

Under the Articles, no business may be transacted at the Meeting unless a quorum is present when the Meeting begins. The quorum required for the Meeting is the presence, in person or by proxy or by a voting deed, of at least two shareholders, holding in the aggregate at least one-third of the issued and outstanding Ordinary Shares as of the Record Date (“**Quorum**”). If within an hour from the time appointed for holding the Meeting a Quorum is not present, the Meeting shall be dissolved and it shall stand adjourned to the same day in the next week (or the business day following such day, if such day is not a business day) at the same time and place. At the adjourned Meeting, any two shareholders then present, in person or by proxy or by a voting deed, shall constitute a Quorum.

Abstentions are counted in determining whether a Quorum is present.

Proxy

The full text of the proposed resolutions for the Meeting, together with the proxy statement providing an overview of the Transaction and other matters relating thereto, and the form of proxy card for the Meeting, are being furnished herewith to the SEC and then mailed to shareholders of record as of the Record Date.

You can vote your shares by attending the Meeting or by completing and signing a proxy card. If you are voting by proxy (in the case of a record shareholder) or instructing your bank, broker or other nominee how to vote via the proxy card (for a shareholder holding in street name), please follow the instructions on the proxy card. We encourage all shareholders to vote or instruct their bank, broker or other nominee how to vote via proxy, even if attending the Meeting.

We will mail copies of this notice, a proxy statement and the proxy card to our shareholders of record and to banks, broker and other nominees, and we will solicit proxies primarily by mail and e-mail. The original solicitation of proxies by mail and e-mail may be further supplemented by solicitation by telephone, mail, e-mail and other means by certain of our officers, directors and employees (who will not receive additional compensation for these services). We will bear the cost of external solicitors and of the solicitation of the proxy cards, including postage, printing and handling, and will reimburse the reasonable expenses of brokerage firms and others for forwarding material to beneficial owners of our Ordinary Shares.

Proxy cards should be completed, signed and returned in the envelope to be enclosed. If you instead send your proxy card directly to the Company's legal counsel offices as permitted below, we will not be able to count it unless we receive it, accompanied by a copy of (a) your Identification Card, passport, or Incorporation Certificate (if applicable), with respect to a shareholder who is registered in the register of shareholders of the Company, and (b) with proof of ownership, as specified above, with respect to a shareholder whose shares are registered under the name of a bank, broker or other nominee.

We will not be able to count your proxy card unless we receive it at the offices of the Company's legal counsel, Zysman, Aharoni, Gayer & Co., at "Beit Zion", 41-45 Rothschild Blvd., 8th Fl., Tel Aviv 6578401, Israel, by 6:00 am Israel time on November 12, 2017 (together with the foregoing proof of ownership). If mailing your proxy card in the enclosed envelope, it must be received by our transfer agent, Continental Stock Transfer & Trust, at 17 Battery Place, New York, NY 10004 in the enclosed envelope, by 3:00 pm Eastern time on November 10, 2017 (an earlier deadline may apply for shares held in street name, as may be indicated in the instructions provided to you with your proxy card).

If you sign and return the proxy card, your shares will not be counted towards or against the majority required for approval of the proposal, unless you specifically vote in favor or against the proposal.

Your vote on the proposed resolutions will not be voted "FOR" the proposal, even if you indicate so on the proxy card, unless you indicate that you have no personal interest in the proposal and that you are not a controlling shareholder, as such term is defined under the Companies Law. The proxy card to be mailed will include instructions on how to make this indication.

On all matters considered at the Meeting, abstentions will be treated as neither a vote "FOR" nor "AGAINST" the matter, although they will be counted in determining whether a Quorum is present.

YOUR VOTE IS IMPORTANT REGARDLESS OF THE NUMBER OF ORDINARY SHARES YOU OWN. ACCORDINGLY, YOU ARE REQUESTED TO PROMPTLY COMPLETE, SIGN AND DATE THE ENCLOSED PROXY CARD AND RETURN IT IN THE ENVELOPE PROVIDED, WHETHER OR NOT YOU PLAN TO ATTEND THE MEETING.

By order of the Board of Directors,

/s/ Dr. Yaron Daniely

Dr. Yaron Daniely



ALCOBRA LTD.
TEL AVIV, ISRAEL

PROXY STATEMENT

EXTRAORDINARY GENERAL MEETING OF SHAREHOLDERS

This Proxy Statement is furnished to the holders of ordinary shares, NIS 0.01 par value per share (“**Ordinary Shares**”), of Alcobra Ltd. (“**Alcobra**” or the “**Company**”) in connection with the solicitation by the Board of Directors of Alcobra (the “**Board**”) of proxies for use at Alcobra’s Extraordinary General Meeting of Shareholders, to be held on November 12, 2017, at 10:00 am (Israel Time), at the offices of Alcobra’s Israeli counsel (Zysman, Aharoni, Gayer & Co.) at “Beit Zion”, 41-45 Rothschild Blvd., 8th Fl., Tel Aviv 6578401, Israel, or at any adjournment thereof (“**Meeting**”).

AGENDA

The agenda for the Meeting is as follows:

Item No. 1:

To approve certain resolutions in connection with the merger of a wholly-owned subsidiary of the Company with and into Arcturus Therapeutics, Inc. (“**Arcturus**”) pursuant to which Alcobra will issue a majority interest in Alcobra’s share capital (on a post-transaction basis) to the equity-holders of Arcturus in consideration for 100% of the equity securities of Arcturus, which will become a wholly-owned subsidiary of Alcobra (the “**Transaction**”).¹

¹ The Transaction was announced on September 27, 2017. A copy of the Merger Agreement relating to the Transaction was attached as Exhibit 99.2 to Alcobra’s Report of Foreign Private Issuer on Form 6-K (a “**Form 6-K**”) that was furnished to the U.S. Securities and Exchange Commission (“**SEC**”) on September 28, 2017. The Notice for the Meeting (the “**Notice**”) was published by Alcobra as Exhibit 99.1 to Alcobra’s Form 6-K that was furnished to the SEC on September 28, 2017 and is amended as appears in Exhibit 99.1 to Alcobra’s Form 6-K that is being furnished to the SEC on October 20, 2017, for which Form 6-K this proxy statement serves as Exhibit 99.2. The Amendment to Notice will be mailed together with the proxy statement.

INTRODUCTION

As further discussed below, following the unanimous approval of the Board, Alcobra, Aleph MergerSub, Inc. (“**Merger Sub**”) and Arcturus entered into an Agreement and Plan of Merger and Reorganization dated as of September 27, 2017 (the “**Merger Agreement**”), pursuant to which the Transaction is intended to be consummated. Subject to the qualifications included in this proxy statement, following the completion of the Transaction, Arcturus’s current equity-holders (which include the holders of Arcturus shares of common stock, preferred shares, warrants and convertible notes, which will all be converted into or exercised for shares of Arcturus common stock in connection with the Transaction) would own in the aggregate approximately 60% of the combined company’s outstanding Ordinary Shares and Alcobra’s current shareholders would own in the aggregate approximately 40% of the combined company’s outstanding Ordinary Shares, in each case, using the treasury stock method, as further explained in “Questions and Answers About the Transaction” starting on page 5.

In order to complete the Transaction, Alcobra’s shareholders are being asked to approve certain resolutions, including (i) a reverse share split of Alcobra’s share capital, (ii) an increase of Alcobra’s authorized share capital, (iii) a change of Alcobra’s name, and (iv) approval of the purchase by Alcobra of a “tail” or run-off directors’ and officers’ liability insurance policy.

In the event that shareholder approval is not obtained for the resolutions in Item No. 1, Alcobra will be unable to complete the Transaction.

NASDAQ Stock Market (“**NASDAQ**”) rules require the combined entity to comply with the initial listing standards of the applicable NASDAQ market to continue to be listed on such market following the Transaction. The NASDAQ Global Market’s initial listing standards require a company to have, among other things, a \$4.00 per share minimum bid price. Because Alcobra’s current price per share is less than \$4.00, the reverse share split is necessary to meet the minimum bid listing requirement. Therefore, the Board recommends to the Company’s shareholders to approve a 7 to 1 reverse share split, so that for every seven Ordinary Shares NIS 0.01 par value, outstanding immediately prior to such split, there will be one Ordinary Share, NIS 0.07 par value, outstanding immediately after the split.

In addition, under the Israeli Companies Law – 5759-1999 (the “**Companies Law**”), a company may not issue shares in excess of its registered share capital. Alcobra’s authorized share capital currently is NIS 500,000, divided into 50,000,000 Ordinary Shares with a par value of NIS 0.01 par value per share. As of October 19, 2017, Alcobra had approximately 19,208,000 Ordinary Shares NIS 0.01 par value remaining for future issuance, after taking into account the shares issuable under outstanding options, including unvested options.

Accordingly, in connection with the Transaction, Alcobra’s shareholders are requested to approve an increase of the authorized share capital of Alcobra by an additional NIS 1,600,000, which will take place immediately after effecting the reverse split. Consequently, Alcobra’s authorized share capital would be NIS 2,100,000, consisting of 30,000,000 Ordinary Shares with a par value of NIS 0.07 per share.

Also, and as required under the Merger Agreement, contingent upon the closing of the Transaction, Alcobra intends to change its name to ARCTURUS THERAPEUTICS, LTD. Under the Companies Law, shareholder approval is required to effect a change of name, which is subject to the approval of the Israeli Companies Registrar.

Lastly, the Company is required under the Merger Agreement to purchase a run-off insurance policy to cover certain potential liabilities of its directors and officers as of immediately prior to the closing of the Transaction. Since the terms of the run-off insurance policy exceed the limitations set forth under the Company’s current compensation policy, the approval of the Company’s shareholders is required to allow the Company to purchase such run-off insurance policy, as described in the paragraph immediately below.

The Company's compensation policy allows Alcobra to purchase insurance coverage such as under a run-off policy for its directors and officers provided that the annual premium does not exceed the higher of \$500,000 or 2% of the limit of liability of the relevant policy. The run-off policy the Company intends to purchase in connection with the Transaction provides for \$35,000,000 in coverage for a period of seven years with an aggregate premium of approximately \$780,000, paid on or around the time of the closing of the Transaction. Because it could be claimed that the premium exceeds the limitation provided above, for the avoidance of doubt Alcobra takes the position that the purchase of this policy (and therefore the entire proposal under Item No. 1) requires approval by the Company's shareholders by the affirmative vote of a majority (which is referred to as a "special majority") of the Ordinary Shares voting on the matter to approve the resolutions above, provided that either (i) included in such majority is at least a majority of the Ordinary Shares held by non-controlling shareholders who do not otherwise have a conflict of interest (referred to under the Companies Law as a personal interest) in the resolution to purchase a run-off insurance policy, that are voted at the Meeting, excluding for such purpose any abstentions; or (ii) the total number of shares held by non-controlling non-conflicted disinterested shareholders specified in clause (i) who voted against the election does not exceed 2% of the voting rights in Alcobra.

It is proposed that the following resolutions be adopted at the Meeting as one proposal, referred to for purposes of the agenda as Item No. 1:

"RESOLVED, to approve a reverse split of Alcobra's share capital at the ratio of seven-for-one, so that each seven Ordinary Shares, par value NIS 0.01 per share, shall be consolidated into one Ordinary Share, par value NIS 0.07 per share (the **"Reverse Split"**), and to amend Alcobra's Amended and Restated Articles of Association (the **"Articles"**) accordingly."

"RESOLVED, to approve an increase of the authorized share capital of Alcobra by an additional NIS 1,600,000 (the **"Share Capital Increase"**)."

"RESOLVED, that the Board of Directors of Alcobra is authorized to cause any shareholders (and any other security holders) who otherwise would be entitled to receive fractional shares as a result of the Reverse Split, because they hold a number of shares not evenly divisible by seven, to be automatically entitled to receive an additional fraction of a share to round up to the next whole share."

"RESOLVED, to approve and to amend Alcobra's Amended and Restated Articles of Association to reflect the Reverse Split and the Share Capital Increase, such that as a result, the authorized share capital of Alcobra shall be NIS 2,100,000 divided into 30,000,000 Ordinary Shares, par value NIS 0.07 per share, and Article 2.1.1 of Alcobra's Amended and Restated Articles of Association will be replaced in its entirety with the following:

The registered capital of the Company is NIS 2,100,000 divided into 30,000,000 ordinary shares with a par value of NIS 0.07 each."

"RESOLVED, to change Alcobra's name to "ARCTURUS THERAPEUTICS, LTD." and to amend the Company's Articles accordingly."

"RESOLVED, to approve the purchase by Alcobra of a "run-off" directors' and officers' liability insurance policy for a period of seven years following the effective time of the Transaction.

The affirmative vote of a majority of the Ordinary Shares voting on the matters is required to approve the resolutions above, provided that either (i) included in such majority is at least a majority of the Ordinary Shares held by non-controlling shareholders who do not otherwise have a conflict of interest (referred to under the Companies Law as a “personal interest”) in the resolution to purchase a run-off insurance policy, that are voted at the Meeting, excluding for such purpose any abstentions; or (ii) the total number of shares held by non-controlling non-conflicted shareholders specified in clause (i) who voted against the election does not exceed 2% of the voting rights in Alcobra.²

Each of the resolutions included in Item No. 1 is to be voted on as one proposal. The Transaction will not be completed if this proposal is not approved.

Alcobra’s Board of Directors unanimously recommends that you vote “FOR” the proposal included in this proxy statement.

² In connection with your vote, you are asked to confirm on the enclosed proxy card that you are not a controlling shareholder and do not have a conflict of interest in the approval of the resolution to purchase a run-off insurance policy. Under the Companies Law, in general, a person will be deemed to be a controlling shareholder if the person has the power to direct the activities of the Company, other than by reason of being a director or other office holder of the Company. A person holding 25% of the Company’s share capital is deemed to be a controlling shareholder. Also, you are deemed to have a conflict of interest if any member of your immediate family or their spouse has a conflict of interest in the adoption of the resolution to purchase a run-off insurance policy.

Questions and Answers About the Transaction

The following section provides answers to frequently asked questions about the Transaction. This section, however, provides only summary information. Please refer to the more detailed information contained elsewhere in this proxy statement and the documents referred to or incorporated by reference in this proxy statement.

Q: What is the Transaction?

A: Alcobra and Arcturus have entered into the Merger Agreement, dated as of September 27, 2017. The Merger Agreement contains the terms and conditions of the proposed business combination of Alcobra and Arcturus. Under the Merger Agreement, Merger Sub will merge with and into Arcturus, with Arcturus surviving as a wholly-owned subsidiary of Alcobra. Thereafter, Alcobra will change its corporate name to “ARCTURUS THERAPEUTICS, LTD.” as required by the Merger Agreement.

At the effective time of the Transaction, each share of Arcturus common stock outstanding immediately prior to the effective time of the Transaction will be converted into the right to receive such number of Alcobra Ordinary Shares, assuming a 7 to 1 reverse stock split, so after the Transaction is consummated the equity-holders of Arcturus will hold 60% of the share capital of the combined company using the treasury stock method. The treasury stock method is used to compute the amount of new shares that can be potentially created by unexercised in-the-money warrants and options. This method assumes that the proceeds that a company receives from an in-the-money option exercise are used to repurchase common shares. Accordingly, out-of-the-money options and warrants do not change the number of such new shares. The percentage of holdings of Arcturus equity-holders in the combined company will change if: (a) Alcobra’s net cash is greater than \$36,750,000 or less than \$33,250,000 or (b) Arcturus’s net cash is greater than \$6,750,000 or less than \$3,250,000. The adjustment of ownership percentage in the combined company will be made by increasing or reducing the valuation of Alcobra and Arcturus basic valuation on a dollar to dollar basis assuming a valuation of \$46,700,000 to Alcobra and \$70,000,000 to Arcturus, provided that in no event will the Arcturus equity-holders hold less than 55% of the combined company share capital using the treasury stock method. Immediately prior to the consummation of the Transaction, all Arcturus preferred shares, warrants and convertible notes will be converted or exercised into shares of Arcturus common stock and then will be converted into the right to receive Alcobra Ordinary Shares. All Arcturus options outstanding immediately prior to the effective time of the Transaction will be assumed by Alcobra at the effective time of the Transaction and converted into options to purchase Alcobra Ordinary Shares.

As a result, if no adjustments are made, immediately following the completion of the Transaction, Arcturus’s current equity-holders would own in the aggregate approximately 60% of the combined company’s outstanding Ordinary Shares (with the directors and officers of Arcturus and their affiliates owning approximately 41% of the combined company’s outstanding Ordinary Shares) and Alcobra’s current shareholders would own in the aggregate approximately 40% of the combined company’s outstanding Ordinary Shares, in each case, using the treasury stock method.

Although Alcobra is incorporated in Israel, it is intended that it will be treated as a U.S. domestic corporation (and, therefore, subject to U.S. income tax) for U.S. federal income tax purposes pursuant to Section 7874(b) of the U.S. Internal Revenue Code of 1986, as amended (the “Code”), as a result of the Transaction.

This is the case because under Section 7874(b) of the Code, a corporation organized or incorporated outside the U.S. will be treated as a U.S. domestic corporation for U.S. federal income tax purposes, when (i) the foreign corporation directly or indirectly acquires substantially all of the assets held directly or indirectly by a U.S. corporation, (ii) the stockholders of the acquired U.S. corporation hold at least 80% of the vote or value of the shares of the foreign acquiring corporation by reason of holding stock in the U.S. acquired corporation and (iii) the foreign corporation's "expanded affiliated group" does not have substantial business activities in the foreign corporation's country of incorporation relative to its expanded affiliated group's worldwide activities.

As described above, Arcturus's current security-holders would own in the aggregate approximately 60% of the combined company's outstanding Ordinary Shares as a result of the Transaction. However, because of the calculation methodology under Section 7874 of the Code, including that passive assets (such as cash) are disregarded, it is expected that Arcturus's current security-holders will own more than 80% of the combined company for purposes of applying Section 7874 of the Code, thereby resulting in Alcobra becoming a U.S. domestic corporation.

For a more complete description of what Arcturus stockholders will receive under the Merger Agreement, please see "The Merger Agreement - Merger Consideration and Exchange Ratio" beginning on page 42 of this proxy statement.

Q: What will happen to Alcobra if, for any reason, the Transaction does not close?

A: If, for any reason, the Transaction does not close, the Board may elect to, among other things, execute one or more of the following: (i) attempt to complete another strategic transaction similar to the Transaction described in this proxy statement; (ii) distribute cash to its shareholders; (iii) attempt to sell or otherwise dispose of the various assets of Alcobra; or (iv) continue to operate the business of Alcobra. If Alcobra decides to dissolve and liquidate its assets, Alcobra would be required to pay all of its debts and contractual obligations and to set aside certain reserves for potential future claims, and there can be no assurance as to the amount or timing of available cash left to distribute to shareholders after paying the debts and other obligations of Alcobra and setting aside funds for reserves in the event of such a liquidation.

In addition to the above, under certain circumstances, including if Alcobra's shareholders do not approve the Transaction, Alcobra may be required to pay Arcturus a termination fee and other Arcturus expenses in the amount of approximately \$3,300,000.

If Alcobra were to continue its business, it would need to re-evaluate its strategic direction relating to its current product candidates, if any, and may need to identify, acquire and develop other products or product candidates. As of September 30, 2017, the Alcobra workforce was comprised of seven employees. Alcobra has only two employees engaged in development and regulatory activities. In addition, Alcobra is in the process of monetizing its Abuse-Deterrent Amphetamine Immediate Release ("ADAIR") product, which comprises one of its two product candidates. Therefore, this re-evaluation process could be challenging.

Therefore, after considering the various alternative plans and based on the information currently available, in the event the Transaction is not approved by shareholders, the Board believes that advancing a shareholder distribution alternative (by way of a dividend or another appropriate mechanism) is the second most preferred strategic alternative.

Q: Why are the two companies proposing to merge?

A: Both companies believe that the Transaction, if completed, will result in a biotechnology company focused on rare and high incidence diseases of unmet medical needs, with the resources to leverage a strong patent position in ribonucleic acid (“RNA”) medicine and advance a growing product candidate pipeline on its own and in partnership with industry leaders. For a discussion of Alcobra’s reasons for the Transaction, please see “The Merger - Reasons for the Merger” beginning on page 30 of this proxy statement.

Q: How much cash will Alcobra have at the closing of the Transaction?

A: The actual amount of net cash will depend mostly on the timing of the closing of the Transaction, but is expected to be approximately \$35,000,000 (as calculated pursuant to the Merger Agreement at the closing of the Transaction). In addition, it is a closing condition of the Merger Agreement that Alcobra has net cash of at least \$30,000,000.

Q: What is required to complete the Transaction?

A: To complete the Transaction, Alcobra shareholders must approve the resolutions contained in Item No. 1. In addition to the requirement of obtaining such shareholder approvals, each of the other closing conditions set forth in the Merger Agreement must be satisfied or waived. For a more complete description of the closing conditions under the Merger Agreement, you are urged to read “The Merger Agreement - Conditions to the Completion of the Merger” beginning on page 57 of this proxy statement.

Q: What is the reverse share split and why is it necessary?

A: NASDAQ rules will require the combined entity to comply with the initial listing standards of the applicable NASDAQ market to continue to be listed on such market following the Transaction. The NASDAQ Global Market’s initial listing standards require a company to have, among other things, a \$4.00 per share minimum bid price. Because Alcobra’s current price per share is less than \$4.00, the reverse share split is necessary to meet the minimum bid listing requirement.

Q: Will holders of Alcobra’s Ordinary Shares issued in the Transaction be able to trade those shares?

A: The Ordinary Shares of Alcobra issued as consideration in the Transaction will be issued in transactions exempt from registration under the Securities Act of 1933 as amended (“**Securities Act**”), in reliance on Section 4(a)(2) of the Securities Act, and Regulation D promulgated thereunder and may not be offered or sold by the holders of those shares absent registration or an applicable exemption from registration requirements. As a general matter, holders of such shares will not be able to transfer any of their shares until at least six months after receiving Ordinary Shares of Alcobra, which is when the shares would first be eligible to be sold under Rule 144 promulgated under the Securities Act, assuming the conditions thereof are otherwise satisfied. Holders of Alcobra shares prior to the closing of the Transaction shall not be subject to trading limitations as a result of the closing of the Transaction or the issuance of shares to Arcturus equity-holders.

In addition, equity-holders of Arcturus, who are expected to hold more than 5% of the combined company’s outstanding share capital, as well as the directors and executive officers of the combined company, have agreed to certain transfer restrictions on all of their Alcobra Ordinary Shares from the date of the closing of the Transaction until 180 days after the closing date of the Transaction. See “The Merger Agreement - Conditions to the Completion of the Merger” on page 57 of this proxy statement for more detail.

Q: Who will be the directors of the combined entity following the completion of the Transaction?

A: Immediately following the closing of the Transaction, the Board of the combined company will be composed of seven members, consisting of (i) four members designated by Arcturus, namely Mr. Craig Willett, Dr. Stuart Collinson, Mr. Joseph Payne and Dr. Padmanabh Chivukula, (ii) three members designated by Alcobra, namely Mr. Daniel Geffken and Ms. Orli Tori who currently serve on the Board and Dr. David Shapiro. Out of the board members named above, it is expected that Mr. Craig Willett, Mr. Daniel Geffken, Ms. Orli Tori and Dr. David Shapiro will be considered “independent directors” under NASDAQ requirements. Because Alcobra directors may be elected only at the annual shareholders meeting of the Company, the new directors of the Board of the combined company will be nominated, effective immediately after the closing of the Transaction, by the existing Board of Alcobra and will serve until the next annual shareholders meeting of the combined company, subject to the provisions of the Articles.

Q: Who will be the executive officers of the combined entity immediately following the completion of the Transaction?

A: Immediately following the Transaction, the executive management team of the combined company is expected to consist of the following two executive officers:

Name	Title
Joseph E. Payne	Chief Executive Officer
Padmanabh Chivukula, Ph.D	Chief Scientific Officer and Chief Operating Officer

Q: Am I entitled to appraisal rights?

A: Holders of Alcobra’s Ordinary Shares are not entitled to appraisal rights in connection with the Transaction.

Q: Have Arcturus’s stockholders adopted the Merger Agreement and approved the Transaction?

A: They will in the near future. The adoption of the Merger Agreement and the approval of the Transaction by Arcturus’s stockholders requires the affirmative vote (or written consent) of the holders of (i) a majority of the shares of Arcturus common stock voting as a single class, (ii) a majority of the shares of Arcturus preferred stock and Arcturus common stock, voting together as a single class and (iii) at least a majority of the shares of each series of Arcturus preferred stock, voting as separate classes.

Certain of Arcturus’s stockholders holding a sufficient number of shares of Arcturus capital stock as required in order to pass pertinent resolutions are party to certain support agreements and thereunder have each agreed to execute written consents approving the Merger Agreement and Transaction. Stockholders of Arcturus, including those who are parties to support agreements, are being requested to execute written consents providing such approvals and it is expected that the written consents necessary to approve the Merger Agreement and the Transaction will be delivered within seven business days of furnishing this proxy statement to the SEC.

Q: What are the material U.S. federal income tax consequences of the Transaction to Alcobra shareholders?

A: The reverse share split described in Item No. 1 should constitute a “recapitalization” for U.S. federal income tax purposes. As a result, a U.S. holder of Alcobra Ordinary Shares generally should not recognize gain or loss upon such reverse share split, except with respect to cash received in lieu of a fractional Ordinary Share, as discussed below in “The Merger Agreement” beginning on page 42. A U.S. holder’s aggregate tax basis in the Alcobra Ordinary Shares received pursuant to such reverse share split should equal the aggregate tax basis of the Alcobra Ordinary Shares surrendered (excluding any portion of such basis that is allocated to any fractional Alcobra Ordinary Share exchanged for cash), and such U.S. holder’s holding period in the Alcobra Ordinary Shares received should include the holding period in the Alcobra Ordinary Shares surrendered. U.S. Treasury regulations provide detailed rules for allocating the tax basis and holding period of the Alcobra Ordinary Shares surrendered for the Alcobra Ordinary Shares received in a recapitalization pursuant to such reverse share split. U.S. holders of Alcobra Ordinary Shares acquired on different dates and at different prices should consult their tax advisors regarding the allocation of the tax basis and holding period of such shares.

As noted above, as a result of the Transaction it is intended that Alcobra will be treated as a U.S. domestic corporation for U.S. federal income tax purposes pursuant to Section 7874(b) of the Code. This “conversion” to a domestic corporation is treated as an inbound Code Section 368(a)(1)(F) reorganization (in effect a deemed change in place of incorporation to the United States for U.S. federal tax purposes) that is deemed to have occurred at the end of the day immediately preceding the first date properties are acquired as part of the Transaction. Although under these circumstances certain exchanging shareholders may be taxable and required to include in income as a deemed dividend the all earnings and profits amount with respect to the shareholder’s Ordinary Shares in Alcobra, such taxation is not expected in this case because Alcobra is not expected to have earnings and profits. However, in the event that there were to be an income inclusion for certain exchanging shareholders, it is expected that such income would be treated as a qualified dividend and taxable at preferential U.S. federal income tax rates.

For those exchanging shareholders that are U.S. persons holding less than 10% of Alcobra’s stock, such shareholders will recognize realized gain (but not loss) with respect to Alcobra’s Ordinary Shares. Alternatively, such shareholders may elect to include in income as a deemed dividend Alcobra’s all earnings and profits amount provided that Alcobra provides information to substantiate the shareholder’s all earnings and profits amount and the shareholders meet the notice requirements in the U.S. Treasury regulations, including those specifically relating to this election. Shareholders whose Ordinary Shares in Alcobra have a fair market value of less than \$50,000 on the closing date of the Transaction will not recognize gain or be required to include any all earnings and profits amount in their reportable income. Because the rules relating to the calculation of the all earnings and profits amount are complex, shareholders that are U.S. persons should consult their U.S. tax advisors for additional information regarding the potential U.S. federal income tax consequences of the Transaction.

The above discussion does not address the impact on Alcobra shareholders if Alcobra were to be a passive foreign investment company (a “**PFIC**”), as defined in Section 1297 of the Code. If Alcobra is a PFIC, then the U.S. federal income tax consequences for U.S. taxpayers could be materially worse than what is described above. Holders of Alcobra Ordinary Shares are urged to work with their own legal and tax advisors to determine the tax consequences of the Transaction to them based on such holder’s own particular circumstances.

Q: Do persons involved in the Transaction have interests that may conflict with mine as an Alcobra shareholder?

A: Yes. When considering the recommendation of the Board, you should be aware that certain members of the Board and executive officers of Alcobra have interests in the Transaction that may be different from, or in addition to, interests you may have as an Alcobra shareholder. The Board was aware of the following interests and considered them, among other matters, in its decision to approve the Merger Agreement:

- Continued Service with Combined Company. The Board of the combined company will be comprised of seven members, including three members to be designated by Alcobra and four members to be designated by Arcturus. However, at the time of approving the Transaction, the Company did not undertake to cause any director to continue to serve on the Board after the consummation of the Transaction.
- Some of our executive officers and other employees, including Mr. David Baker, Dr. Tomer Berkovitz and Ms. Irena Katsman may be eligible to collect severance payments upon termination of their reemployment in connection with the closing of the Transaction and change in control of the Company. The aggregate cost to Alcobra for providing such severance is approximately \$760,000 and was taken into account when calculating the expected Alcobra Net Cash at the closing of the Transaction. Making such payment is not expected to impact the Exchange Ratio.
- Alcobra also undertook to pay special success bonuses in the aggregate amount of \$181,000 to Dr. Tomer Berkovitz and Ms. Irena Katsman in connection with the Transaction if the Alcobra Net Cash at the closing of the Transaction exceeds \$33,250,000. Since the special bonuses are only paid if Alcobra's Net Cash is within the collar range, the aggregate cost of providing such bonuses will not impact the Exchange Ratio.
- Also, the full acceleration of 1,536,576 options Alcobra granted to employees and directors will be triggered by the closing of the Transaction. To the extent that the exercise price of such options is below the share price of the Company immediately prior to the Effective Time, such options will impact the calculation of the Exchange Ratio according to the treasury stock method.

Q: Why is Alcobra seeking shareholder approval in connection with the Transaction?

A: In order to be able to complete the Transaction, the Merger Agreement provides that Alcobra needs to complete a reverse split of its share capital, increase its authorized share capital, change its name and purchase a “run-off” directors’ and officers’ liability insurance policy. Under Israeli law, all of these items require the approval of Alcobra’s shareholders.

Q: What is the required majority for approval of the matters relating to the Transaction under Item No. 1 at the Meeting and why is that majority required?

A: Under the Companies Law, the affirmative vote of a majority of the Ordinary Shares present in person or by proxy and voting on Item No. 1 is required to approve the resolutions proposed for each of the matters included under Item No. 1. Furthermore, under the Companies Law, any compensatory matter for directors and executive officers (collectively referred to as “office holders” under the Companies Law) that deviates from an Israeli public company’s compensation policy for its office holders must be approved by the special majority described below as part of the foregoing ordinary majority. Our office holder compensation policy allows us to purchase insurance coverage such as under a run-off directors’ and officers’ liability insurance policy, provided that the annual premium does not exceed the higher of \$500,000 or 2% of the limit of liability of the relevant policy. The run-off policy the Company intends to purchase in connection with the Transaction provides for \$35,000,000 in coverage for a period of seven years with an aggregate premium of approximately \$780,000, paid on or around the time of the closing of the Transaction. Because it could be claimed that the premium exceeds the limitation provided above, for the avoidance of doubt Alcobra takes the position that under the Companies Law, the resolution authorizing our obtaining the run-off policy—and, by extension, all other resolutions included under Item No. 1— must be approved by a simple majority of the Ordinary Shares present in person or by proxy and voting on Item No. 1 that also fulfills at least one of the following two special majority conditions: (i) at least a majority of the Ordinary Shares held by non-controlling shareholders that are voted at the Meeting and who do not otherwise have a conflict of interest (referred to under the Companies Law as a “personal interest”) in the purchase of the run-off insurance policy must vote in favor of Item No. 1, excluding for such purpose any abstentions; and/or (ii) the total number of shares held by non-controlling non-conflicted shareholders specified in clause (i) who vote against Item No. 1 may not exceed 2% of the voting rights in Alcobra.

For purposes of Item No. 1, a “controlling shareholder” is any shareholder that has the ability to direct the Company’s activities (other than by means of being a director or other office holder of the Company). A person is presumed to be a controlling shareholder if it holds or controls, by itself or together with others, one-half or more of any one of the “means of control” of the Company. “Means of control” is defined as any one of the following: (i) the right to vote at a general meeting of the Company, or (ii) the right to appoint directors of the Company or its chief executive officer. For purposes of that proposal, a “controlling shareholder” furthermore includes any shareholder holding 25% or more of the voting rights in our Company if no other shareholder holds more than 50% of the voting rights.

We are unaware of any shareholder that would be deemed to be a controlling shareholder of our Company as of the current time for purposes of the vote on Item No. 1.

A “personal interest” of a shareholder under the Companies Law (x) includes an interest of any members of the shareholder’s immediate family (or spouses thereof) or an interest of a company with respect to which the shareholder (or such a family member thereof) serves as a director or the chief executive officer, owns at least 5% of the shares or has the right to appoint a director or the chief executive officer; and (y) excludes an interest arising solely from the ownership of ordinary shares of the Company. In determining whether a vote cast by proxy is disinterested, the “personal interest” of the proxy holder who has discretion how to vote the underlying shares is also considered and will cause that vote to be excluded from the disinterested vote, even if the shareholder granting the proxy does not have a personal interest in the matter being voted upon.

Controlling shareholders and shareholders that have a conflict of interest are qualified to participate in the vote on Item No. 1; however, the vote of such shareholders may not be counted towards the majority requirement described above and will not count towards the 2% threshold described above.

A shareholder must inform our Company before the vote (or if voting by proxy, indicate on the proxy card) whether or not such shareholder has a conflict of interest in the approval of the run-off policy under Item No. 1, and failure to do so disqualifies the shareholder from participating in the vote on Item No. 1. In order to confirm that you lack a conflict of interest in the approval of the run-off policy and in order to therefore be counted towards the special majority required for the approval of Item No. 1, you must check the box under Item 1A on the accompanying proxy card when you record your vote on Item No. 1.

If you believe that you, or a related party of yours, is a controlling shareholder or has such a conflict of interest and you wish to participate in the vote for or against the resolutions proposed under Item No. 1, you should not check the box under Item 1A on the enclosed proxy card and you should not vote on Item No. 1 via the proxy card. Instead, you should contact our Chief Financial Officer, Dr. Tomer Berkovitz, at +972-3-7299865 or tomer@alcobra-pharma.com, who will provide you with a separate proxy card that is designed for you so that you can submit your vote on Item No. 1. In that case, your vote will be counted towards the ordinary majority required for the approval of Item No. 1, but will not be counted towards the special majority required for approval of that proposal. If you hold your shares in “street name” (i.e., shares that are held through a bank, broker or other nominee) and believe that you are a controlling shareholder or have a conflict of interest, you may also contact the representative managing your account, who can then contact our Chief Financial Officer on your behalf.

Q: When do you expect the Transaction to be completed?

A: Alcobra and Arcturus anticipate that the Transaction will be completed in the fourth quarter of 2017, but Alcobra cannot predict the exact timing. For more information, please see “Completion and Effectiveness of the Merger” beginning on page 42.

Q: Who can I contact with questions on how to vote?

A: Alcobra has retained Morrow Sodali, LLC to assist in its solicitation of proxies for the Meeting. Shareholders with questions on how to vote can contact Morrow Sodali by calling +800-662-5200 or +203-658-9400, or via e-mail at ahd@morrowsodali.com.

Risk Factors

In addition to the other information included in this proxy statement, including the matters addressed under the caption entitled “Cautionary Statement Regarding Forward-Looking Statements” on page 24, you should carefully consider the following risk factors in determining how to vote at the Meeting. The following is not intended to be an exhaustive list of the risks related to the Transaction and you should read and consider the risk factors described under Part 1, Item 3, “Key Information – Risk Factors” of Alcobra’s Annual Report on Form 20-F for the year ended December 31, 2016, which is on file with the Securities and Exchange Commission (“SEC”) and incorporated herein by reference.

Risks Relating to the Transaction

The issuance of Alcobra’s Ordinary Shares to Arcturus stockholders in connection with the Transaction will substantially dilute the relative voting power of current Alcobra shareholders, and as a result the Alcobra shareholders will exercise substantially less influence over the management of the combined company following the completion of the Transaction.

Pursuant to the terms of the Merger Agreement, it is anticipated that Alcobra will issue Ordinary Shares of Alcobra to the stockholders of Arcturus. Following the closing of the Transaction, Alcobra’s current shareholders will own approximately 40% of the combined company’s share capital, and existing Arcturus stockholders will own approximately 60% of the combined company’s issued share capital using the treasury stock method. The percentages of relative holdings in the combined company may change as a result of the net cash actually attributed to each of Alcobra and Arcturus; provided, however, that in no event will the Arcturus equity-holders hold less than 55% of the outstanding share capital of the combined company immediately after the consummation of the Transaction. For more information about adjusting the consideration to be paid to the equity-holders of Arcturus see “Questions and Answers About the Transaction” beginning on page 5.

Accordingly, the issuance of Alcobra’s Ordinary Shares to Arcturus stockholders in connection with the Transaction will significantly reduce the relative voting power of each Ordinary Share held by current Alcobra shareholders, and the existing Alcobra shareholders will hold a minority stake in the combined company. In addition, four of the seven members of the board of directors of the combined company will initially be designated by Arcturus. Consequently, Alcobra’s shareholders will exercise substantially less influence over the management and policies of the combined company than they currently exercise over the management and policies of Alcobra.

Alcobra shareholders may not realize a benefit from the Transaction commensurate with the ownership dilution they will experience in connection with the Transaction.

If the combined company is unable to realize the full strategic and financial benefits anticipated from the Transaction, Alcobra shareholders will have experienced substantial dilution of their ownership interests without receiving any commensurate benefit, or only receiving part of the commensurate benefit to the extent the combined company is able to realize only part of the strategic and financial benefits currently anticipated from the Transaction.

Arcturus is not a publicly traded company, making it difficult to determine the fair market value of Arcturus.

The outstanding capital stock of Arcturus is privately held and is not traded on any public market, which makes it difficult to determine the fair market value of Arcturus. There can be no assurance that the merger consideration to be issued to Arcturus stockholders will not exceed the actual value of Arcturus.

The conditions under the Merger Agreement to Arcturus's consummation of the Transaction may not be satisfied at all or in the anticipated timeframe.

The obligation of Arcturus to complete the Transaction is subject to certain conditions, including the condition that Alcobra has at least \$30,000,000 in net cash as of the closing, the approval by Alcobra's shareholders of certain matters as set forth above, the accuracy of the representations and warranties contained in the Merger Agreement, subject to certain materiality qualifications, compliance by the parties with their respective covenants under the Merger Agreement and no law or order preventing the Transaction. These conditions are described in more detail under "The Merger Agreement – Conditions to the Completion of the Merger" beginning on page 57 of this proxy statement. Alcobra cannot assure you that all of the conditions will be satisfied or waived. If the conditions are not satisfied or waived, the Transaction may not occur or will be delayed, and Alcobra and Arcturus each may lose some or all of the intended benefits of the Transaction.

The announcement and pendency of the Transaction or failure to consummate the Transaction could have an adverse effect on Alcobra's financial results, future business and operations, as well as the market price of Alcobra's Ordinary Shares.

The announcement and pendency of the Transaction, or the companies' failure to consummate the Transaction, could disrupt Alcobra's business. Among other things, the attention of Alcobra's management may be directed toward the completion of the Transaction and related matters and may be diverted from other opportunities that might otherwise be beneficial to Alcobra. Should they occur, any of these matters could adversely affect Alcobra's financial condition, results of operations or business prospects.

The completion of the Transaction is subject to a number of conditions, and there can be no assurance that the conditions to the completion of the Transaction will be satisfied. If the Transaction is not completed, Alcobra will be subject to several risks, including:

- that most of the fees and expenses in connection with the Transaction, such as legal, accounting and transaction agent fees, must be paid even if the Transaction is not completed, and Alcobra may be subject to payment of a termination fee and other Arcturus expenses in the aggregate amount of approximately \$3,300,000 in certain circumstances;
- that it may be very difficult to retain Alcobra's remaining directors and employees long enough to pursue other alternatives;
- the Board would need to reevaluate Alcobra's strategic alternatives, many of which may be less favorable to stakeholders, such as liquidation of the company;
- Alcobra may be delisted from the NASDAQ Global Market or the NASDAQ Capital Market for failure to comply with continued listing requirements;
- Alcobra would not realize any of the anticipated benefits of having completed the Transaction;
- the price of Alcobra's Ordinary Shares may decline and remain volatile; and
- Alcobra could be subject to litigation related to any failure to consummate the Transaction or any related action that could be brought to enforce Alcobra's obligations under the Merger Agreement.

In addition, if the Merger Agreement is terminated and the Board determines to seek another business combination, there can be no assurance that it will be able to find a transaction that is superior or equal in value to the Transaction.

If the Transaction is not completed, Alcobra may elect to liquidate its remaining assets, and there can be no assurance as to the amount of cash available to distribute to Alcobra's shareholders after paying Alcobra's debts and other obligations.

If the Transaction is not completed, the Board of Alcobra may elect to take the steps necessary to liquidate all of its remaining assets. The process of liquidation may be lengthy and Alcobra cannot make any assurance regarding the timing of completing such a process. In addition, Alcobra would be required to pay all of its debts and contractual obligations, and to set aside certain reserves for potential future claims. There can be no assurance as to the amount of available cash, if any, that might be available to distribute to shareholders after paying the debts and other obligations and setting aside funds for reserves, nor as to the timing of any such distribution.

Alcobra has incurred and expects to continue to incur substantial transaction-related costs in connection with the Transaction.

Alcobra has incurred, and expects to continue to incur, a number of non-recurring transaction-related costs associated with completing the Transaction and combining the two companies. These fees and costs have been, and will continue to be, substantial. Non-recurring transaction costs include, but are not limited to, fees paid to legal, financial and accounting advisors, severance and benefit costs, filing fees and printing costs. Additional unanticipated costs may be incurred in the combined company's business, which may be higher than expected and could have a material adverse effect on the combined company's financial condition and operating results.

Even if the Transaction is consummated, the combined company may fail to realize the anticipated benefits of the Transaction.

The success of the Transaction will depend on, among other things, the combined company's ability to achieve its business objectives and raise the necessary capital to fund its operations, including the successful development of its current and future product candidates. If the combined company is not able to achieve these objectives, the anticipated benefits of the Transaction may not be realized fully, may take longer to realize than expected, or may not be realized at all.

Alcobra and Arcturus have operated and, until the completion of the Transaction, will continue to operate independently. Even if the Transaction is completed, it is possible that the integration process could result in the loss of key employees, the disruption of each company's ongoing business, an adverse impact on the value of the combined company's assets, or inconsistencies in standards, controls, procedures or policies that could adversely affect the combined company's ability to comply with reporting obligations as a public company, an inability to satisfy its obligations to third parties or to achieve the anticipated benefits of the Transaction, or an inability to raise the necessary capital to fund each company's operations. Integration efforts between the two companies will also divert management's attention and resources. Any delays in the integration process or inability to realize the full extent of the anticipated benefits of the Transaction could have an adverse effect on the combined company's business and the results of the combined company's operations. Such an adverse effect may impact the value of the shares of Alcobra after the completion of the Transaction.

The Exchange Ratio will not be adjusted in the event of any change in Alcobra's share price or the value of Arcturus's stock.

In the Transaction, each outstanding share of common stock of Arcturus (with certain exceptions), by virtue of the Transaction and without any action on the part of the parties to the Merger Agreement or the holders of Ordinary Shares of Alcobra, will be converted into the right to receive validly issued, fully paid and non-assessable Ordinary Shares of Alcobra pursuant to an established exchange ratio set forth in the Merger Agreement, which we refer to as the "**Exchange Ratio**". This Exchange Ratio will not be adjusted for changes in the market price or value of either Alcobra's Ordinary Shares or Arcturus's stock. However, the Exchange Ratio may be adjusted to eliminate the effect of certain events, including a reclassification, recapitalization, or share or stock split (as applicable) in the outstanding shares of the capital stock of either Alcobra or Arcturus.

Share price changes may result from a variety of factors (many of which are beyond our or Arcturus's control), including the following:

- changes in Alcobra's and Arcturus's respective businesses, operations and prospects, or market assessments;
- market assessments regarding the likelihood that the Transaction will be completed; and
- general market and economic conditions and other factors generally affecting the price of Alcobra's Ordinary Shares or the value of Arcturus's stock.

The price of Alcobra's Ordinary Shares at the closing of the Transaction may vary from the price on the date the Merger Agreement was executed and the date of the Meeting. As a result, the market value of the merger consideration will also vary.

After the Transaction is consummated, the combined company will continue to be subject to Israeli income tax unless additional actions are taken.

Alcobra is incorporated in Israel, and the post-Transaction combined company will continue to be incorporated in Israel, while all of its offices, assets, management, most of its business partners and most of its board members are expected to be located in the United States. So long as the parent entity is an Israeli company with no Israeli operations, the combined company will be subject to Israeli income tax and an acquisition of the combined company may result in adverse tax consequences for potential acquirers (other than potential Israeli acquirers), which may reduce the value of the stock of the combined company.

After the Transaction is consummated, the combined company may reincorporate in the U.S. and such reincorporation may result in taxes imposed on its shareholders.

As noted above, Alcobra is incorporated in Israel, and the post-Transaction combined company will continue to be incorporated in Israel, while all of its offices, assets, management, most of its business partners and most of its board members are expected to be located in the United States. Accordingly, the combined company may seek to reincorporate in Delaware or another jurisdiction in the United States, while maintaining its NASDAQ listing. The reincorporation of the combined company will be subject to all corporate approvals, which may include an approval of the shareholders of the combined company, and, such reincorporation may result in certain of the combined company shareholders recognizing taxable income in the jurisdiction in which such shareholders are tax residents or in, in certain cases, in which their members or partners are resident. If the plan to reincorporate the company is executed, the combined company does not intend to make any cash distributions to shareholders to pay such taxes. Shareholders may be subject to withholding taxes or other taxes with respect to their ownership of the combined company after the reincorporation.

After the Transaction is consummated, the combined company may reincorporate in the U.S. and such reincorporation may result in taxes imposed on the combined company.

As noted above, the combined company may seek to reincorporate in Delaware or another jurisdiction in the United States, while maintaining its NASDAQ listing. The reincorporation of the combined company will be subject to all required corporate approvals, which may include an approval of the shareholders of the combined company, and such reincorporation may result in income recognition by, and tax liability for, the combined company. Such a tax liability could reduce the ability of the combined company to fund its research and development activities or otherwise fund its business.

The value of shareholders' investment may be impacted by the U.S. income tax imposed on Alcobra's worldwide income.

Because Alcobra is expected to be treated as a U.S. domestic corporation as a result of the Transaction, it will be taxable by the United States on its worldwide income, which may adversely impact the value of shareholders' investment after the Transaction.

The value of shareholders' investment may be impacted if any of Alcobra's non-U.S. subsidiaries are subject to U.S. controlled foreign corporation rules.

As a result of the Transaction and Alcobra's treatment as a domestic corporation, all non-U.S. corporations in which Alcobra has direct or indirect interests exceeding 50%, by vote or by value, will be controlled foreign corporations ("CFC") and subject to U.S. CFC rules, which generally provide that certain types of income of CFCs, though undistributed, must be included in Alcobra's gross income in the year the income is earned by the CFC. If the CFC rules were to apply, this could impact the value of shareholders' investment after the Transaction.

The Internal Revenue Service ("IRS") may not agree with the conclusion that, following the Transaction, Alcobra is not subject to certain adverse consequences for U.S. federal income tax purposes.

As described above (see "Questions and Answers About the Transaction - What is the Transaction?" on page 5 of this proxy statement), based on the rules for determining share ownership under Section 7874 of the Code and certain factual assumptions, after the Transaction, Arcturus's current equity-holders are expected to own more than 80% of the combined company for purposes of applying Section 7874 of the Code. However, if the percentage ownership for purposes of applying Section 7874 of the Code were determined to be less than 80% but at least 60%, and certain other circumstances exist, Section 7874 of the Code would cause the combined company to be treated as a "surrogate foreign corporation," which could result in a number of adverse U.S. tax consequences. Moreover, in such case, Section 4985 of the Code and rules related thereto would impose an excise tax on the value of certain Alcobra share compensation held directly or indirectly by certain "disqualified individuals" (including officers and directors of Alcobra) at a rate currently equal to 15%.

Risks Related to Development, Clinical Testing and Regulatory Approval of Arcturus's Product Candidates

Arcturus is an early stage preclinical development company. Any product candidates Arcturus develops may fail in development or be delayed to a point where they do not become commercially viable.

Before obtaining regulatory approval for the commercial distribution of Arcturus's product candidates, Arcturus must conduct, at its own expense, extensive preclinical tests and clinical trials to demonstrate the safety and efficacy in humans of its product candidates. Preclinical and clinical testing is expensive, difficult to design and implement, can take many years to complete and is uncertain as to outcome, and the historical failure rate for product candidates is high.

If Arcturus enters into clinical trials, the results from preclinical testing or early clinical trials of a product candidate may not predict the results that will be obtained in subsequent subjects or in subsequent human clinical trials of that product candidate or any other product candidate. Moreover, preclinical and clinical data are often susceptible to varying interpretations and analyses, and many companies that have believed their product candidates performed satisfactorily in preclinical studies and clinical trials have nonetheless failed to obtain marketing approval for their products.

In addition, Arcturus, the U.S. Food and Drug Administration ("FDA") or other applicable regulatory authorities, or an Institutional Review Board ("IRB") or similar foreign review board or committee, may delay initiation of or suspend clinical trials of a product candidate at any time for various reasons, including if Arcturus or they believe the healthy volunteer subjects or patients participating in such trials are being exposed to unacceptable health risks. Among other reasons, adverse side effects of a product candidate or related product on healthy volunteer subjects or patients in a clinical trial could result in Arcturus's decision, or a decision by the FDA or foreign regulatory authorities, to suspend or terminate the trial, or, in the case of regulatory agencies, a refusal to approve a particular product candidate for any or all indications of use.

Clinical trials of a new product candidate require the enrollment of a sufficient number of patients, including patients who are suffering from the disease the product candidate is intended to treat and who meet other eligibility criteria. Rates of patient enrollment are affected by many factors, including the size of the patient population, the age and condition of the patients, the stage and severity of disease, the availability of clinical trials for other investigational drugs for the same disease or condition, the nature of the protocol, the proximity of patients to clinical sites, the availability of effective treatments for the relevant disease, and the eligibility criteria for the clinical trial. For example, Arcturus may experience difficulty enrolling its clinical trials, due to the availability of existing approved treatments, as well as other investigational treatments in development. Delays or difficulties in patient enrollment or difficulties retaining trial participants, including as a result of the availability of existing or other investigational treatments, can result in increased costs, longer development times or termination of a clinical trial.

Clinical trials also require the review, oversight and approval of IRBs, which continually review clinical investigations and protect the rights and welfare of human subjects. Inability to obtain or delay in obtaining IRB or ethics committee approval can prevent or delay the initiation and completion of clinical trials, and the FDA or foreign regulatory authorities may decide not to consider any data or information derived from a clinical investigation not subject to initial and continuing IRB or ethics committee review and approval, as the case may be, in support of a marketing application.

Arcturus's product candidates that it develops may encounter problems during clinical trials that will cause Arcturus, an IRB, ethics committee or regulatory authorities to delay, suspend or terminate these trials, or that will delay or confound the analysis of data from these trials. If Arcturus experiences any such problems, it may not have the financial resources to continue development of the product candidate that is affected, or development of any of its other product candidates. Arcturus may also lose, or be unable to enter into, collaborative arrangements for the affected product candidate and for other product candidates it is developing. A failure of one or more of Arcturus's clinical trials can occur at any stage of testing. Arcturus may experience numerous unforeseen events during, or as a result of, preclinical testing and the clinical trial process that could delay or prevent regulatory approval or its ability to commercialize its product candidates, including:

- Arcturus's preclinical tests or clinical trials may produce negative or inconclusive results, and it may decide, or regulators may require it, to conduct additional preclinical testing or clinical trials, or it may abandon projects that it expects to be promising;
- delays in filing Investigational New Drug Applications (“IND”) or comparable foreign applications or delays or failure in obtaining the necessary approvals from regulators or IRBs/ethics committees in order to commence a clinical trial at a prospective trial site, or their suspension or termination of a clinical trial once commenced;
- conditions imposed on Arcturus by an IRB or ethics committee, or the FDA or comparable foreign authorities regarding the scope or design of its clinical trials;
- problems in engaging IRBs or ethics committees to oversee clinical trials or problems in obtaining or maintaining IRB or ethics committee approval of trials;
- delays in enrolling patients and volunteers into clinical trials, and variability in the number and types of patients and volunteers available for clinical trials;
- high drop-out rates for patients and volunteers in clinical trials;
- negative or inconclusive results from Arcturus's clinical trials or the clinical trials of others for product candidates similar to its;
- inadequate supply or quality of product candidate materials or other materials necessary for the conduct of its clinical trials;
- greater than anticipated clinical trial costs;
- serious and unexpected drug-related side effects experienced by participants in its clinical trials or by individuals using drugs similar to its product candidates;
- poor or disappointing effectiveness of its product candidates during clinical trials;
- unfavorable FDA or other regulatory agency inspection and review of a clinical trial site or records of any clinical or preclinical investigation;
- failure of its third-party contractors or investigators to comply with regulatory requirements or otherwise meet their contractual obligations in a timely manner, or at all;
- governmental or regulatory delays and changes in regulatory requirements, policy and guidelines, including the imposition of additional regulatory oversight around clinical testing generally or with respect to its technology in particular; or
- varying interpretations of data by the FDA and similar foreign regulatory agencies.

If Arcturus is not successful in developing any product candidates, it may be required to change the scope and direction of its product development activities. In that case, Arcturus may not be able to identify and implement successfully an alternative product development strategy. Even if Arcturus successfully completes clinical trials of its product candidates, any given product candidate may not prove to be a safe and effective treatment for the disease for which it was being tested.

Arcturus may not be successful in its efforts to identify or discover potential product candidates.

The success of Arcturus's business depends primarily upon its ability to identify, develop and commercialize RNA therapeutics. Arcturus's research programs may initially show promise in identifying potential product candidates, yet fail to yield product candidates for clinical development for a number of reasons, including:

- Arcturus's research methodology or that of its strategic alliance partners may be unsuccessful in identifying potential product candidates;
- potential product candidates may be shown to have harmful side effects or may have other characteristics that may make the products unmarketable or unlikely to receive marketing approval; or
- Arcturus's strategic alliance partners may change their development profiles for potential product candidates or abandon a therapeutic area.

If any of these events occur, Arcturus's may be forced to abandon its development efforts for a program or programs, which would have a material adverse effect on its business. Research programs to identify new product candidates require substantial technical, financial and human resources. Arcturus may focus its efforts and resources on potential programs or product candidates that ultimately prove to be unsuccessful.

Arcturus may be unable to obtain U.S. approval and, as a result, unable to commercialize its product candidates.

Arcturus's product candidates are subject to extensive governmental regulations relating to, among other things, research, testing, development, manufacturing, safety, efficacy, approval, recordkeeping, reporting, labeling, storage, packaging, advertising and promotion, pricing, marketing and distribution of drugs. Rigorous preclinical testing and clinical trials and an extensive regulatory approval process are required to be successfully completed in the United States before a new drug can be marketed. Satisfaction of these and other regulatory requirements is costly, time consuming, uncertain and subject to unanticipated delays. It is possible that none of the product candidates Arcturus may develop will obtain the regulatory approvals necessary for it or its collaborators to begin selling them.

Arcturus has limited experience in conducting and managing the clinical trials necessary to obtain regulatory approvals, including approval by the FDA. The time required to obtain FDA and other regulatory approvals is unpredictable but typically takes many years following the commencement of clinical trials, depending upon the type, complexity and novelty of the product candidate. The standards that the FDA and its foreign counterparts use when regulating Arcturus are not always applied predictably or uniformly and can change. Any analysis Arcturus performs of data from preclinical and clinical activities is subject to confirmation and interpretation by regulatory authorities, which could delay, limit or prevent regulatory approval. Arcturus may also encounter unexpected delays or increased costs due to new government regulations, for example, from future legislation or administrative action, or from changes in FDA policy during the period of product development, clinical trials and FDA regulatory review. It is impossible to predict whether legislative changes will be enacted, or whether FDA or foreign regulations, guidance or interpretations will be changed, or what the impact of such changes, if any, may be.

Because the RNA technologies and novel RNA therapeutics Arcturus is developing may represent a new class of drug, the FDA has not yet established any definitive policies, practices or guidelines in relation to these medicines. The lack of policies, practices or guidelines may hinder or slow review by the FDA of any regulatory filings that Arcturus may submit. Moreover, the FDA may respond to these submissions by defining requirements Arcturus may not have anticipated. Such responses could lead to significant delays in the clinical development of Arcturus's product candidates. In addition, because there may be approved treatments for some of the diseases for which Arcturus may seek approval, in order to receive regulatory approval, Arcturus may need to demonstrate through clinical trials that the product candidates it develops to treat these diseases, if any, are not only safe and effective, but safer or more effective than existing products. Furthermore, in recent years, there has been increased public and political pressure on the FDA with respect to the approval process for new drugs, and the FDA's standards, especially regarding drug safety, appear to have become more stringent.

Any delay or failure in obtaining required approvals could have a material adverse effect on its ability to generate revenues from the particular product candidate for which it is seeking approval. Furthermore, any regulatory approval to market a product may be subject to limitations on the approved uses for which Arcturus may market the product or the labeling or other restrictions. In addition, the FDA has the authority to require a Risk Evaluation and Mitigation Strategy ("REMS") plan as part of a New Drug Application ("NDA"), or after approval, which may impose further requirements or restrictions on the distribution or use of an approved drug, such as limiting prescribing to certain physicians or medical centers that have undergone specialized training, limiting treatment to patients who meet certain safe-use criteria and requiring treated patients to enroll in a registry. Such limitations and restrictions may limit the size of the market for the product and affect reimbursement by third-party payors.

Even if Arcturus obtains regulatory approvals, its marketed RNA medicines will be subject to ongoing regulatory oversight. If it fails to comply with continuing U.S. requirements, its approvals could be limited or withdrawn, Arcturus could be subject to other penalties, and its business would be seriously harmed.

Following any initial regulatory approval of any RNA medicines Arcturus may develop, it will also be subject to continuing regulatory oversight, including the review of adverse drug experiences and clinical results that are reported after its drug products are made commercially available. This would include results from any post-marketing tests or surveillance to monitor the safety and efficacy of the drug product required as a condition of approval or agreed to by Arcturus. Any regulatory approvals that Arcturus receives for its product candidates may also be subject to limitations on the approved uses for which the product may be marketed.

The FDA has significant post-market authority, including, for example, the authority to require labeling changes based on new safety information and to require post-market studies or clinical trials to evaluate serious safety risks related to the use of a drug and to require withdrawal of the product from the market. The FDA also has the authority to require a REMS plan after approval, which may impose further requirements or restrictions on the distribution or use of an approved drug.

Even if Arcturus receives regulatory approval to market its product candidates, the market may not be receptive to its product candidates upon their commercial introduction, which will prevent Arcturus from becoming profitable.

The product candidates that Arcturus is developing are based upon new technologies or therapeutic approaches. Arcturus is actively pursuing technology alliances and strategic therapeutic partnerships to address other targets. Key participants in partnerships, such as physicians, third-party payors and consumers, may not accept a product intended to improve therapeutic results based on its RNA technology platform portfolio. As a result, it may be more difficult for Arcturus to convince the medical community and third-party payors to accept and use its product, or to provide favorable reimbursement.

Other factors that Arcturus believes will materially affect market acceptance of its product candidates include:

- the timing of its receipt of any marketing approvals and their terms;
- the safety and efficacy of its product candidates, as demonstrated in clinical trials and as compared with alternative treatments, if any;
- the relative convenience and ease of administration of its RNA-based therapeutic candidates;
- the willingness of patients to accept potentially new routes of administration or new or different therapeutic approaches and mechanisms of action;
- the success of its physician education programs;
- the availability of adequate government and third-party payor reimbursement;
- the pricing of its products, particularly as compared to alternative treatments; and
- the availability of alternative effective treatments for the diseases that therapeutic candidates Arcturus develops are intended to treat and the relative risks, benefits and costs of those treatments.

In addition, Arcturus's estimates regarding the potential market size may be materially different from what it currently expects at the time it commences commercialization, which could result in significant changes in its business plan and may have a material adverse effect on its results of operations and financial condition.

Any partnering, collaborative or other strategic arrangements that Arcturus currently has or that it will establish in the future may not be successful or Arcturus may otherwise not realize the anticipated benefits from these arrangements. In addition, any such arrangements may place the development and commercialization of Arcturus's product candidates outside Arcturus's control, may require Arcturus to relinquish important rights or may otherwise be on terms unfavorable to Arcturus.

Arcturus has been partnering, and plans to further partner, with larger biopharmaceutical companies that possess market know-how and marketing capabilities to complete the development and commercialization of RNA therapeutics. These arrangements may not be successful or Arcturus may otherwise not realize the anticipated benefits from these arrangements. Arcturus may not be able to locate third-party strategic partners to develop and market Arcturus's product candidates.

Arcturus is an early stage company with a limited operating history.

Arcturus was incorporated in the State of Delaware in February 2013. As such, Arcturus has a limited operating history and its operations are subject to all of the risks inherent in the establishment of a new business enterprise, including a lack of operating history. Arcturus cannot be certain that its business strategy will be successful or that it will be solvent at any particular time. Arcturus's likelihood of success must be considered in light of the problems, expenses, difficulties, complications and delays frequently encountered in connection with the establishment of any company. If Arcturus fails to address any of these risks or difficulties adequately, its business will likely suffer. Because of the numerous risks and uncertainties associated with developing its product candidates, it is unable to predict the extent of any future losses or when Arcturus will become profitable, if ever. Arcturus may never become profitable and you may never receive a return on an investment in the combined company's securities. An investor in the combined company's securities must carefully consider the substantial challenges, risks and uncertainties inherent in the attempted development and commercialization of procedures and products in the medical, cell therapy, biotechnology and biopharmaceutical industries.

Cautionary Statement Concerning Forward-Looking Statements

This proxy statement, including information set forth or incorporated by reference in this document, contains statements that constitute forward-looking information statements within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements include, without limitation, statements regarding the expected timetable for completing the Transaction, the satisfaction or waiver of any conditions to the Transaction, anticipated benefits, growth opportunities and other events relating to the Transaction, Alcobra's plans, objectives and expectations for future operations, including its projected results of operations and statements contained in "Questions and Answers About the Merger" and "The Merger" and in statements containing words such as "believes," "estimates," "anticipates," "intends," "continues," "contemplates," "expects," "may," "will," "could," "should," or "would" or other similar words or phrases. These statements, which are based on information currently available to Alcobra, are not guarantees and involve risks and uncertainties that could cause actual results to materially differ from those expressed in, or implied by, these statements, including those described under "Risk Factors" and in Alcobra's filings with the SEC that are incorporated herein by reference. We cannot guarantee any future results, including with respect to the Transaction. Readers should not place undue reliance on forward-looking statements. These forward-looking statements speak only as of the date on which the statements were made and we expressly disclaim any obligation to release publicly any updates or revisions to any forward-looking statement included in this proxy statement or elsewhere, except as required by law.

The Merger

Background of the Merger

The Board and senior management of Alcobra regularly review Alcobra's operations, financial performance and industry conditions as they may affect Alcobra's long-term strategic goals and plans, and consider and evaluate options for enhancing shareholder value as an independent company and alternatives for business combination transactions to enhance shareholder value.

The following chronology sets forth a summary of the material events leading up to the execution of the Merger Agreement.

In May 2013, Alcobra successfully completed its initial public offering, raising gross proceeds of \$25 million with the intention of using the proceeds for the clinical development of Metadoxine Extended Release ("MDX"). Alcobra subsequently raised an additional \$38 million, \$30 million and \$41 million respectively in public offerings that took place in October 2013, January 2015 and November 2015.

On January 17, 2017, Alcobra announced that a Phase 3 clinical trial of MDX had failed to achieve its primary endpoint of reduction in Attention Deficit Hyperactivity Disorder ("ADHD") symptoms using the CAARS-Adult ADHD scale. The clinical trial reported the results of 280 evaluable patients after an early termination of the study following the FDA's decision to place MDX on clinical hold which was based on its interpretation of safety findings regarding neurological findings in long term preclinical studies. Failure of that trial led to the cessation of Alcobra's development plans for MDX in adult ADHD, as well as a public announcement by Alcobra regarding its decision to evaluate strategic alternatives and cost-cutting initiatives. After the announcement of Phase 3 clinical trial results, Alcobra's management conducted a re-evaluation of assets that had been identified by it before for the potential expansion of its existing CNS portfolio.

On February 6, 2017, Alcobra announced that it had met with the FDA to discuss its new, proprietary ADAIR product candidate under development for the treatment of ADHD. The meeting defined a "505(b)(2)" development path to be funded by Alcobra's existing cash balance, and which targeted an NDA submission in the second half of 2018. Alcobra held an investors call on February 7, 2017, which included members of senior management, in order to provide additional insights with respect to plans for the development and market opportunity of ADAIR.

On March 6, 2017, during a meeting of the Alcobra Board of Directors, management presented an overview of the process employed to evaluate over 150 potential assets or companies to acquire that the management of Alcobra, with its outside business development consultants, had identified and evaluated before and after the January 17, 2017 announcement of the results of the Phase 3 trial. Dr. Yaron Daniely, Alcobra's chief executive officer at that time, provided an update to the Board regarding two leading clinical stage companies - Company A and Company B - and two preclinical companies which either had assets available to license or presented the potential for the companies to be acquired. Company A had been identified by Alcobra's management and Company B had been introduced to Alcobra by one of its large shareholders. The Board encouraged management to focus on each of the two clinical stage companies. Thereafter, Alcobra completed due diligence evaluations of all four companies, which evaluated, among other things: clinical, regulatory, preclinical, intellectual property, and market opportunity information and commercial assessment work. During the month of April 2017, Alcobra's management concluded that Company A had a clinical development program that was too risky based on the modest efficacy results seen in a Phase II trial and following consultation with a scientific expert in the field in which the target company was focused. Alcobra undertook extensive due diligence on Company B, including engaging scientific experts, reviewing confidential data in an electronic data room, hosting a visit by Company B management to Alcobra offices, and holding multiple calls with Company B to gather additional information. Alcobra concluded that Company B did not have well established management and staffing and did not have adequate existing financial statements at that time, which would make it challenging to become a public company in the near term. As a result, negotiations were put on hold.

From April through June 2017, Alcobra evaluated Company C, an Israeli company that Alcobra's management was already familiar with. In connection with such evaluation, Alcobra undertook extensive due diligence, including engaging scientific experts, reviewing confidential data in an electronic data room, visiting the offices of Company C and holding multiple calls with Company C to gather additional information. Alcobra subsequently decided to attempt to negotiate a merger with Company C. A draft merger agreement was produced between Alcobra and Company C; however, upon further discussions with the Board of Directors, several members of the Board expressed a concern that the time until a major clinical milestone was too long and, accordingly, if Company C merged with Alcobra, it would have insufficient funding to reach the key clinical milestone without raising additional funds. As a result, negotiations with Company C were put on hold.

In parallel to the discussions with Company C, Alcobra's senior management and Board discussed the need to explore strategic alternatives and highlighted the need to undertake cost-cutting measures to preserve cash (including a significant reduction in force). Among other things, Alcobra inquired, on a confidential basis, into several asset acquisitions and merger opportunities; however, the ensuing negotiations that transpired did not result in a viable merger opportunity. Such opportunities included: Company D, which entered into a term sheet with Alcobra; however, Company D could not fulfill certain conditions precedent to enter into substantive negotiations and the negotiations were terminated.

In April 2017, Alcobra evaluated the possible engagement of three potential investment banks, including, among others, Ladenburg Thalmann & Co. Inc. ("**Ladenburg**"), which was chosen by the Alcobra Board because of its deep expertise in mergers such as the Transaction.

On April 27, 2017, Alcobra signed an engagement letter with Ladenburg and formally engaged the bank to assist and advise with respect to the strategic process. Between April 27, 2017 and June 22, 2017, Alcobra's senior management and Board worked with Ladenburg to evaluate potential strategic alternatives, some of which are discussed above, and included Company B, Company C and Company D; however, negotiations with such candidates did not lead to signed term sheets or a definitive merger agreement.

On June 22, 2017, the Board determined to authorize Ladenburg to commence a formal strategic merger transaction process and formed a special committee of the Board ("**Special Committee**") for purposes of supporting the process. The Special Committee was composed of Board directors Ms. Orli Tori, Mr. Yuval Yanai, Dr. Yaron Daniely, Mr. Daniel Geffken and Dr. Aharon Schwartz.

On June 23, 2017, following Alcobra's public announcement of the strategic process, Ladenburg sent formal process letters to a broad selection of private and public companies in the life sciences industry, as described further below. These companies consisted of private companies interested in becoming publicly traded companies on the NASDAQ, private companies not in the process of going public, private companies that had failed in earlier attempts at an IPO, publicly traded companies outside of the United States seeking a NASDAQ listing and public companies in the United States that believed they presented a strategic complement to Alcobra or were seeking a merger transaction as a *de facto* financing event.

In addition to the aforementioned public and private companies, Ladenburg, with the help of Alcobra's Special Committee and management, also reached out to a broad set of investors and service providers, which included significant Alcobra shareholders, investment banks, venture capital firms, securities lawyers, auditors and investor relations firms with the goal of broadening the pool of potential candidates.

Ladenburg led a formal selection process seeking potential merger partners. In identifying and prioritizing potential merger partners, the following criteria, among others, presented to and approved by the Board, were considered: life sciences companies with a priority towards bio/pharma companies, clear development milestones or other value inflection points within 6 to 18 months, therapeutic areas expected to be of interest to investors based on unmet clinical need for new therapies and likely commercial potential given the competitive landscape, strong management background and experience, current investor backing and certainty of sufficient cash on-hand post-transaction to execute their business plan, a clean capital structure, and audited financial statements or ability to produce audited financial statements for the last two fiscal years.

Ladenburg contacted 114 companies focused on the life sciences sector, including Arcturus, seeking their interest in a potential merger with a public company. Ladenburg's outreach consisted of direct meetings, calls and/or e-mails with senior management teams.

Among the 114 companies, 47 companies, including Arcturus, received a formal process letter from Ladenburg, based on responses of the companies to Ladenburg's outreach. The formal process letter outlined a brief overview of Alcobra as well as Alcobra's criteria for selecting a potential merger target. Potential merger candidates were advised to assume that Alcobra would have \$35 million in net cash upon the consummation of a merger.

Ladenburg established a deadline of July 13, 2017 to receive formal proposals of interest and received 33 non-binding proposals, including a proposal from Arcturus.

On July 18, 2017, Ladenburg and members of the Alcobra management team met in New York and via teleconference to further evaluate the 33 proposals and identified ten companies (Arcturus among them) that appeared to be the most attractive candidates. One of the ten companies subsequently withdrew from the process, based on its decision to pursue independent fundraising.

On July 19, 2017, management and the Special Committee, which was apprised of the selection process Alcobra and Ladenburg had been conducting, updated the Board on the status of the strategic M&A process and the identification of the most attractive candidates. During this meeting, the status of the ADAIR development program was reviewed and the Board guided management to limit expenditures on the ADAIR development program and seek to monetize the asset or find alternative funding for the project through outside investors.

On July 26, 2017 and August 2, 2017, each of the nine finalists, including Arcturus, delivered in-person company presentations before Ladenburg, the Alcobra Special Committee and members of the Alcobra Board and management team in New York and Tel Aviv respectively. Following these presentations and extensive discussions, the Special Committee selected four companies with which to engage in additional discussions, based on the Special Committee's assessment (along with Alcobra management and Ladenburg) of the quality of the management, additional insight into the potential for the companies, the quality of the presentations, readiness to be a public company, strength of the offer (fairness of the valuation of the company and Alcobra), and its suitability per the pre-established criteria set by Alcobra for a merger partner discussed above. The Special Committee decided to engage in additional discussions with two lead candidates, which included Arcturus, as well as two back-up candidates.

On August 8, 2017, the Board was apprised of the Special Committee's recommendation to evaluate further the two lead candidates and the two backup candidates and its plans to gather additional input from the four companies, including the possibility of improved offers. Between the dates of August 9 and 13, 2017, Ladenburg, on behalf of Alcobra, contacted the four companies in an effort to improve their offers and to seek clarification of certain factors related to their offers. Ladenburg received updates and, in some cases, improved offers from some of the four companies, including Arcturus.

On August 14, 2017, following an update from the Special Committee, and with Ladenburg and Alcobra's legal counsel in attendance, the Special Committee recommended Arcturus as the most favorable candidate because, among other things, of the relative valuation of Alcobra that it offered. Arcturus also appeared to offer a more exciting pipeline of products with its focus on RNA medicines with many more development programs and the appearance of stronger potential IP protection. Furthermore, Arcturus offered the potential for a more straightforward merger structure and one which could be implemented more quickly than the other lead candidate's proposed structure. Consequently, the Board guided Alcobra's management to focus its attention on further negotiations with Arcturus and the second lead candidate.

During the same meeting, Alcobra's management informed the Board that it identified an investor group who was interested in acquiring and funding the development of ADAIR. The Board authorized management and Dr. Daniely to negotiate a loan agreement with the investors to fund short term development of ADAIR and to negotiate all terms necessary to spin out ADAIR into a separate entity.

On August 17, 2017, the Board authorized management to negotiate and conclude with Arcturus the final terms of the term sheet, and negotiate a definitive merger agreement. Arcturus was prioritized over the other candidate based on, among other factors: 1) scientific interest in the platform technology; 2) multiple development programs; 3) external validation and revenue from major pharma partners; 4) relative simplicity and speed of doing a deal with them; 5) strength and expertise of management team; 6) subjective assessment of the likelihood of generating further investor interest; and 7) higher valuation for Alcobra.

On August 22, 2017, Alcobra signed a Letter of Intent ("**LOI**") with an investor group to acquire ADAIR and granting an exclusivity period to negotiate a final agreement. With the intent to finalize an agreement prior to a merger of Alcobra with another company.

Throughout August and September of 2017, Alcobra's management and other employees, as well as its advisors, conducted due diligence on Arcturus through access to a confidential data room, review of collaboration agreements with external partners such as Ultragenyx Pharmaceutical, Inc. ("**Ultragenyx**"), Takeda Pharmaceutical Company Limited ("**Takeda**") and Cystic Fibrosis Foundation Therapeutics Inc. ("**CFFT**"), engagement of outside scientific and technical experts, review of the scientific literature, phone calls between Alcobra and its advisors and Arcturus and its advisors, review of legal, financial and other diligence materials, making diligence inquiries and follow-ups and assessments of the competitive landscape. Ladenburg also conducted interviews with representatives of two external collaborations to assess the process by which they selected Arcturus as a partner and their satisfaction with the progress of the collaboration.

On August 24, 2017, following negotiations between the parties, Alcobra and Arcturus executed a non-binding term sheet. The parties then began drafting a merger agreement and negotiated its completion. During this time period, numerous calls were held and e-mails were exchanged between the two companies to ask and answer questions regarding a variety of issues, including Arcturus's partnership agreements with other pharma companies and CFFT, IP, CMC (Chemistry, manufacturing and Control) Arcturus's technology platforms and the diseases that Arcturus's development programs target. Alcobra's management and advisors were provided access to an electronic data room set up by Arcturus. The data room contained scientific, financial and legal information about Arcturus. Arcturus and their advisors were given access to an electronic data room set up by Alcobra containing financial, legal, and regulatory information about Alcobra and scientific information on all of Alcobra's development programs.

During this period, the parties assessed the relative valuation of each company in the proposed merger. For the purpose of this discussion and negotiation, the proposed valuation of Arcturus was based on its last note conversion to equity in December 2016 and supported by valuations of companies in a similar therapeutic area and stage of development.

On August 31, 2017, Arcturus provided an initial draft of the Merger Agreement to Alcobra. On September 6, 2017 and September 7, 2017, Arcturus provided to Alcobra initial drafts of both the Lock-Up Agreement and Support Agreement. These agreements were negotiated by the parties, along with their respective legal advisors, and several drafts of each were exchanged.

On September 12, 2017, the Board had a discussion with members of the Arcturus board of directors and management about diligence and disclosure issues. These discussions were largely related to a particular Arcturus agreement with a partner, the status of that agreement, and the timing and nature of potential future agreements with such partner.

On September 18 and 19, 2017, Dr. Stuart Collinson, Arcturus's Executive Chairperson and Mr. Craig Willet, a director of Arcturus, visited Israel and met with members of the Board and management of Alcobra to discuss the disclosure issues around such partnership and the prospects of future, broader collaboration with such partner, and negotiate certain key transaction terms. Following a visit to Israel, Alcobra concluded its diligence over Arcturus and the negotiations of the Merger Agreement were completed. The issues negotiated included the absolute and relative valuations of Alcobra and Arcturus and adjusting Arcturus valuation to the diligence findings and the proposed composition of the Board of Directors and management of a combined company. In particular, due to the fact that Arcturus had not signed the new revised agreement with Janssen Pharmaceuticals, Inc. ("**Janssen**") at the time, the parties agreed to reduce the valuation of Arcturus to the valuation disclosed in this proxy statement.

On September 25, 2017, Alcobra's interim chief executive officer Mr. David Baker and Mr. Howard Rosen, a director of Alcobra and former Chairman of the Board, met with Arcturus management and board members on site at Arcturus's facilities in San Diego to conduct further due diligence and received a tour of the Arcturus facilities.

On September 27, 2017, Alcobra's Board of Directors held a meeting in which representatives of management, company counsel and Ladenburg were present. At the meeting, Alcobra's counsel, ZAG/S&W LLP, engaged in further discussion with the board on key provisions of the transaction documents that had been previously discussed and reviewed the fiduciary duties of directors in connection with the Transaction. At this meeting, representatives of Ladenburg discussed the proposed Transaction and went over various analyses and other materials that were presented to the Board, and then delivered to Alcobra's board its Opinion, to the effect that and subject to the various assumptions, qualifications and limitations set forth in its Opinion, as of that date, the consideration to be paid in the Transaction was fair, from a financial point of view, to the Alcobra shareholders. Alcobra's Board engaged in extensive discussions relating to Arcturus, its business and the terms of the proposed Transaction. After further discussion, the Board unanimously determined that it was advisable and fair to, and in the best interests of the Company and the Company's shareholders for the Company to enter into the Merger Agreement, and, accordingly, the Board approved the Merger Agreement and the Transaction.

Reasons for the Merger

The Board considered the following factors in reaching its conclusion to approve the Merger Agreement and to recommend that the Alcobra shareholders approve Item No. 1, all of which the Board viewed as supporting its decision to approve the business combination with Arcturus:

- Arcturus is engaged in the RNA medicines field, which is an attractive field both for its promise to address significant unmet medical needs in rare, liver and respiratory diseases, as well as its externally confirmed potential following the recent clinical success of companies such as Alnylam Pharmaceuticals, Inc.;
- The proposed valuation for Alcobra offers a substantial premium to both Alcobra's current market capitalization and Alcobra's current and expected net cash position, and is better than valuations provided by most other merger candidates evaluated by the Board and relative to premiums in other similar transactions;
- The proposed valuation of Arcturus is attractive relative to comparable and similar transactions and other companies in the RNA field;
- Arcturus's UNA and LUNAR platforms provide two IP protected platforms in the field of RNA medicines which have the potential to be applied to many different diseases;
- The LUNAR platform is distinct from other RNA delivery approaches and offers the potential to deliver multiple types of RNA to different cell types throughout the human body making it potentially more versatile than other RNA delivery approaches;
- Arcturus has entered into several partnerships with leading pharmaceutical partners, such as Takeda and Ultragenyx, and patient advocacy groups such as CFFT, which partnerships demonstrate strong interest in the Arcturus technology by credible industry leaders and further validates the development programs and the underlying technology;
- Some partnership programs that Arcturus has entered into provide for upfront and milestone payments as well as reimbursement of Arcturus research and development costs, which serve as external non-dilutive funding to Arcturus;
- Arcturus's internal research and development programs have the potential to generate meaningful value because they target rare diseases where there are no or limited treatment options and thus the potential to capture large market share with premium pricing;
- Arcturus's multiple development programs (i) offer multiple "shots on goal" and diversify the risk of any one program and (ii) offer multiple potential value-creating milestones over the next 24 months;
- The selection of Arcturus as a merger candidate was reached after an extensive strategic process that Alcobra conducted with the assistance of Ladenburg, included extensive diligence over Arcturus and other merger candidates and after other candidates were evaluated and compared with the Arcturus opportunity;
- The opinion of Ladenburg delivered to the Board to the effect that, as of September 27, 2017 and based upon and subject to the various assumptions made, procedures followed, matters considered, and qualifications and limitations set forth in the opinion, the Exchange Ratio was fair to the Alcobra Shareholders, from a financial point of view; and

- The Board also reviewed the recent financial condition, results of operations and status of the Alcobra development programs, including:
 - o the lack of success in developing MDX and the difficulty Alcobra would have obtaining the amount of funding required to meaningfully progress MDX and develop the ADAIR asset in the near-term;
 - o risks associated with continuing to operate Alcobra on a stand-alone basis, including the need to rebuild infrastructure and management to continue its operations;
 - o the results of substantial efforts made over a significant period of time by Alcobra's senior management and financial advisors to solicit strategic alternatives for Alcobra to the merger, including the discussions that Alcobra management and the Alcobra Board of Directors had during the first half of 2017 with other potential merger candidates; and
 - o the projected liquidation value of Alcobra and the risks, costs and timing associated with liquidating compared to the value Alcobra shareholders will receive in the merger.

The Board also reviewed the terms of the Transaction and associated transactions, including:

- The Exchange Ratio used to establish the number of Ordinary Shares of Alcobra to be issued in the merger is fixed based on the relative valuations of the companies, and thus the relative percentage ownership of Alcobra shareholders and Arcturus stockholders immediately following the closing of the Transaction is similarly fixed, except for adjustments based on the amount of Alcobra's or Arcturus's net cash at the time of the closing of the Transaction (which is subject to a \$1.75 million collar);
- The combined company will have three out of the seven board members nominated by Alcobra, allowing for continued influence on the combined company's strategy and proportional representation for Alcobra's existing shareholders on the combined company's board;
- The limited number and nature of the conditions to Arcturus's obligation to consummate the merger, the limited risk of non-satisfaction of such conditions and the likelihood that the Transaction will be consummated on a timely basis; and
- The belief that the terms of the Merger Agreement, including the parties' representations, warranties and covenants, and the conditions to their respective obligations, are reasonable under the circumstances.

In the course of its deliberations, the Board also considered a variety of risks and other countervailing factors related to entering into the Transaction, including:

- The potential dilution to the shareholders of Alcobra in connection with the consummation of the Transaction;
- Potential adverse tax implications on Alcobra and its shareholders;
- Management expertise and suitability to lead a public company, given that Arcturus has operated as a private company since its inception;
- The termination fee of \$3,000,000 and related expenses payable to Arcturus upon the occurrence of certain events and the potential effect of such termination fee in deterring other potential acquirers from proposing an alternative transaction that may be more advantageous to Alcobra shareholders;

- The substantial expenses to be incurred in connection with the Transaction, including the costs associated with any merger related litigation;
- The possible volatility, at least in the short term, of the trading price of the Alcobra shares resulting from the announcement of the Transaction;
- The possibility of any suit, action or proceeding with respect to the Transaction;
- The risk that the Transaction might not be consummated in a timely manner or at all and the potential adverse effect of the public announcement of the Transaction or on the delay or failure to complete the Transaction on the reputation of Alcobra;
- The risk to the business of Alcobra, operations and financial results in the event that the Transaction is not consummated, including the diminution of Alcobra's cash and its likely inability to raise additional capital through the public or private sale of equity securities;
- The strategic direction of the combined company following the completion of the Transaction, which will be determined by a board of directors initially comprised of a majority of the members of the current Arcturus board of directors; and
- Various other risks associated with the combined company and the Transaction, including those described in "Risk Factors" beginning on page 13 of this proxy statement.

The foregoing information and factors considered by the Board are not intended to be exhaustive but are believed to include all of the material factors considered by the Board. In view of the wide variety of factors considered in connection with its evaluation of the Transaction and the complexity of these matters, the Board did not find it useful and did not attempt to quantify, rank or otherwise assign relative weights to these factors. In considering the factors described above, individual members of the Board may have given different weights to different factors. The Board conducted an overall analysis of the factors described above, including thorough discussions with, and questioning of, the Alcobra management team and the legal and financial advisors of Alcobra, and considered the factors overall to be favorable to, and in support of, its unanimous determination.

Interests of Certain Persons in the Merger

The Board of the combined company will be comprised of seven members, including three members to be designated by Alcobra and four members to be designated by Arcturus. However, at the time of approving the Transaction, the Company did not undertake to cause any director to continue to serve on the Board after the consummation of the Transaction.

Pursuant to the terms of existing employment agreements with Alcobra, some of our executive officers and other employees, including Mr. David Baker, Dr. Tomer Berkovitz and Ms. Irena Katsman, may be eligible to collect severance payments upon termination of their reemployment in connection with the closing of the Transaction and change in control of the Company. The aggregate cost to Alcobra for providing such severance is approximately \$760,000 and was taken into account when calculating the expected Alcobra Net Cash at the closing of the Transaction. Making such payment is not expected to impact the Exchange Ratio.

Alcobra also undertook to pay special success bonuses in the aggregate amount of \$181,000 to Dr. Tomer Berkovitz and Ms. Irena Katsman in connection with the Transaction if the Alcobra Net Cash at the closing of the Transaction exceeds \$33,250,000. Since the special bonuses are only paid if Alcobra's Net Cash is within the collar range, the aggregate cost of providing such bonuses will not impact the Exchange Ratio.

Also, the full acceleration of 1,536,576 options Alcobra granted to employees and directors will be triggered by the closing of the Transaction. To the extent that the exercise price of such options is below the share price of the Company immediately prior to the Effective Time, such options will impact the calculation of the Exchange Ratio according to the treasury stock method.

Opinion of the Financial Advisor to the Board

Pursuant to an engagement letter dated April 27, 2017, Alcobra retained Ladenburg to act as a financial advisor in connection with the Transaction and the transactions contemplated by the Merger Agreement and to render an opinion to Alcobra's Board as to the fairness, from a financial point of view, of the Exchange Ratio to Alcobra's shareholders. On September 27, 2017, Ladenburg rendered its oral opinion, subsequently confirmed by delivery of a written opinion dated September 27, 2017 (the "**Opinion**") to Alcobra's Board, that, as of the date of such Opinion, and based upon the various assumptions, qualifications and limitations set forth therein, that the Exchange Ratio was fair, from a financial point of view, to Alcobra's shareholders.

The full text of the written Opinion of Ladenburg, dated September 27, 2017, is attached as Annex A to this proxy statement and is incorporated by reference. Alcobra encourages Alcobra's shareholders to read the Opinion in its entirety for the assumptions made, procedures followed, other matters considered and limits of the review by Ladenburg. The summary of the written Opinion of Ladenburg set forth herein is qualified by reference to the full text of such Opinion. Ladenburg provided its Opinion for the sole benefit and use of Alcobra's Board in its consideration of the Transaction and the other transactions contemplated by the Merger Agreement. Ladenburg's Opinion is not a recommendation to any shareholder as to how to vote with respect to the proposed Transaction or the other transactions contemplated by the Merger Agreement or to take any other action in connection with the Transaction or otherwise.

In connection with its Opinion, Ladenburg took into account an assessment of general economic, market and financial conditions as well as its experience in connection with similar transactions and securities valuations generally and, among other things:

- Reviewed a draft dated September 27, 2017 of the Merger Agreement, which was the most recent draft made available to Ladenburg prior to delivery of its Opinion;
- Reviewed and analyzed certain publicly available financial and other information for each of Alcobra and Arcturus, respectively, including equity research, and certain other relevant financial and operating data furnished to Ladenburg by the management of each of Alcobra and Arcturus, respectively;
- Reviewed and analyzed certain relevant historical financial and operating data concerning Arcturus furnished to Ladenburg by the management of Arcturus;
- Discussed with certain members of the management of Alcobra the historical and current business operations, financial condition and prospects of Alcobra;
- Reviewed and analyzed certain operating results of Arcturus as compared to operating results and the reported price and trading histories of certain publicly traded companies that Ladenburg deemed relevant;
- Reviewed and analyzed certain financial terms of the Merger Agreement as compared to the publicly available financial terms of certain selected business combinations that Ladenburg deemed relevant;

- Reviewed and analyzed certain financial terms of completed initial public offerings for certain companies that Ladenburg deemed relevant;
- Reviewed certain pro forma financial effects of the Transaction;
- Reviewed and analyzed such other information and such other factors, and conducted such other financial studies, analyses and investigations, as Ladenburg deemed relevant for the purposes of its Opinion; and
- Took into account Ladenburg's experience in other transactions, as well as its experience in securities valuations and Ladenburg's general knowledge of the industries in which Alcobra and Arcturus operate.

In conducting its review and arriving at its Opinion, Ladenburg, with the consent of Alcobra, assumed and relied, without independent investigation, upon the accuracy and completeness of all financial and other information provided to Ladenburg by Alcobra and Arcturus, or which is publicly available or was otherwise reviewed by Ladenburg. Ladenburg did not take any responsibility for the accuracy, completeness or reasonableness of, or independent verification of, such information. Ladenburg relied upon, without independent verification, the assessment of management of Alcobra and Arcturus as to the viability of, and risks associated with, the current and future products and services of Arcturus (including without limitation, the development, testing and marketing of such products and services, the receipt of all necessary governmental and other regulatory approvals for the development, testing and marketing thereof, and the life and enforceability of all relevant patents and other intellectual and other property rights associated with such products and services). In addition, Ladenburg did not conduct, or assume any obligation to conduct, any physical inspection of the properties or facilities of Alcobra or Arcturus.

With respect to the financial forecasts supplied to Ladenburg by Alcobra regarding Arcturus, Ladenburg assumed, with Alcobra's consent, that they were reasonably prepared on the basis of the best currently available estimates and judgments of the managements of Alcobra and Arcturus, as applicable, as to the future operating and financial performance of Alcobra and Arcturus, as applicable, and that they provided a reasonable basis upon which Ladenburg could form its opinion. Furthermore, Ladenburg has assumed, with Alcobra's consent, that there will be no further adjustments to the Exchange Ratio between the date hereof and the date the final Exchange Ratio is determined. Ladenburg expressly disclaims any undertaking or obligation to advise any person of any change in any fact or matter affecting its Opinion of which Ladenburg becomes aware after the date of its Opinion. Ladenburg assumed there were no material changes in the assets, liabilities, financial condition, results of operations, business or prospects of Alcobra or Arcturus since the date of the last financial statements made available to them. Ladenburg did not make or obtain any independent evaluations, valuations or appraisals of the assets or liabilities of Alcobra or Arcturus, nor was Ladenburg furnished with such materials. Further, as Alcobra's Board was aware, Arcturus's management did not provide Ladenburg with, and Ladenburg did not otherwise have access to, financial forecasts regarding Arcturus's business, and accordingly, Ladenburg did not perform either a discounted cash flow analysis or any multiples-based analyses with respect to Arcturus. In addition, Ladenburg did not evaluate the solvency or fair value of Alcobra or Arcturus under any state or federal laws relating to bankruptcy, insolvency or similar matters. Ladenburg's Opinion did not address any legal, tax or accounting matters related to the Merger Agreement or the Transaction, as to which Ladenburg has assumed that Alcobra and the Board received such advice from legal, tax and accounting advisors as each has determined appropriate. Ladenburg's Opinion addressed only the fairness of the Exchange Ratio, from a financial point of view, to Alcobra's shareholders. Ladenburg expressed no view as to any other aspect or implication of the Transaction or any other agreement, arrangement or understanding entered into in connection with the Transaction. Ladenburg's Opinion was necessarily based upon economic and market conditions and other circumstances as they existed and could be evaluated by Ladenburg on the date of its Opinion. It should be understood that although subsequent developments may affect Ladenburg's Opinion, Ladenburg does not have any obligation to update, revise or reaffirm its Opinion and Ladenburg expressly disclaims any responsibility to do so.

Ladenburg did not consider any potential legislative or regulatory changes currently being considered or recently enacted by the United States or any foreign government, or any domestic or foreign regulatory body, or any changes in accounting methods or generally accepted accounting principles that may be adopted by the SEC, the Financial Accounting Standards Board, International Financial Reporting Standards or any similar foreign regulatory body or board.

For purposes of rendering its Opinion, Ladenburg assumed, in all respects material to its analysis, that the representations and warranties of each party contained in the Merger Agreement are true and correct, that each party will perform all of the standards of the covenants and agreements required to be performed by it under the Merger Agreement and that all conditions to the consummation of the Transaction will be satisfied without waiver thereof. Ladenburg assumed that the final form of the Merger Agreement will be substantially similar to the last draft reviewed by Ladenburg. Ladenburg also assumed that all governmental, regulatory and other consents and approvals contemplated by the Merger Agreement will be obtained and that in the course of obtaining any of those consents no restrictions will be imposed or waivers made that would have an adverse effect on the contemplated benefits of the Transaction. Ladenburg assumed that the Transaction will be consummated in a manner that complies with the applicable provisions of the Securities Act and the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”), the Companies Law and the Israeli Securities Law and all regulations promulgated thereunder and all other applicable Israeli, federal and state statutes, rules and regulations. Alcobra has informed us, and Ladenburg has assumed, that the Transaction is intended to constitute a reorganization within the meaning of Section 368(a) of the Code and the Treasury regulations promulgated thereunder.

It is understood that Ladenburg’s Opinion was intended for the benefit and use of the Board of Alcobra in its consideration of the financial terms of the Transaction and may not be used for any other purpose or reproduced, disseminated, quoted or referred to at any time, in any manner or for any purpose without Ladenburg’s prior written consent. Ladenburg’s Opinion did not constitute a recommendation to the Board of Alcobra on whether or not to approve the Transaction or to any shareholder or any other person as to how to vote with respect to the Transaction or to take any other action in connection with the Transaction or otherwise. Ladenburg’s Opinion did not address Alcobra’s underlying business decision to proceed with the Transaction or the relative merits of the Transaction compared to other alternatives available to Alcobra. Ladenburg expressed no opinion as to the prices or ranges of prices at which shares of securities of any person, including Alcobra, will trade at any time, including following the announcement or consummation of the Transaction. Ladenburg was not requested to opine as to, and Ladenburg’s Opinion does not in any manner address, the amount or nature of compensation to any of the officers, directors or employees of any party to the Transaction, or any class of such persons, relative to the compensation to be paid to the equity-holders of the Arcturus in connection with the Transaction or with respect to the fairness of any such compensation.

The following is a summary of the principal financial analyses performed by Ladenburg to arrive at its Opinion. Some of the summaries of financial analyses include information presented in tabular format. In order to fully understand the financial analyses, the tables must be read together with the text of each summary. The tables alone do not constitute a complete description of the financial analyses. Considering the data set forth in the tables without considering the full narrative description of the financial analyses, including the methodologies and assumptions underlying the analyses, could create a misleading or incomplete view of the financial analyses. Ladenburg performed certain procedures, including each of the financial analyses described below, and reviewed with the management of Alcobra the assumptions on which such analyses were based and other factors, including the historical and projected financial results of Alcobra and Arcturus.

Transaction Overview

Based upon the exchange ratio in the Merger Agreement (which is subject to adjustment before the closing of the Transaction), Alcobra will issue to stockholders of Arcturus 5,956,425 million shares of Alcobra Ordinary Shares (as adjusted for the proposed reverse share split). Alcobra's current shareholders will own approximately 40% of the combined entity post- Transaction.

Implied Equity Value.

Ladenburg estimated an implied equity value for Arcturus of approximately \$70.0 million, which was calculated by multiplying 5,956,425 (the number of shares of Alcobra Ordinary Shares to be issued to Arcturus stockholders based on the exchange ratio, assuming the occurrence of the reverse share split) by \$11.75 (the implied per share price of Alcobra Ordinary Shares following the reverse share split).

Implied Total Enterprise Value.

Ladenburg calculated an implied total enterprise value for Arcturus of approximately \$65.0 million by subtracting an assumed Arcturus Net Cash balance of approximately \$5.0 million (based on Arcturus's projected indebtedness, cash and cash equivalents at October 31, 2017, the assumed closing date of the Transaction), from the implied equity value of approximately \$70.0 million.

Analysis of Selected Initial Public Offering Transactions

Ladenburg reviewed the initial public offerings ("IPO") of 25 companies which completed an IPO since September 2015 and whose lead products at the time of its IPO were in preclinical to phase 1/2 stages of development. The implied total enterprise value at IPO is defined as the pre-money equity value plus indebtedness, liquidation value of preferred stock and non-controlling interest, minus cash and cash equivalents at the time of its IPO. Although the companies referred to below were used for comparison purposes, none of these companies is directly comparable to Arcturus. Accordingly, an analysis of the results of such a comparison is not purely mathematical, but instead involves complex considerations and judgments concerning differences in historical and projected financial and operating characteristics of the selected companies below. These companies, which are referred to as the "**Selected Early Stage IPO Companies**" were:

- Aeglea BioTherapeutics, Inc.
- AnaptysBio, Inc.
- Audentes Therapeutics, Inc.
- AveXis, Inc.
- BeiGene, Ltd.
- Corvus Pharmaceuticals, Inc.
- CRISPR Therapeutics AG
- CytomX Therapeutics, Inc.
- Dimension Therapeutics, Inc.
- Editas Medicine, Inc.
- Intellia Therapeutics, Inc.
- Jounce Therapeutics, Inc.
- Krystal Biotech, Inc.

- Mersana Therapeutics, Inc.
- Merus Labs International Inc.
- Mirna Therapeutics, Inc.
- MyoKardia, Inc.
- PhaseRx, Inc.
- Protagonist Therapeutics, Inc.
- Proteostasis Therapeutics, Inc.
- REGENXBIO Inc.
- Selecta Biosciences, Inc.
- Voyager Therapeutics, Inc.
- Wave Life Sciences Ltd.
- Zymeworks Inc.

As indicated in the following table, the Selected Early Stage IPO Companies had implied total enterprise values between \$45 million and \$491 million, with a median of \$166 million and an interquartile range of \$82 million to \$230 million. Using the 25th percentile and the 75th percentile of the implied total enterprise values, Ladenburg then calculated a range of implied total equity values for Arcturus (by adding an estimated \$5.0 million in net cash at closing), which was approximately \$87 million to \$235 million. This compares to Arcturus's total equity value as per the Merger Agreement of approximately \$70 million.

Date of IPO Announcement	Company Name	Enterprise Value (dollars in millions)
9/20/17	Krystal Biotech Inc.	\$ 45.2
6/27/17	Mersana Therapeutics, Inc.	\$ 176.2
4/27/17	Zymeworks Inc.	229.7
1/26/17	Jounce Therapeutics, Inc.	125.4
1/25/17	AnaptysBio Inc.	168.6
10/18/16	CRISPR Therapeutics AG	248.2
8/10/16	Protagonist Therapeutics, Inc.	76.9
7/19/16	Audentes Therapeutics, Inc.	160.0
6/21/16	Selecta Biosciences, Inc.	165.8
5/18/16	Merus Labs International Inc.	60.3
5/17/16	PhaseRx, Inc.	58.5
5/5/16	Intellia Therapeutics, Inc.	447.9
4/6/16	Aeglea BioTherapeutics, Inc.	46.2
3/22/16	Corvus Pharmaceuticals, Inc.	141.2
2/10/16	AveXis, Inc.	283.3
2/10/16	Proteostasis Therapeutics, Inc.	82.0
2/2/16	BeiGene, Ltd.	491.0
2/2/16	Editas Medicine, Inc.	322.9
11/10/15	Voyager Therapeutics, Inc.	125.8
11/10/15	Wave Life Sciences Ltd.	225.2
10/28/15	MyoKardia, Inc.	135.0
10/21/15	Dimension Therapeutics, Inc.	171.3
10/7/15	CytomX Therapeutics, Inc.	216.0
9/30/15	Mirna Therapeutics, Inc.	55.1
9/16/15	REGENXBIO Inc.	333.9

Analysis of Selected Publicly Traded Companies

Ladenburg reviewed selected financial data of ten publicly traded companies in the biopharmaceutical industry which were in various stages of development and were focused on the RNA delivery space (the “**Selected Publicly Traded RNA Companies**”). Although the companies referred to below were used for comparison purposes, none of those companies is directly comparable to Arcturus. Accordingly, an analysis of the results of such a comparison is not purely mathematical, but instead involves complex considerations and judgments concerning differences in historical and projected financial and operating characteristics of the selected companies below. The total enterprise values are based on closing stock prices on September 26, 2017. The Selected Publicly Traded RNA Companies were:

- Alnylam Pharmaceuticals, Inc.
- Arbutus Biopharma Corporation
- Arrowhead Pharmaceuticals, Inc.
- Dicerna Pharmaceuticals, Inc.
- Idera Pharmaceuticals, Inc.
- Miragen Therapeutics, Inc.
- Moderna Therapeutics, Inc.*
- Regulus Therapeutics Inc.
- Silence Therapeutics plc
- Wave Life Sciences Ltd.

*Moderna Therapeutics, Inc. is an early stage, private company in the RNA technology space.

As indicated in the following table, the ten Selected Publicly Traded RNA Companies had implied total enterprise values between \$84 million and \$9,506 million, with a median implied total enterprise value of \$228 million and an interquartile range of \$143 million to \$376 million. Using the 25th percentile and the 75th percentile of the implied total enterprise values, Ladenburg then calculated a range of implied total equity values for Arcturus (by adding an estimated \$5.0 million in net cash at closing), which was \$148 million to \$381 million. This compares to Arcturus’s total equity value as per the Merger Agreement of approximately \$70 million.

Company Name	Enterprise Value (dollars in millions)
Alnylam Pharmaceuticals, Inc.	\$ 9,506
Arbutus Biopharma Corporation	261
Arrowhead Pharmaceuticals, Inc.	201
Dicerna Pharmaceuticals, Inc.	84
Idera Pharmaceuticals, Inc.	255
Miragen Therapeutics, Inc.	146
Moderna Therapeutics, Inc. ⁽¹⁾	3,443
Regulus Therapeutics Inc.	120
Silence Therapeutics plc	142
Wave Life Sciences Ltd.	414

⁽¹⁾ Moderna Therapeutics, Inc. is still private. Last valuation was gathered from PitchBook and had \$1.3 billion of cash on hand at December 31, 2016, as stated in such company's press release dated January 9, 2017.

Analysis of Selected Precedent Transactions

Ladenburg reviewed the financial terms, to the extent the information was publicly available, of 11 merger transactions of companies that operated in the biotechnology space and were in early stages of clinical development (the "**Selected Early Stage Precedent Transactions**"). Although the precedent transactions referred to below were used for comparison purposes, none of the target companies is directly comparable to Arcturus. Accordingly, an analysis of the results of such a comparison is not purely mathematical, but instead involves complex considerations and judgments concerning differences in historical and projected financial and operating characteristics of the companies involved and other factors that could affect the merger value of such companies and Arcturus to which they are being compared. Ladenburg reviewed the implied total enterprise values of the target company or business (including downstream milestone payments). These transactions, including the month and year each were announced, as follows:

Selected Early Stage Precedent Transactions

Month and Year Announced	Target Company	Acquirer	Enterprise Value (dollars in millions)
May 2017	True North Therapeutics, Inc.	Bioverativ Inc. (NasdaqGS: BIVV)	\$ 825
November 2016	Kolltan Pharmaceuticals, Inc.	Celldex Therapeutics, Inc.	235
September 2016	EngMab AG	Celgene Corporation	600
September 2016	RetroSense Therapeutics, LLC	Allergan plc (NYSE: AGN)	60
July 2016	Cormorant Pharmaceuticals AB	Bristol-Myers Squibb Company	520
January 2016	Fluorinov Pharma Inc.	Trillium Therapeutics Inc.	7
January 2016	Tensha Therapeutics, Inc.	Roche Holdings, Inc.	535
December 2015	PhosImmune Inc.	Agenus Inc.	45
December 2015	Open Monoclonal Technology, Inc.	Ligand Pharmaceuticals Incorporated (NasdaqGM: LGND)	178
October 2015	QuanticeL Pharmaceuticals, Inc.	Celgene Corporation	485
October 2015	Admune Therapeutics LLC	Novartis AG	258

As indicated in the above table, the eleven Selected Early Stage Precedent Transactions target companies had implied total enterprise values between \$37 million and \$825 million, with a median total enterprise value of \$258 million and an interquartile range of \$119 million to \$528 million. Using the 25th percentile and the 75th percentile of the implied total enterprise values, Ladenburg then calculated a range of implied total equity values for Arcturus (by adding an estimated \$5.0 million in net cash at closing), which was \$124 million to \$533 million. This compares to Arcturus's total equity value as per the Merger Agreement of approximately \$70 million.

The summary set forth above does not purport to be a complete description of all the analyses performed by Ladenburg. The preparation of a fairness opinion involves various determinations as to the most appropriate and relevant methods of financial analysis and the application of these methods to the particular circumstances and, therefore, such an opinion is not readily susceptible to partial analysis or summary description. Ladenburg did not attribute any particular weight to any analysis or factor considered by it, but rather made qualitative judgments as to the significance and relevance of each analysis and factor. Accordingly, notwithstanding the separate factors summarized above, Ladenburg believes, and advised Alcobra's Board, that its analyses must be considered as a whole and that selecting portions of its analyses and the factors considered by it, without considering all analyses and factors, could create an incomplete view of the process underlying its Opinion. In performing its analyses, Ladenburg made numerous assumptions with respect to industry performance, business and economic conditions and other matters, many of which are beyond the control of Alcobra and Arcturus. These analyses performed by Ladenburg are not necessarily indicative of actual values or future results, which may be significantly more or less favorable than suggested by such analyses. In addition, analyses relating to the value of businesses do not purport to be appraisals or to reflect the prices at which businesses or securities may actually be sold. Accordingly, such analyses and estimates are inherently subject to uncertainty, being based upon numerous factors or events beyond the control of the parties or their respective advisors. None of Alcobra, Arcturus, Ladenburg or any other person assumes responsibility if future results are materially different from those projected. The analyses supplied by Ladenburg and its Opinion were among several factors taken into consideration by Alcobra's Board in making its decision to enter into the Merger Agreement and should not be considered as determinative of such decision.

Ladenburg was selected by Alcobra's Board to render an Opinion to Alcobra's Board because Ladenburg is a nationally recognized investment banking firm and because, as part of its investment banking business, Ladenburg is continually engaged in the valuation of businesses and their securities in connection with mergers, negotiated underwritings, secondary distributions of listed and unlisted securities, private placements and valuations for corporate and other purposes. In addition, in the ordinary course of its business, Ladenburg and its affiliates may trade the equity securities of Alcobra for its own account and for the accounts of their customers, and, accordingly, may at any time hold a long or short position in such securities. In the three years preceding the date hereof, Ladenburg has not had a relationship with Alcobra and has not received any fees from Alcobra, other than the up-front retainer fee, interim fee and a fee for its Opinion which was delivered on September 27, 2017, each as described below. In the three years preceding the date hereof, Ladenburg has not had a relationship with Arcturus and has not received any fees from Arcturus. Ladenburg and its affiliates may in the future seek to provide investment banking or financial advisory services to Alcobra and Arcturus and/or certain of their respective affiliates and expect to receive fees for the rendering of these services.

The issuance of Ladenburg's Opinion was reviewed and approved by a fairness opinion committee of Ladenburg.

Pursuant to the engagement letter between Ladenburg and Alcobra, if the Transaction is consummated, Ladenburg will be entitled to receive a transaction fee of \$600,000 payable in cash, which is net of the \$50,000 retainer paid at the onset of the engagement. Ladenburg was also paid a \$300,000 interim fee and a fee of \$250,000 in cash for rendering its Opinion. Additionally, Alcobra has agreed to reimburse Ladenburg for its out-of-pocket expenses and has agreed to indemnify Ladenburg against certain liabilities, including liabilities under the federal securities laws. The terms of the fee arrangement with Ladenburg, which are customary in transactions of this nature, were negotiated at arm's length between Alcobra and Ladenburg, and Alcobra's Board was aware of the arrangement, including the fact that a portion of the fee payable to Ladenburg is contingent upon the completion of the Transaction.

NASDAQ Stock Market Listing

Alcobra has filed an initial listing application for the combined company with The NASDAQ Global Market. If such application is accepted, Alcobra anticipates that the Ordinary Shares of the combined company will be listed on The NASDAQ Global Market following the closing of the Transaction under the trading symbol "ARCT."

THE MERGER AGREEMENT

The following is a summary of the material provisions of the Merger Agreement but does not purport to describe all of the terms of the Merger Agreement. This summary may not contain all of the factual information about Alcobra, Merger Sub or Arcturus. The following description does not purport to be complete and is qualified in its entirety by reference to the Merger Agreement. You should refer to the full text of the Merger Agreement for details of the Transaction and the terms and conditions of the Merger Agreement.

The Merger Agreement contains representations and warranties that Alcobra and Merger Sub, on the one hand, and Arcturus, on the other hand, have made to one another as of specific dates. These representations and warranties have been made for the benefit of the other parties to the Merger Agreement and may be intended not as statements of fact but rather as a way of allocating the risk to one of the parties if those statements prove to be incorrect. In addition, the assertions embodied in the representations and warranties are qualified by information in confidential disclosure schedules exchanged by the parties in connection with the signing of the Merger Agreement. While Alcobra and Arcturus do not believe that these disclosure schedules contain information required to be publicly disclosed under the applicable securities laws, other than information that has already been so disclosed, the disclosure schedules do contain information that modifies, qualifies and creates exceptions to the representations and warranties set forth in the Merger Agreement. Accordingly, you should not rely on the representations and warranties as current characterizations of factual information about Alcobra, Arcturus or Merger Sub, because they were made as of specific dates, may be intended merely as a risk allocation mechanism between Alcobra and Merger Sub, and Arcturus and are modified by the disclosure schedules.

Structure

Under the Merger Agreement, Merger Sub will merge with and into Arcturus, with Arcturus surviving as a wholly-owned subsidiary of Alcobra. Arcturus will be the surviving corporation of the Transaction, and will be a wholly owned subsidiary of Alcobra. Alcobra will change its name to ARCTURUS THERAPEUTICS, LTD.

Completion and Effectiveness of the Merger

The Transaction will be completed as promptly as practicable after all of the conditions to completion of the Transaction are satisfied or waived, including the approval of the shareholders and stockholders of Alcobra and Arcturus, as applicable. Alcobra and Arcturus are working to complete the Transaction as quickly as practicable. The Transaction is anticipated to close during the fourth quarter of 2017. However, Alcobra and Arcturus cannot predict the exact timing of the completion of the Transaction because it is subject to various conditions.

Merger Consideration and Exchange Ratio

Merger Consideration

At the effective time of the Transaction, upon the terms and subject to the conditions set forth in the Merger Agreement:

- each share of Arcturus common stock or Arcturus preferred stock held as treasury stock or held or owned by Arcturus, Alcobra, any Alcobra Subsidiary or Merger Sub, immediately prior to the Effective Time will be canceled and retired and will cease to exist, and no consideration will be delivered in exchange for such shares;

- each outstanding share of Arcturus common stock (after giving effect to the conversion of Arcturus preferred stock, warrants and convertible notes) will be converted into the right to receive the number of Alcobra Ordinary Shares as determined pursuant to the Exchange Ratio described below;
- each outstanding option to purchase shares of Arcturus common stock will be assumed by Alcobra and will be converted into an option to purchase the number of Alcobra Ordinary Shares as determined pursuant to the Exchange Ratio;
- each outstanding warrant to purchase shares of Arcturus's common stock (after being exercised in accordance with the terms of the warrants) will be converted into the right to receive that number of Alcobra Ordinary Shares as determined pursuant to the Exchange Ratio; and
- each Arcturus note will be converted immediately prior to the consummation of the Transaction into Arcturus preferred stock, which, in turn will convert into common stock, which, in turn, will convert into the right to receive that number of Alcobra Ordinary Shares as determined pursuant to the Exchange Ratio.

No fractional Alcobra Ordinary Shares will be issued in connection with the Transaction. Each holder of Arcturus common stock who would otherwise be entitled to receive a fractional Alcobra Ordinary Share (after aggregating all fractional Alcobra Ordinary Shares issuable to such holder) will instead be paid in cash the dollar amount (rounded to the nearest whole cent), without interest, determined by multiplying such fraction by the closing price of an Alcobra Ordinary Share on The NASDAQ Global Market (or such other NASDAQ market on which the Alcobra Ordinary Shares then trade) on the date the Transaction becomes effective.

Exchange Ratio

The Exchange Ratio is calculated using a formula intended to allocate existing Arcturus equity-holders (on a fully-diluted basis) a percentage of the combined company. Based on Arcturus's and Alcobra's capitalization as of the date of the Merger Agreement, the Exchange Ratio is currently estimated to be (i) approximately 1.7794 pre-split Alcobra Ordinary Shares NIS 0.01 par value, before giving effect to adjustment to account for the effect of the reverse share split of Alcobra Ordinary Shares, which is expected to be in the ratio of 7 to 1, and expected to be implemented prior to the consummation of the Transaction; or (ii) on a post-split basis, approximately 0.2542 Alcobra Ordinary Shares NIS 0.07 par value. These estimates are subject to adjustment prior to closing of the Transaction, including (1) adjustments to account for the issuance of any additional shares of Arcturus common stock or Alcobra Ordinary Shares, as applicable, prior to the consummation of the Transaction and (2) if either or both of (a) Alcobra's net cash is greater than \$36,750,000 or less than \$33,250,000 and (b) Arcturus's net cash is greater than \$6,750,000 or less than \$3,250,000 (and as a result, Alcobra's equity-holders could own more, and Arcturus's equity-holders could own less, or vice versa, of the combined company).

Based on the estimates set forth above and certain other assumptions, following the completion of the Transaction, Arcturus stockholders would own approximately 60% of the fully-diluted Ordinary Shares of the combined company and Alcobra shareholders would own approximately 40% of the fully-diluted Ordinary Shares of the combined company. These ownership levels, however, are subject to change in the event either or both of Alcobra's Net Cash or Arcturus's Net Cash are not within the aforementioned ranges. For example, assuming Alcobra's net cash is \$35,000,000, which is within the range, and Arcturus's Net Cash is \$12,000,000 (which would cause the Arcturus Equity Value to equal \$77,000,000), then the corresponding Exchange Ratio will be 0.2796. Accordingly, in such case, following the closing of the Transaction, Alcobra's current shareholders would own approximately 37.7% of the combined company's share capital, and existing Arcturus stockholders would own approximately 62.3% of the combined company's issued share capital using the treasury stock method.

The Exchange Ratio formula is the quotient obtained by dividing (i) the Arcturus Equity Value divided by the Arcturus Outstanding Shares by (ii) the Alcobra Equity Value divided by the Alcobra Outstanding Shares, subject to adjustment to reflect the reverse share split (with such ratio being calculated to the nearest 1/10,000 of a share); except that if, as of the Cash Determination Date (as defined below), either or both of (a) Alcobra Net Cash is greater than \$36,750,000 or less than \$33,250,000 and (b) Arcturus Net Cash is greater than \$6,750,000 or less than \$3,250,000, then Exchange Ratio will instead mean the quotient obtained by dividing $(A \div C) \div (B \div D)$.

The following terms will have the following meanings as they relate to the Exchange Ratio formula:

- **A** means (i) if the Arcturus Net Cash is greater than \$6,750,000 or less than \$3,250,000, (x) the Arcturus Net Cash minus \$5,000,000 plus (y) Arcturus Equity Value, or (ii) if the Arcturus Net Cash is equal to or greater than \$3,250,000 and equal to or less than \$6,750,000, the Arcturus Equity Value;
- **B** means (i) if the Alcobra Net Cash is greater than \$36,750,000 or less than \$33,250,000, (x) the Alcobra Net Cash minus \$35,000,000 plus (y) Alcobra Equity Value, or (ii) if the Alcobra Cash is equal to or greater than \$33,250,000 and equal to or less than \$36,750,000, the Alcobra Equity Value;
- **C** means Arcturus Outstanding Shares;
- **D** means Alcobra Outstanding Shares, subject to adjustment to reflect the reverse split.
- *Arcturus Net Cash* means (a) the sum of Arcturus's cash and cash equivalents, marketable securities, accounts, interest and other receivables (to the extent determined to be collectible), and deposits (to the extent refundable to Arcturus), in each case as of the anticipated closing date, determined in a manner consistent with the manner in which such items were historically determined and in accordance with the Arcturus financial statements, minus (b) the sum of Arcturus's short and long term liabilities, excluding any liabilities as a result of deferred or unearned revenues, and including accounts payable and accrued expenses (without duplication of any expenses accounted for below), in each case as of such date and determined in a manner consistent with the manner in which such items were historically determined and in accordance with the Arcturus financial statements.
- *Arcturus Equity Value* means \$70,000,000.
- *Arcturus Equity Value Percentage* means the (x) Arcturus Equity Value divided by (y) the sum of the Arcturus Equity Value plus the Alcobra Equity Value, expressed as a percentage.
- *Alcobra Net Cash* is the number calculated in accordance with the Merger Agreement. See "Merger Consideration and Exchange Ratio - Determination of Alcobra's Net Cash" below.
- *Alcobra Equity Value* means \$46,670,000.
- *Alcobra Outstanding Shares* means the total number of Alcobra Ordinary Shares (taking into account the reverse split) outstanding immediately prior to the effective time of the Transaction assuming, without limitation or duplication, the exercise of each Alcobra option outstanding as of such effective time, solely to the extent such Alcobra option will not be canceled pursuant to the Merger Agreement at the effective time or exercised prior thereto, using the treasury stock method.

- *Arcturus Outstanding Shares* means the total number of shares of Arcturus common stock outstanding immediately prior to the effective time of the Transaction expressed on an as-converted to Arcturus common stock basis and assuming, without limitation or duplication, (a) such number of Arcturus shares of common stock underlying Arcturus convertible notes and Arcturus warrants that will be converted immediately prior to the effective time of the Transaction, as applicable, (b) the effectiveness of the conversion of Arcturus preferred stock, and (c) the issuance of shares of Arcturus common stock with respect to the Arcturus options, calculated using the treasury stock method.

Notwithstanding the foregoing, the Exchange Ratio will not be reduced below the Exchange Ratio needed to maintain the Arcturus Equity Value Percentage at 55%.

Determination of Alcobra's Net Cash

For purposes of determining the Exchange Ratio, Alcobra's net cash will be calculated 10 calendar days prior to the anticipated closing date of the Transaction (the "**Cash Determination Date**"). The closing of the Transaction could be delayed if Arcturus and Alcobra are not able to agree upon the amount of Alcobra's net cash as of the cash determination date.

Under the Merger Agreement, *Alcobra Net Cash* means (a) the sum of Alcobra's cash and cash equivalents, marketable securities, accounts, interest and other receivables (to the extent determined to be collectible), and deposits (to the extent refundable to Alcobra), in each case as of the anticipated closing date of the Transaction, determined in a manner consistent with the manner in which such items were historically determined and in accordance with the Alcobra audited financial statements and the Alcobra unaudited interim balance sheet, minus (b) the sum of Alcobra's short and long term liabilities, including accounts payable and accrued expenses (without duplication of any expenses accounted for below), in each case as of such date and determined in a manner consistent with the manner in which such items were historically determined and in accordance with the Alcobra audited financial statements and the Alcobra unaudited interim balance sheet, minus (c) the cash cost of any unpaid change of control payments or severance, termination or similar payments that are or become due to any current or former employee, director or independent contractor of Alcobra, or any other third party, minus (d) the cash cost of any accrued and unpaid retention payments or other bonuses due to any current or former employee, director or independent contractor of Alcobra as of the closing date, minus (e) the cash cost of any other terminated Alcobra employee payment not set forth in clauses (c) or (d), minus (f) all payroll, employment or other withholding taxes incurred by Alcobra and any Alcobra associate (to the extent paid or to be paid by Alcobra on the behalf of such Alcobra associate) in connection with any payment amounts set forth in clauses (c), (d) or (e) and the exercise of any Alcobra option on or prior to the effective time of the Transaction, minus (g) any remaining unpaid fees and expenses (including any attorney's, accountant's, financial advisor's or finder's fees) as of such date for which Alcobra is liable and incurred by Alcobra in connection with the Merger Agreement and the contemplated transactions or otherwise, minus (h) the cash cost of any unpaid retention payment amounts due under any insurance policy with respect to any legal proceeding against Alcobra or Merger Sub, minus (i) the expected cost and expenses of the aggregate liability of Alcobra liabilities arising from existing legal proceedings, minus (j) any unpaid amounts payable by Alcobra in satisfaction of its obligations under the Merger Agreement with respect to expenses incurred in connection with the run-off insurance policy for the directors and officers indemnified parties, plus (k) prepaid expenses and expenses paid, or liabilities incurred, prior to closing of the Transaction, that are approved in writing payable by Alcobra in excess of its obligations, minus (l) notice payments, fines or other payments to be made by Alcobra in order to terminate any existing agreement to which Alcobra is a party, minus (m) payments up to the unpaid deductible amount under Alcobra's directors and officers insurance in connection with legal proceedings in effect as of the date of the Merger Agreement or initiated following the date of the Merger Agreement and before the closing date of the Transaction assumed by the insurer or expected to be assumed by the insurer, plus (n) amounts committed to in writing by an insurer to reimburse Alcobra for its fees and expenses in connection with shareholder activism with respect to liabilities not included in clause (b).

Alcobra's net cash balance as of the Cash Determination Date is subject to numerous factors, many of which are outside of Alcobra's control. The Exchange Ratio at the closing of the Transaction will be subject to an adjustment if either or both of (a) Alcobra Net Cash is greater than \$36,750,000 or less than \$33,250,000 and (b) Arcturus's Net Cash is greater than \$6,750,000 or less than \$3,250,000 (and as a result, Alcobra equity-holders could own more, and Arcturus equity-holders could own less, or vice versa, of the combined company), as described under "—Merger Consideration and Exchange Ratio."

Fractional Shares

No fractional Alcobra Ordinary Shares will be issued in connection with the Transaction. Each holder of Arcturus common stock who would otherwise be entitled to receive a fractional Alcobra Ordinary Share (after aggregating all fractional Alcobra Ordinary Shares issuable to such holder) will, instead be paid in cash the dollar amount (rounded to the nearest whole cent), without interest, determined by multiplying such fraction by the closing price of an Alcobra Ordinary Share on The NASDAQ Global Market (or such other NASDAQ market on which the Alcobra Ordinary Shares then trade) on the date the Transaction becomes effective.

Representations and Warranties

The Merger Agreement contains customary representations and warranties made by Alcobra, Merger Sub and Arcturus relating to their respective businesses, as well as other facts pertinent to the Transaction. These representations and warranties are subject to materiality, knowledge and other similar qualifications and expire at the effective time of the Transaction, as further described below. The representations and warranties of each of Alcobra, Merger Sub and Arcturus have been made solely for the benefit of the other parties and those representations and warranties should not be relied on by any other person. In addition, those representations and warranties may be intended not as statements of actual fact, but rather as a way of allocating risk among the parties, may have been modified by the disclosure schedules delivered in connection with the Merger Agreement, are subject to the materiality standard described in the Merger Agreement, which may differ from what may be viewed as material by you, will not survive completion of the Transaction and cannot be the basis for any claims under the Merger Agreement by the other parties after termination of the Merger Agreement, and were made only as of the date of the Merger Agreement or another date as is specified in the Merger Agreement.

Arcturus made a number of representations and warranties to Alcobra and Merger Sub in the Merger Agreement, including representations and warranties relating to the following matters:

- subsidiaries; due organization; organizational documents;
- authority; vote required;
- non-contravention; consents;
- capitalization;
- financial statements;
- absence of changes;
- title to assets;
- real property; leaseholds;

- intellectual property;
- material contracts;
- undisclosed liabilities;
- compliance; permits; restrictions;
- tax matters;
- employee and labor matters; benefit plans;
- environmental matters;
- insurance;
- legal proceedings; orders;
- inapplicability of anti-takeover statutes;
- no financial advisor;
- disclosure; information statement
- exclusivity of representations; reliance; and
- inapplicability of Section 328 of the Companies Law; no controlling shareholder.

Significant portions of Arcturus’s representations and warranties are qualified as to “materiality” or “material adverse effect.” Under the Merger Agreement, a material adverse effect with respect to Arcturus means any effect, change, event, circumstance or development that, when considered together with all other effects, changes, events, circumstances or developments that have occurred prior to the date of determination of the occurrence of such material adverse effect, is or would reasonably be expected to be materially adverse to or has or would reasonably be expected to have or result in a material adverse or effect on (i) the business, condition (financial or otherwise), capitalization, assets, operations or financial performance of Arcturus and its subsidiaries, taken as a whole or (ii) the ability of Arcturus to consummate the transactions contemplated by the Merger Agreement or perform any of its covenants or obligations under the Merger Agreement in all material respects, except that none of the following, as they apply to Arcturus and its subsidiaries, are or will be taken into account in determining whether there has been a material adverse effect:

- any rejection by a governmental body of a registration or filing by Arcturus relating to Arcturus’s intellectual property rights;
- conditions generally affecting the industries in which Arcturus and its subsidiaries participate or the U.S. or global economy or capital markets as a whole, to the extent that such conditions do not have a disproportionate impact on Arcturus and its subsidiaries, taken as a whole;
- any failure by Arcturus to meet internal projections or forecasts on or after the date of the Merger Agreement, provided that any such effect, change, event, circumstance or development causing or contributing to any such failure to meet projections or forecasts may constitute a material adverse effect of Arcturus and may be taken into account in determining whether a material adverse effect has occurred;
- the execution, delivery, announcement or performance of obligations under the Merger Agreement or the announcement, pendency or anticipated consummation of the Transaction;
- any natural disaster or any acts of terrorism, sabotage, military action or war or any escalation or worsening of such; or

- any changes after the date of the Merger Agreement in U.S. GAAP or applicable legal requirements.

Alcobra and Merger Sub made a number of representations and warranties to Arcturus in the Merger Agreement, including representations and warranties relating to the following subject matters:

- subsidiaries; due organization; organizational documents;
- authority; vote required;
- non-contravention; consents;
- capitalization;
- SEC filings; financial statements;
- absence of changes;
- title to assets;
- real property; leaseholds;
- intellectual property;
- material contracts;
- undisclosed liabilities;
- compliance; permits; restrictions;
- grants and subsidies;
- tax matters;
- employee and labor matters; benefit plans;
- environmental matters;
- insurance;
- legal proceedings; orders;
- anti-corruption;
- inapplicability of anti-takeover statutes;
- no financial advisor;
- disclosure;
- bank accounts; deposits;
- transactions with affiliates;
- valid issuance;
- code of ethics;
- opinion of financial advisor;
- shell company status;
- foreign private issuer; and
- exclusivity of representations; reliance.

Similar to Arcturus's representations and warranties, significant portions of Alcobra's representations and warranties are qualified as to "materiality" or "material adverse effect." Under the Merger Agreement, a material adverse effect with respect to Alcobra means any effect, change, event, circumstance or development that, considered together with all other effects, changes, events, circumstances or developments that have occurred prior to the date of determination of the occurrence of such material adverse effect, is or would reasonably be expected to be materially adverse to or has or would reasonably be expected to have or result in a material adverse effect on (i) the business, condition (financial or otherwise), capitalization, assets, operations or financial performance of Alcobra and its subsidiaries, taken as a whole or (ii) the ability of Alcobra to consummate the transactions contemplated by the Merger Agreement or perform any of its covenants or obligations under the Merger Agreement in all material respects, except that none of the following, as they apply to Alcobra, are or will be taken into account in determining whether there has been a material adverse effect:

- any rejection by a governmental body of a registration or filing by Alcobra relating to Alcobra's intellectual property rights;
- conditions generally affecting the industries in which Alcobra and its subsidiaries participate or the U.S. or global economy or capital markets as a whole, to the extent that such conditions do not have a disproportionate impact on Alcobra or its subsidiaries, taken as a whole;
- any failure by Alcobra or its subsidiaries to meet internal projections or forecasts or third-party revenue or earnings predictions or any change in the price or trading volume of the Alcobra Ordinary Shares, provided that any such effect, change, event, circumstance or development causing or contributing to any such failure to meet projections or predictions or any change in stock price or trading volume may constitute a material adverse effect of Alcobra and may be taken into account in determining whether a material adverse effect has occurred;
- as a result of any sale, transfer, license, assignment or other divestiture of Alcobra's ADAIR and MDX product candidates;
- the execution, delivery, announcement or performance of obligations under the Merger Agreement or the announcement, pendency or anticipated consummation of the Transaction;
- any natural disaster or any acts of terrorism, sabotage, military action or war or any escalation or worsening of such; or
- any changes after the date of the Merger Agreement in U.S. GAAP or applicable legal requirements.

Covenants; Conduct of Business Pending the Merger

During the period commencing on September 27, 2017 and ending at the earlier of the date of termination of the Merger Agreement and the effective time of the Transaction, each of the parties agreed that it will conduct its business in the ordinary course, pay outstanding accounts payables and other current liabilities (including payroll) when due and payable, and conduct its business and operations in compliance with all applicable laws, rules, regulations and the requirements of their respective material contracts. Each party also agreed that it would provide the other party with prompt notice upon the occurrence of certain events or discovery of certain conditions, facts or circumstances.

Arcturus also agreed that prior to the earlier of termination of the Merger Agreement and the effective time of the Transaction, subject to certain limited exceptions set forth in the Merger Agreement, without the prior written consent of Alcobra, Arcturus would not and would not permit any of its subsidiaries to:

- declare, accrue, set aside or pay any dividend or make any other distribution in respect of any shares of Arcturus capital stock or repurchase, redeem or otherwise reacquire any shares of its capital stock or other securities except pursuant to Arcturus contracts existing as of the date of the Merger Agreement;
- sell, issue or grant, or authorize the issuance of any capital stock or other security (except for shares of Arcturus common stock issued upon the valid exercise of Arcturus options, Arcturus convertible notes or Arcturus warrants outstanding as of the date of the Merger Agreement), any option, warrant or right to acquire any capital stock or any other security (except for the grant of options to purchase up to an aggregate 500,000 shares of Arcturus common stock under the Arcturus 2013 Equity Incentive Plan), any equity-based award or instrument convertible into or exchangeable for any capital stock or other security, or any debt securities or any rights to acquire any debt securities;
- amend the certificate of incorporation, bylaws or other charter or organizational documents of Arcturus, or effect or be a party to any merger, consolidation, share exchange, business combination, recapitalization, reclassification of shares, stock split, reverse stock split or similar transaction;
- form any subsidiary or acquire any equity interest or other interest in any other entity;
- lend money to any person (except for reasonable advances to employees and consultants for travel and other reasonable business related expenses in the ordinary course of business), incur or guarantee any indebtedness for borrowed money, other than in the ordinary course of business, guarantee any debt securities of others, or make any capital expenditure or commitment in excess of \$150,000;
- enter into any contract with a labor union or collective bargaining agreement;
- acquire any material asset nor sell, lease, or otherwise irrevocably dispose of any of its assets or properties, or grant any encumbrance with respect to such assets or properties, in each case, other than in the ordinary course of business;
- make, change or revoke any material tax election, file any material amendment to any tax return, adopt or change any accounting method in respect of taxes, change any annual tax accounting period, enter into any tax allocation agreement, tax sharing agreement or tax indemnity agreement, other than commercial contracts entered into in the ordinary course of business with vendors, customers or landlords, enter into any closing agreement with respect to any tax, settle or compromise any claim, notice, audit report or assessment in respect of material taxes, apply for or enter into any ruling from any tax authority with respect to taxes, surrender any right to claim a material tax refund, or consent to any extension or waiver of the statute of limitations period applicable to any material tax claim or assessment;
- adopt any stockholder rights plan or similar arrangement; or
- agree, resolve or commit to do any of the foregoing.

Alcobra also agreed that prior to the earlier of termination and the effective time of the merger, subject to certain limited exceptions set forth in the Merger Agreement, without the prior written consent of Arcturus, Alcobra would not:

- declare, accrue, set aside or pay any dividend or make any other distribution in respect of any shares of Alcobra capital stock or repurchase, redeem or otherwise reacquire any shares of its capital stock or other securities;
- sell, issue or grant, or authorize the issuance of any capital stock or other security (except for Alcobra Ordinary Shares issued upon the valid exercise of Alcobra options outstanding as of the date of the Merger Agreement), any option, warrant or right to acquire any capital stock or any other security, any equity-based award or instrument convertible into or exchangeable for any capital stock or other security, or any debt securities or any rights to acquire any debt securities;

- amend the articles of association or other charter or organizational documents of Alcobra or the certificate of incorporation, bylaws or other charter or organizational documents of the Merger Sub, or effect or be a party to any merger, consolidation, share exchange, business combination, recapitalization, reclassification of shares, stock split, reverse stock split or similar transaction;
- form any subsidiary or acquire any equity interest or other interest in any other entity;
- lend money to any person (except for reasonable advances to employees and consultants for travel and other reasonable business related expenses in the ordinary course of business), incur or guarantee any indebtedness for borrowed money, other than in the ordinary course of business, guarantee any debt securities of others, or make any capital expenditure or commitment;
- adopt, establish or enter into any Alcobra employee plan, cause or permit any Alcobra employee plan to be amended other than as required by law, including in order to make amendments for the purposes of Section 409A of the Code, subject to prior review and approval (with such approval not to be unreasonably withheld, conditioned or delayed) by Arcturus, hire any additional employees or independent contractors or enter into or amend the term of any employment or consulting agreement with any employee or independent contractor other than as reasonably necessary for the completion of the transactions contemplated by the Merger Agreement, enter into any contract with a labor union or collective bargaining agreement, pay any bonus or make any profit-sharing or similar payment to (other than in the ordinary course of business), increase the amount of the wages, salary, commissions, fringe benefits or other compensation or remuneration payable to, any of its directors or employees, accelerate the vesting of or entitlement to any payment, award, compensation or benefit with respect to any current or former Alcobra employee, or pay or increase the severance or change of control benefits offered to any Alcobra associate;
- enter into any material transaction outside the ordinary course of business other than with respect to monetizing its ADAIR and other legacy products;
- acquire any material asset nor sell, lease, or otherwise irrevocably dispose of any of its assets or properties, or grant any encumbrance with respect to such assets or properties, other than in the ordinary course of business;
- make, change or revoke any material tax election, file any material amendment to any tax return, adopt or change any accounting method in respect of taxes, change any annual tax accounting period, enter into any tax allocation agreement, tax sharing agreement or tax indemnity agreement, other than commercial contracts entered into in the ordinary course of business with vendors, customers or landlords, enter into any closing agreement with respect to any tax, settle or compromise any claim, notice, audit report or assessment in respect of material taxes, apply for or enter into any ruling from any tax authority with respect to taxes, surrender any right to claim a material tax refund, or consent to any extension or waiver of the statute of limitations period applicable to any material tax claim or assessment;
- enter into, amend or terminate any Alcobra contract that, if effective as of the date of the Merger Agreement, would constitute an Alcobra material contract;
- initiate or settle any legal proceeding;
- incur any liabilities or otherwise take any actions other than in the ordinary course of business;

- adopt any stockholder rights plan or similar arrangement;
- renew, extend or modify the current sublease for Alcobra’s principal executive office space; or
- agree, resolve or commit to do any of the foregoing.

Non-Solicitation

The Merger Agreement contains provisions prohibiting Alcobra and Arcturus from seeking a competing transaction, subject to specified exceptions described below. Under these “non-solicitation” provisions, each of Alcobra and Arcturus has agreed that neither it nor its subsidiaries, nor any of its officers, directors, employees, representatives, affiliates, advisors or agents will directly or indirectly, other than with respect to Alcobra, as necessary to communicate, discuss, negotiate or consummate the sale, transfer, license, assignment or other divestiture of Alcobra’s ADAIR and MDX product candidates: (i) solicit, initiate, respond to or take any action to facilitate or encourage any inquiries or the communication, making, submission or announcement of any acquisition inquiry or competing proposal or take any action that could reasonably be expected to lead to an acquisition inquiry or competing proposal; (ii) enter into or participate in any discussions or negotiations with any person with respect to any acquisition inquiry or competing proposal; (iii) furnish any information regarding such party to any person in connection with, in response to, relating to or for the purpose of assisting with or facilitating an acquisition inquiry or competing proposal; (iv) approve, endorse or recommend any acquisition inquiry or competing proposal (subject to the terms and conditions of the Merger Agreement); (v) execute or enter into any letter of intent or similar document or any contract contemplating or otherwise relating to any acquisition inquiry or competing proposal; or (vi) grant any waiver or release under any confidentiality, standstill or similar agreement (other than to the other party). With respect to Alcobra, the subjects of any communications, discussions or negotiations, or the furnishing of information, in each case in connection with the sale, transfer, license, assignment or other divestiture of Alcobra’s ADAIR and MDX product candidates pursuant to clauses (i) through (vi) in the preceding sentence will be limited to information that is reasonably related to the sale, transfer, license, assignment or other divestiture of Alcobra’s ADAIR and MDX product candidates and will not include any non-public information regarding (x) Alcobra’s other assets, businesses or operations or (y) the transactions contemplated by the Merger Agreement.

However, prior to the approval of the proposals relating to the Transaction set forth in this proxy statement at the Meeting or by written consent of Arcturus stockholders, as the case may be, (i) either Alcobra or Arcturus may enter into discussions or negotiations with, any person that has made (and not withdrawn) a bona fide, unsolicited, competing proposal, which such party’s board of directors determines in good faith, after consultation with its independent financial advisor, if any, and its outside legal counsel, constitutes, or would reasonably be expected to result in, a superior competing proposal, and (ii) thereafter furnish to such person non-public information regarding such party pursuant to an executed confidentiality agreement containing provisions (including nondisclosure provisions, use restrictions, non-solicitation provisions, no hire provisions and “standstill” provisions) at least as favorable to such party as those contained in the confidentiality agreement between Alcobra and Arcturus, but in each case of the foregoing clauses (i) and (ii), only if: (A) neither such party nor any representative of such party has breached its non-solicitation obligations under the Merger Agreement; (B) the board of directors of such party determines in good faith based on the advice of outside legal counsel, that the failure to take such action would constitute a breach of the fiduciary duties of the board of directors of such party under applicable laws; (C) at least three business days prior to furnishing any such non-public information to, or entering into discussions with, such person, such party gives the other party written notice of the identity of such person and of such party’s intention to furnish nonpublic information to, or enter into discussions with, such person; and (D) at least three business days prior to furnishing any such non-public information to such person, such party furnishes such non-public information to Arcturus or Alcobra, as applicable (to the extent such non-public information has not been previously furnished by such party to Arcturus or Alcobra, as applicable). Without limiting the generality of the foregoing, each party has acknowledged and agreed that, in the event any representative of such party (whether or not such representative is purporting to act on behalf of such party) takes any action that, if taken by such party, would constitute a breach of the non-solicitation obligations of such party, the taking of such action by such representative will be deemed to constitute a breach of the non-solicitation obligations of such party for purposes of the Merger Agreement.

Alcobia and Arcturus will notify each other promptly but no later than 24 hours after receipt of any acquisition inquiry or a competing proposal, and any such notice will be made orally and in writing and will indicate in reasonable detail the terms and conditions of such acquisition inquiry or competing proposal, including the identity of the person making or submitting such acquisition inquiry or competing proposal. Both Alcobia and Arcturus will keep the other informed, on a current basis, of the status and material developments (including any changes to the terms) of such competing proposal. In addition, each party will provide the other party with at least five business days' written notice of a meeting of its board of directors (or any committee thereof) at which its board of directors (or any committee thereof) is reasonably expected to consider a competing proposal or acquisition inquiry.

An acquisition inquiry means, with respect to Alcobia and/or Arcturus, an inquiry, indication of interest or request for information (other than an inquiry, indication of interest or request for information made or submitted by Arcturus, on the one hand, or Alcobia, on the other hand, to the other) that would reasonably be expected to lead to an acquisition proposal with such party to the Merger Agreement.

A competing proposal is, with respect to Alcobia and/or Arcturus, any offer or proposal, whether written or oral (other than an offer or proposal made or submitted by or on behalf of Arcturus or any of its affiliates, on the one hand, or by or on behalf of Alcobia or any of its affiliates, on the other hand, to the other) made by a third party contemplating or otherwise relating to any of the following with respect to such party to the Merger Agreement:

- any merger, consolidation, amalgamation, share exchange, business combination, issuance of securities, acquisition of securities, reorganization, recapitalization, tender offer, exchange offer or other similar transaction: (i) in which a party to the Merger Agreement is a constituent corporation; (ii) in which a person or "group" (as defined in the Exchange Act and the rules promulgated thereunder) of persons directly or indirectly acquires beneficial or record ownership of securities representing more than 20% of the outstanding securities of any class of voting securities of such party to the Merger Agreement or any of its subsidiaries; or (iii) in which a party to the Merger Agreement or any of its subsidiaries issues securities representing more than 20% of the outstanding securities of any class of voting securities of such party to the Merger Agreement or any of its subsidiaries;
- any sale, lease, exchange, transfer, license, acquisition or disposition of any business or businesses or assets that constitute or account for 20% or more of the consolidated book value or the fair market value of the assets of a party and its subsidiaries, taken as a whole (other than the sale, transfer, license, assignment or other divestiture of Alcobia's ADAIR and MDX product candidates in accordance with the terms and conditions of the Merger Agreement and any lease, exchange, transfer, license, disposition, partnership or collaboration involving less than substantially all of the assets of Arcturus pursuant to a collaboration agreement, partnership agreement or similar arrangement); or
- any tender offer or exchange offer that if consummated would result in any person beneficially owning 20% or more of the outstanding equity securities of a party to the Merger Agreement or any of its subsidiaries.

A superior competing proposal is any unsolicited bona fide written competing proposal (with all references to 20% in the definition of competing proposal being treated as references to 50% for these purposes) made by a third party that (i) was not obtained or made as a direct or indirect result of a breach of (or in violation of) the Merger Agreement and (ii) is on terms and conditions that the board of directors of either Alcobra or Arcturus, as the case may be, determines, in its reasonable, good faith judgment, after obtaining and taking into account such matters that its board of directors deems relevant following consultation with its outside legal counsel and financial advisor, if any (A) is more favorable, from a financial point of view, to the Alcobra shareholders or the Arcturus stockholders, as applicable, than the terms of the Transaction; and (B) is reasonably capable of being consummated; provided, however, that any such offer will not be deemed to be a superior competing proposal if any financing required to consummate the transaction contemplated by such offer is not committed and is not reasonably capable of being obtained by such third party or if the consummation of such transaction is contingent on any such financing being obtained.

Either Alcobra or Arcturus, as the case may be, may terminate the Merger Agreement if the board of directors, and/or any committee of the board of directors, of the other party has:

- failed to include its approval and recommendation to shareholders or stockholders (as applicable) relating to the Transaction in this proxy statement;
- willfully and intentionally breached, or any of its representatives have breached, the non-solicitation provisions of the Merger Agreement;
- approved, endorsed or recommended a competing proposal; or
- entered into a definitive agreement for a competing proposal.

Proxy Documents

Within five business days after signing, Alcobra will establish a record date for, duly call, give notice of and, as soon as reasonably practicable convene the Meeting, and publish the notice of the Meeting. In addition, Alcobra will prepare, with the cooperation of Arcturus, and cause to be submitted to the SEC this proxy statement (with the proxy card required under the Companies Law and the regulations promulgated thereunder).

Information Statement and Arcturus Written Consent

Within two business days of this proxy statement being submitted to the SEC, Arcturus will mail an information statement to the Arcturus stockholders to solicit the Arcturus stockholder written consent.

Within five business days after the information statement mailing date, Arcturus will obtain the Arcturus stockholder written consent for purposes of (i) adopting the Merger Agreement, and approving the Transaction, the preferred stock conversion, and the other actions contemplated by the Merger Agreement; (ii) acknowledging that such approval is irrevocable and that such stockholder is aware of its rights to demand appraisal for its shares pursuant to Section 262 of the Delaware General Corporation Law, a copy of which was attached thereto, and that such stockholder has received and read a copy of Section 262 of the Delaware General Corporation Law; and (iii) acknowledging that by its approval of the Transaction it is not entitled to appraisal rights with respect to its shares in connection with the Transaction and thereby waives any rights to receive payment of the fair value of its capital stock under the Delaware General Corporation Law.

Regulatory Approvals

Each party to the merger agreement will use commercially reasonable efforts to take all actions necessary to comply promptly with applicable law that may be imposed on such party with respect to the merger and the other transactions contemplated by the Merger Agreement.

Arcturus Stock Options and Arcturus Warrants

At the effective time of the Transaction, each outstanding Arcturus option that is unexercised immediately prior to the effective time of the Transaction, whether or not vested, will be assumed by Alcobra and converted into an option to purchase Ordinary Shares of Alcobra as determined pursuant to the Exchange Ratio described in more detail above. All rights with respect to Arcturus common stock under Arcturus options assumed by Alcobra will be converted into rights with respect to Alcobra Ordinary Shares.

Accordingly, from and after the effective time of the Transaction, each Arcturus option assumed by Alcobra may be exercised solely for Ordinary Shares of Alcobra.

The number of Ordinary Shares of Alcobra subject to each outstanding Arcturus option assumed by Alcobra will be determined by multiplying the number of shares of Arcturus common stock that were subject to such Arcturus option, as in effect immediately prior to the effective time of the Transaction, by the Exchange Ratio and rounding the resulting number down to the nearest whole number of Ordinary Shares of Alcobra. The per share exercise price for the Ordinary Shares of Alcobra issuable upon exercise of each Arcturus option assumed by Alcobra will be determined by dividing the per share exercise price of Arcturus common stock subject to such option, as in effect immediately prior to the effective time of the Transaction, by the Exchange Ratio and rounding the resulting exercise price up to the nearest whole cent. Any restriction on the exercise of any Arcturus option assumed by Alcobra will continue in full force and effect and the term, exercisability, vesting schedule and other provisions of such Arcturus option will otherwise remain unchanged.

Indemnification and Insurance for Officers and Directors

Under the Merger Agreement, from the closing of the Transaction through the seventh anniversary of the date on which the effective time of the Transaction occurs, Alcobra and the surviving corporation in the Transaction agree to, jointly and severally, indemnify and hold harmless to the fullest extent allowed under the Companies Law, and the case of the surviving corporation, the Delaware General Corporation Law, each present and former director or officer of Alcobra against all claims, losses, liabilities, damages judgments, fines and reasonable fees, costs and expenses, including attorneys' fees and disbursements, incurred in connection with any claim, action, suit, proceeding or investigation, whether civil, criminal, administrative or investigative, arising out of such individual's position as a director or officer of Alcobra, whether asserted or claimed prior to, at or after the effective time of the Transaction.

Under the Merger Agreement, the articles of association of Alcobra and the certificate of incorporation and bylaws of the surviving corporation will contain provisions no less favorable with respect to indemnification, advancement of expenses and exculpation of present and former directors and officers of each of Alcobra and Arcturus than are presently set forth in the articles of association of Alcobra and the certificate of incorporation and bylaws of the surviving corporation, as applicable, which provisions will not be amended, modified or repealed for a period of seven years' time from the effective time of the merger in a manner that would adversely affect the rights thereunder of individuals who, at or prior to the effective time of the Transaction, were officers or directors of Alcobra.

The Merger Agreement also provides that Alcobra will purchase a run-off insurance policy for Alcobra's officers and directors in effect for seven years from the closing, providing at least the same coverage and amounts as the current directors' and officers' liability insurance policies maintained by Arcturus and Alcobra and containing terms and conditions that are not less favorable to current and former officers and directors of Alcobra than the existing officers and directors insurance policies. Alcobra is proposing the purchase of such a run-off insurance policy pursuant to Item No. 1 because the annual premium on the proposed run-off insurance policy exceeds the maximum annual premium permitted under Alcobra's executive compensation policy. Therefore, under the Companies Law, all resolutions proposed under Item No. 1 must be approved by a special majority of the Ordinary Shares present and voting at the Meeting. Please see "Questions and Answers About the Transaction— What is the required majority for approval of the matters relating to the Transaction under Item No. 1 at the Meeting and why is that majority required?" on page 10 of this proxy statement.

Additional Agreements

As soon as reasonable practicable, and no later than the fifth day following the date of the Merger Agreement, Alcobra will call and give notice of and hold a meeting of its shareholders. In addition, Alcobra agreed to prepare, with the cooperation of Arcturus, and cause to be submitted to the SEC this proxy statement, with the required proxy card.

Each of Arcturus and Alcobra has agreed to, among other things:

- use its commercially reasonable efforts to cause to be taken all actions necessary to consummate the Transaction and any other transaction contemplated by the Merger Agreement;
- reasonably cooperate with the other parties and provide the other parties with such assistance as may be reasonably requested for the purpose of facilitating the performance by each party of its respective obligations under the Merger Agreement and to enable the surviving corporation to continue to meet its obligations under the Merger Agreement following the closing;
- make all filings and other submissions (if any) and give all notices (if any) required to be made and given by such party in connection with the Transaction and any other transaction contemplated by the Merger Agreement;
- use its commercially reasonable efforts to lift any injunction prohibiting, or any other legal bar to, the Transaction and any other transaction contemplated by the Merger Agreement;
- use its commercially reasonable efforts to satisfy the conditions precedent to the consummation the Transaction and any other transaction contemplated by the Merger Agreement; and
- use its commercially reasonable efforts to cause the merger to qualify, and agree not to, and not permit or cause any of its affiliates or any subsidiaries to, take any actions or cause any action to be taken which would reasonably be expected to prevent the merger from qualifying, as a "reorganization" under Section 368(a) of the Code.

NASDAQ Stock Market Listing

Alcobra Ordinary Shares are currently listed on The NASDAQ Global Market under the symbol “ADHD.” Alcobra will use commercially reasonable efforts to (i) maintain its existing listing on The NASDAQ Global Market and to obtain approval of the listing of the combined company on The NASDAQ Global Market; (ii) effect the reverse split; (iii) prepare and submit to The NASDAQ Global Market a notification form for the listing of the Ordinary Shares of Alcobra to be issued to Arcturus stockholders pursuant to the Transaction, (iv) cause such Ordinary Shares to be approved for listing (subject to notice of issuance); and (v) to the extent required by NASDAQ Marketplace Rule 5110, file an initial listing application for the Ordinary Shares of Alcobra and to cause such listing application to be approved for listing (subject to official notice of issuance). In addition, under the Merger Agreement, each of Alcobra’s and Arcturus’s obligation to complete the Transaction is subject to satisfaction or waiver by each of the parties, at or prior to the closing of the Transaction, of various conditions, including that the existing Alcobra Ordinary Shares must have been continually listed on The NASDAQ Global Market, Alcobra must have caused the Alcobra Ordinary Shares to be issued in the Transaction to be approved for listing (subject to official notice of issuance) on The NASDAQ Global Market as of the effective time of the Transaction and, to the extent required by NASDAQ Marketplace Rule 5110, the initial listing application for the combined company must be approved for listing. If such application is accepted, Alcobra anticipates that its common stock will be listed on The NASDAQ Global Market following the closing of the Transaction under the trading symbol “ARCT.”

Conditions to the Completion of the Merger

The respective obligations of Alcobra and Arcturus to complete the Transaction and the other transactions contemplated by the Merger Agreement are subject to the satisfaction or waiver of various conditions that include, in addition to other customary closing conditions, the following:

- there must not have been issued any temporary restraining order, preliminary or permanent injunction or other order preventing the consummation of the Transaction by any court of competent jurisdiction or other governmental entity of competent jurisdiction, and no law, statute, rule, regulation, ruling or decree will be in effect which has the effect of making the consummation of the Transaction illegal;
- the holders of a majority of the outstanding shares of Arcturus common stock and Arcturus preferred stock, voting together as a single class on an as-converted to Arcturus common stock basis and at least a majority of the outstanding shares of Arcturus preferred stock, voting as separate classes, must have adopted and approved the Merger Agreement and the Transaction;
- the affirmative vote, as required by applicable law, must have approved certain resolutions relating to the Transaction;
- Arcturus has received evidence, in form and substance satisfactory to it, that Merger Sub has obtained approval of Merger Sub’s sole stockholder adopting the Merger Agreement and approving the Transaction;
- the existing Alcobra Ordinary Shares must have been continually listed on The NASDAQ Global Market or be listed on The NASDAQ Global Market through the closing of the Transaction, the Alcobra Ordinary Shares to be issued in the Transaction must be approved for listing on The NASDAQ Global Market or The NASDAQ Global Market (subject to official notice of issuance) as of the effective time of the Transaction, and, to the extent required by NASDAQ Marketplace Rule 5110, the initial listing application for the combined company has been approved for listing; and
- there is no legal proceeding pending, or overtly threatened in writing by a governmental body which (i) challenges or seeks to restrain the consummation of the Transaction, (ii) relates to the Transaction and seeks to obtain from one of the parties to the Merger Agreement damages or other relief which may be material to such party, (iii) seeks to prohibit or limit in any material and adverse respect the ability of a party to the Merger Agreement to vote, transfer, receive dividends with respect to or otherwise exercise ownership rights with respect to the shares of Alcobra; (iv) would materially and adversely affect the right or ability of Alcobra or Arcturus to own the assets or operate the business of Alcobra or Arcturus; or (v) seeks to compel Arcturus, Alcobra or any subsidiary of Alcobra to dispose of or hold separate any material assets as a result of the Transaction.

In addition, each of Arcturus's and Alcobra's obligation to complete the Transaction is further subject to the satisfaction or waiver by that party of the following additional conditions:

- the representations and warranties regarding capitalization matters of the other party in the Merger Agreement must be true and correct in all but de minimis respects on the date of the Merger Agreement and on the closing date of the Transaction with the same force and effect as if made on the closing date, or, if such representations and warranties address matters as of a particular date, then as of that particular date; provided, that (i) certain of the Arcturus representations in relation to absence of changes and (ii) the Arcturus, Alcobra and Merger sub representation regarding the qualification of the merger as a reorganization within the meaning of Section 368(a) of the Code, will be true and correct in all respects as of the date of the Merger Agreement and on the closing date of the Transaction, as if made at such time;
- all other representations and warranties of the other party in the Merger Agreement must be true and correct on the date of the Merger Agreement and on the closing date of the Transaction with the same force and effect as if made on the date on which the Transaction is to be completed or, if such representations and warranties address matters as of a particular date, then as of that particular date, except where the failure of these representations and warranties to be true and correct would not have a material adverse effect on the other party;
- the other party to the Merger Agreement must have performed or complied with in all material respects all covenants and obligations in the Merger Agreement required to be performed or complied with by it on or before the closing of the Transaction;
- the other party to the Merger Agreement has not experienced a material adverse effect that is continuing;
- the other party's lock-up agreements must continue to be in full force and effect immediately following the effective time of the Transaction; and
- the other party to the Merger Agreement must have delivered certain certificates and other documents required under the Merger Agreement for the closing of the Transaction.

In addition, the obligation of Alcobra and Merger Sub to complete the Transaction is further subject to the satisfaction or waiver of the following conditions:

- Arcturus must have effected a conversion of all of its outstanding preferred stock into shares of Arcturus common stock;
- all Arcturus warrants must have been exercised;
- Arcturus must have effected a conversion of all of the Arcturus notes;
- Arcturus must have terminated certain investor agreements;
- Arcturus must have delivered a certificate setting forth the allocation of the Arcturus consideration to its equity-holders; and
- Arcturus must have performed and complied in all material respects with the covenants relating to it included in the Merger Agreement.

In addition, the obligation of Arcturus to complete the Transaction is further subject to the satisfaction or waiver of the following conditions:

- Arcturus will have received evidence that all Alcobra contracts, subject to certain exceptions, have been terminated, assigned or fully performed by Alcobra and all obligations have been fully satisfied or discharged any obligations thereunder or received a waiver of such obligations;
- Alcobra must have delivered to Arcturus written resignations of the officers and directors of Alcobra, and Alcobra must have appointed the directors and officers designated by Arcturus with such appointments to be effective as of the effective time of the Transaction;
- the principal executive officer and the principal financial officer of Alcobra must have provided, with respect to any document filed with the SEC on or after September 27, 2017, any necessary certification required under Rule 13a-14 under the Exchange Act;
- Alcobra and Arcturus have agreed upon the Alcobra net cash calculation or the accounting firm has delivered its determination with respect to such calculation, and Alcobra's net cash is greater than or equal to \$30,000,000;
- Alcobra must have satisfied all of its liabilities as described in the Merger Agreement and received payoff letters evidencing the satisfaction of such liabilities and authorizing the release of liens on its assets; and
- Alcobra must have effected the Reverse Split described in Item No. 1 and delivered a certificate setting forth and certifying the number of outstanding Ordinary Shares, certified by its chief executive officer.

Termination of the Merger Agreement and Termination Fee

The Merger Agreement may be terminated at any time before the closing of the Transaction, whether before or after the required shareholder or stockholder approvals (as applicable) to complete the Transaction have been obtained, as set forth below:

- (1) by mutual agreement of Alcobra and Arcturus;
- (2) by either Alcobra or Arcturus if the Transaction has not closed by December 31, 2017 (other than in cases in which such failure to close is due to a breach by the party wishing to terminate), which date may be extended by two months if the merger shares to be issued in the Transaction do not qualify for an exemption from registration and prospectus delivery requirements of the Securities Act, the equivalent state "blue sky" laws or equivalent provisions under applicable Israeli law;
- (3) by either Alcobra or Arcturus if there is any final non-appealable order or ruling that prohibits the completion of the Transaction;
- (4) by Alcobra if Arcturus has not obtained the required vote from Arcturus stockholders within five business days of the information statement being mailed to the Arcturus stockholders;
- (5) by either Alcobra or Arcturus if the Meeting has been held and completed and Item No. 1 has not been approved (other than in cases in which such failure has been caused by Alcobra's action or failure to act and such action or failure to act is a material breach of the Merger Agreement by Alcobra);
- (6) by Arcturus (any time prior to obtaining the required vote from Alcobra's shareholders) if (i) Alcobra failed to include its board recommendation of the proposals in this proxy statement, (ii) the Board has approved, endorsed or recommended any competing proposal, (iii) Alcobra has failed to hold the Meeting within 60 days of the mailing of this proxy statement, which date may be extended in certain circumstances, (iv) Alcobra has entered into any definitive agreement for a competing proposal or (v) Alcobra or its representatives have willfully and intentionally breached the non-solicitation obligations in the Merger Agreement;

- (7) by Alcobra (any time prior to obtaining the required vote from Arcturus stockholders) if (i) the Arcturus board fails to include its board recommendation of the proposals in this proxy statement, (ii) the Arcturus board has approved, endorsed or recommended any competing proposal, (iii) Arcturus has entered into any definitive agreement for a competing proposal or (iv) Arcturus has willfully and intentionally breached the non-solicitation obligations in the Merger Agreement;
- (8) by Arcturus if Alcobra or Merger Sub breaches any of its representations, warranties, covenants or agreements in the Merger Agreement that would prevent Alcobra or Merger Sub from satisfying their closing conditions and such breaches remains uncured for 15 calendar days after receipt of written notice of such breaches; or
- (9) by Alcobra if Arcturus breaches any of its representations, warranties, covenants or agreements in the Merger Agreement that would prevent Arcturus from satisfying its closing conditions and such breaches remains uncured for 15 calendar days after receipt of written notice of such breaches.

Arcturus is required to pay Alcobra a termination fee of \$3,000,000 if the Merger Agreement is terminated by Alcobra, as applicable, pursuant to clauses (4) or (7) above and before obtaining the Arcturus stockholder approval an acquisition proposal has been announced (and in the case of clause (4), within 12 months after the date of such termination, Arcturus enters into a definitive agreement with respect to a merger, change of control transaction, sale of 50% or more of its assets, or similar transaction or consummates such a transaction).

Arcturus is also required to pay Alcobra third-party expense reimbursements of up to \$300,000 and all legal fees and expenses of Alcobra incurred if the Merger Agreement is terminated by Alcobra or Arcturus, as applicable, pursuant to clauses (4), (7) or (9) above, or if Alcobra fails to consummate the transactions to be consummated at the closing solely as a result of a Arcturus material adverse effect.

Alcobra is required to pay Arcturus a termination fee of \$3,000,000, if the Merger Agreement is terminated by Arcturus or Alcobra, as applicable, pursuant to clauses (5) or (6) above and prior to the Meeting an acquisition proposal is announced.

Alcobra is also required to pay Arcturus third-party expense reimbursements of up to \$300,000 and all legal fees and expenses of Arcturus incurred connection with the preparation of this proxy statement and its information statement if the Merger Agreement is terminated by Arcturus or Alcobra, as applicable, pursuant to clauses (5), (6), or (8) above or in the event Arcturus fails to consummate the transactions solely as a result of an Alcobra material adverse effect.

Any termination of the Merger Agreement will not relieve any party for its fraud or from any liability for any willful and material breach of any representation, warranty, covenant, obligation or other provision contained in the Merger Agreement.

Amendment

The Merger Agreement may be amended by an instrument in writing signed on behalf of each of Alcobra, Merger Sub and Arcturus with the approval of the respective boards of directors of Alcobra, Merger Sub and Arcturus at any time, except that after the Merger Agreement has been adopted by the shareholders of Alcobra or stockholders of Arcturus (as applicable), no amendment which by law requires further approval by the shareholders or stockholders of Alcobra or Arcturus, as the case may be, will be made without such further approval.

Expenses

The Merger Agreement provides all fees and expenses incurred in connection with the Merger Agreement and the transactions contemplated thereby will be paid by the party incurring such expenses, except as described above in “Termination of the Merger Agreement and Termination Fee” beginning on page 59, and except that Alcobra will pay for all fees and expenses incurred in relation to the engagement of the exchange agent and in relation to printing and filing with the SEC of this proxy statement and any related amendments or supplements.

Governing Law

All matters arising out of or relating to the Merger Agreement and the transactions contemplated thereby will be governed by and construed in accordance with the internal laws of the State of Delaware without giving effect to any choice or conflict of law provision or rule (whether of the State of Delaware or any other jurisdiction) that would cause the application of laws of any jurisdictions other than those of the State of Delaware.

Arcturus's Business

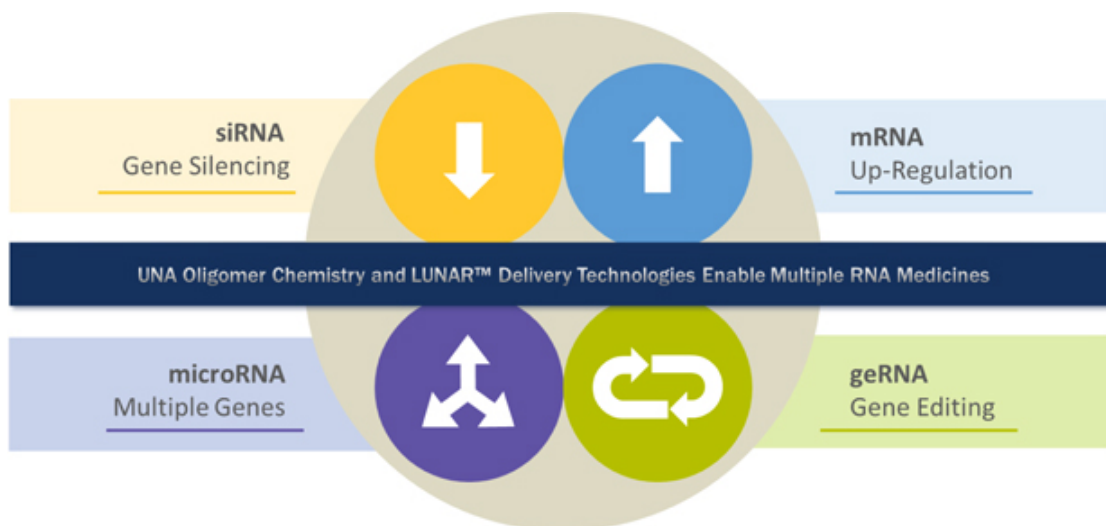
Overview

Arcturus is a preclinical RNA medicines company focused on developing RNA technologies and novel RNA therapeutics for rare, infectious, fibrotic, and respiratory diseases with significant unmet medical needs. Arcturus has two proprietary technologies with the potential to address the major hurdles in RNA medicine development such as RNA delivery challenges, limited potency and narrow therapeutic index.

Arcturus has developed a novel lipid-mediated delivery system called Lipid-enabled and Unlocked Nucleomonomer Agent modified RNA (“LUNAR™”). In preclinical proof of concept studies, Arcturus has demonstrated that LUNAR can potentially deliver RNA to clinically important cells and tissues, including liver hepatocytes, liver stellate cells, myocytes and lung cells, resulting in knockdown or upregulation of target proteins. Arcturus's lipids are pH-sensitive and biodegradable, causing minimal lipid accumulation in cells after multiple dosing and showing a wide therapeutic index in preclinical studies in rodents and non-human primates.

Arcturus's proprietary Unlocked Nucleomonomer Agent (“UNA”) oligomer chemistry technology can be incorporated into multiple types of nucleic acid medicines. Preclinical studies in rodents and non-human primates have shown that the addition of UNA can potentially improve the *in vivo* efficiency of messenger RNA (“mRNA”)-mediated protein replacement and small-interfering RNA (“siRNA”)-mediated gene silencing.

Arcturus's LUNAR and UNA technologies are wholly-owned by Arcturus and covered by Arcturus's patent portfolio of 120 patents and patent applications, issued in the United States, Europe, Japan and other countries. Arcturus believes that it can use its technologies to develop medicines in multiple RNA therapeutic modalities: (1) siRNA – knockdown of genes overexpressed in disease; (2) mRNA – up-regulation of proteins; (3) miRNA – modulation of multiple genes at one time; and (4) geRNA – editing of errant genes.



Arcturus is using LUNAR and UNA technologies to develop both wholly-owned, internal RNA-based medicines, as well as in partnerships with Ultragenyx, Takeda, Janssen and CFFT. Arcturus is initially focused on developing mRNA and siRNA medicines to treat diseases with clear unmet medical needs, accelerated clinical paths and commercial opportunities. Arcturus's preclinical pipeline currently has seven active development programs:

- The LUNAR-OTC program is developing mRNA compounds to treat ornithine transcarbamylase (“**OTC**”) deficiency, a life-threatening genetic disease that affects approximately 1 in 60,000 people. This is an internal research program, and Arcturus has achieved preclinical proof of concept for its LUNAR-OTC compound in a mouse model of the disease.
- The LUNAR-CF program is developing mRNA compounds to replace dysfunctional cystic fibrosis transmembrane conductance regulator (“**CFTR**”) protein in cystic fibrosis (“**CF**”) patients. CF is a common genetic disease in the United States, and approximately 1,000 patients are newly diagnosed each year. This program is supported by CFFT and has achieved preclinical proof of concept in mice and in cultured cells from CF patients.
- The LUNAR-TTR program is developing siRNA compounds to treat transthyretin-mediated amyloidosis (“**ATTR**”). The incidence of ATTR varies in populations around the world. Approximately 1 in 100,000 people are living with ATTR throughout the U.S. and Europe. Arcturus has achieved proof of concept in non-human primates and is actively pursuing partnership opportunities to complete investigational new drug (“**IND**”) enabling studies and help initiate clinical studies.
- The LUNAR-RLD program is developing mRNA compounds to treat rare diseases. The initial candidate for this program will be for an undisclosed, severe rare liver disease.
- Arcturus has partnered with Ultragenyx to develop mRNA therapeutic candidates for certain rare disease targets.
- Arcturus has partnered with Takeda to develop RNA-based therapeutic candidates for the treatment of nonalcoholic steatohepatitis (“**NASH**”) and other gastrointestinal (“**GI**”) disorders.
- Arcturus has partnered with Janssen, a Johnson & Johnson company, to develop nucleic acid-based products for the treatment of hepatitis B virus infection (“**HBV**”) and potentially other infectious and respiratory diseases.

Arcturus's team has extensive experience in the discovery and development of RNA medicines. Arcturus was founded and is led by Mr. Joseph E. Payne, President and Chief Executive Officer, and Padmanabh Chivukula, Ph.D., Chief Scientific Officer and Chief Operating Officer. Mr. Payne has over twenty years of drug discovery experience at Arcturus, Merck Research Labs, DuPont Pharmaceuticals Co., Bristol-Myers Squibb Co., Kalypsys Inc., and Nitto Denko Corporation. He has contributed to over 40 publications and patents, and several IND clinical candidates. Dr. Chivukula brings over fifteen years of experience in drug delivery and therapeutic drug development, including leading the polymeric RNAi research department at Nitto Denko Corporation. In addition, Stuart Collinson, Ph.D., serves as Arcturus's Executive Chair and Dr. Michael Hodges serves as research and development and medical consultant. Dr. Collinson's experience includes Chief Executive Officer of Aurora Biosciences and senior roles at GlaxoWellcome plc and Baxter International Inc. Dr. Hodges is currently Chief Medical Officer of Amplyx Pharmaceuticals, Inc., and his experience includes senior roles at Santaris A/S, Altair Inc., Kemia Inc., and Pfizer Inc. For additional information about the management team, please refer to “Management Following the Merger” beginning on page 80.

Arcturus's Strategy

Arcturus aims to leverage its proprietary LUNAR and UNA technologies to develop a pipeline of RNA medicines for rare, infectious, fibrotic and respiratory diseases. Arcturus is focused on developing a balanced portfolio of proprietary and partnered programs to advance its preclinical candidates in a timely and cost-effective manner.

Arcturus's internal programs are focused on significant unmet medical needs in rare and orphan diseases. These diseases affect between 250 and 350 million people around the world. There are no drugs approved by the U.S. Food and Drug Administration ("FDA") for over 95% of these conditions. Therefore, these diseases represent both a significant unmet medical need and a large potential market. Arcturus believes the versatility of its two RNA development platform technologies gives it a distinct advantage in developing RNA medicines to treat the genetic cause of rare diseases.

Arcturus's novel UNA chemistry and LUNAR delivery technologies are covered by its extensive patent portfolio, and Arcturus believes that it can use its technologies to enable multiple types of RNA medicines. Arcturus is actively pursuing technology alliances and strategic therapeutic partnerships to address other targets.

Arcturus's team is also exploring new RNA chemistries and intellectual property opportunities to expand its RNA technology platform portfolio and facilitate its development of novel RNA therapeutic candidates.

Arcturus's business strategy includes:

- *Develop a portfolio of RNA therapeutics to treat rare, infectious, fibrotic and respiratory diseases and become a clinical stage company.* Arcturus's initial focus is on urea cycle disorders, CF, and gastrointestinal disorders. Arcturus has achieved preclinical proof of concept in its LUNAR-OTC, LUNAR-CF and LUNAR-TTR programs, including robust target protein expression, extended duration of functional activity and a wide therapeutic index in preclinical disease models. Arcturus aims to establish the infrastructure required to move these programs into the clinic.
- *Leverage Arcturus's UNA and LUNAR technologies to develop therapeutics for a broad range of additional rare diseases.* Arcturus believes that many other rare diseases would be good candidates for mRNA replacement therapy or siRNA-mediated gene silencing. Given that the delivery system will be similar across multiple programs, Arcturus anticipates that the costs and risks associated with developing new RNA therapeutics for other orphan diseases will be greatly reduced.
- *Form strategic collaborations that leverage Arcturus's UNA and LUNAR technologies.* Arcturus is in discussions with several biopharmaceutical firms to develop RNA, DNA and gene editing programs for various disease indications. Arcturus intends to pursue partnerships in order to accelerate the development and maximize the market potential of its UNA and LUNAR technology platforms. In particular, Arcturus intends to partner with larger biopharmaceutical companies that possess market know-how and marketing capabilities to complete the development and commercialization of RNA therapeutics. Arcturus's UNA and LUNAR technologies also potentially enable the delivery of nuclease-encoding mRNAs to various tissues and cell types. In addition, the combination of Arcturus's UNA and LUNAR technologies with gene editing technology has the potential to enable *in vivo* gene editing, to either add or delete gene function in humans, which, if successful, could potentially have a variety of important medical applications.

- *Identify new RNA chemistries and intellectual property opportunities to expand Arcturus's RNA technology platform portfolio.* Arcturus's team is working to discover and develop new RNA chemistries that will complement its LUNAR and UNA technology platforms and strengthen its ability to develop novel RNA therapeutic candidates for a range of unmet medical needs.

Arcturus's Competitive Strengths

Arcturus believes its proprietary UNA and LUNAR technologies, extensive intellectual property portfolio and experienced team will enable Arcturus to advance its drug candidates and existing partnerships, and further partner its technology platform to expand future development and commercial opportunities.

Arcturus's competitive strengths include:

- *LUNAR delivery technology and UNA oligomer technology are not limited to a specific type, modality or size of nucleic acid.* Preclinical studies, both in Arcturus's internal research programs and in Arcturus's external partnered development programs, have shown that both LUNAR and UNA technologies can potentially be used to improve the safety and efficacy of different types of RNA including mRNA and siRNA. This means that Arcturus is not restricted in the types of RNA medicines that it can develop. Arcturus can pursue mRNA-mediated protein replacement, siRNA-mediated gene silencing and gene editing candidates.
- *LUNAR and UNA are amenable to multiple routes of administration (intravenous, intramuscular, and nebulized).* Preclinical studies in both rodents and non-human primates have shown that LUNAR can deliver RNA compounds specifically to hepatocytes. Additionally, preclinical studies in rodents have shown that LUNAR can deliver RNA compounds to liver stellate cells via intravenous injection, muscle cells via intramuscular injection and lung cells via nebulization. This versatility in route of administration, combined with the ability to use both technologies with many different types of nucleic acids, means that these platforms can potentially be used to develop RNA therapies for a range of different diseases.
- *Tissue specific production or inhibition of desired proteins in liver hepatocytes, liver stellate cells, myocytes and lung cells.* Unlike other lipid-mediated delivery systems, LUNAR can potentially be used to target different clinically important cells including stellate cells, hepatocytes, lung epithelial cells and myocytes. This would be a clear advantage over the GalNAc delivery system that can deliver a single small RNA molecule to hepatocytes. GalNAc technology is utilized by companies such as Ionis Pharmaceuticals, Inc., Alnylam Pharmaceuticals, Inc., Arrowhead Pharmaceuticals, Inc., Regulus Therapeutics Inc., Dicerna Pharmaceuticals, Inc. and Silence Therapeutics plc.
- *LUNAR can deliver mixtures of different RNAs as one drug product.* LUNAR can potentially deliver mixtures containing multiple RNAs to target cells *in vivo*.

- *Potential improved tolerability relative to other nucleic acid delivery systems.* Preclinical safety studies showed that two doses over 14 days of up to 30 mg/kg of LUNAR-RNA compounds were well-tolerated in non-human primates. Doses as low as 0.3 mg/kg can induce high expression levels of target proteins. Arcturus believes that these results indicate that LUNAR, unlike other lipid-mediated delivery systems, has a wide therapeutic index.
- *Ability to repeat dose.* Multiple preclinical studies in different animal models with different target proteins have shown that therapeutic protein levels can be attained with repeat dosing of LUNAR-RNA compounds. Arcturus believes that this indicates that LUNAR-RNA compounds do not elicit antibody or cell-mediated potency drift.
- *Experienced team.* Arcturus's team has extensive experience in the discovery and development of RNA medicines at large pharmaceutical companies, as well as experience and know-how in lipid-mediated delivery technology. This combination of in-house expertise uniquely positions Arcturus to develop novel RNA development technologies and RNA medicines.
- *Arcturus's intellectual property portfolio.* The LUNAR and UNA technologies are wholly owned by Arcturus and covered by Arcturus's patent portfolio of 120 patents and patent applications, issued in the United States, Europe, Japan and other countries. These intellectual property assets allow Arcturus to pursue RNA therapeutic candidates and serve as a barrier-to-entry for competitors.
- *Ability to develop high barrier-to-entry products with rapid development of subsequent products with lower costs and risks.* The properties of Arcturus's proprietary technologies, outlined above, allow Arcturus to develop high barrier-to-entry RNA medicines. The versatility of Arcturus's two RNA development platforms will allow Arcturus to develop subsequent products relatively quickly with less risk and lower costs.

RNA Medicines

The World Health Organization estimates there are 10,000 monogenic diseases. Monogenic diseases are caused by mutations in a single gene. These disorders affect 1/100 people at birth, and between 250 and 350 million people around the world live with a rare genetic disease. Many of these diseases cause moderate to severe symptoms and significantly decrease the quality of life and life expectancy for patients. There are no FDA-approved drugs for over 95% of known rare genetic diseases. This is a significant unmet medical need.

RNA medicine has the potential to treat many diseases caused by genetic mutations including diseases that cannot be treated by conventional drugs such as small molecules and biologics. DNA carries the blueprint from which all proteins necessary for life are produced inside cells. Each gene has the code needed to make one or more proteins. Various types of RNA, including mRNA, siRNA and microRNA, work together to control how the genes contained in DNA are translated into proteins.

mRNA can be used as protein replacement therapy to treat diseases caused by a lack of protein, or by defective proteins, such as CF. If a gene has a mutation that stops it from producing protein or causes it to produce defective proteins, mRNA medicine can be used to ensure that a healthy version of the missing protein is produced.

siRNA medicines can treat viral infections like HBV and diseases like Huntington's disease that are caused by malfunctioning proteins. Each siRNA binds perfectly to one mRNA with the result that the machinery in the cell destroys the mRNA. This mechanism, called RNA interference ("RNAi"), can be used to prevent mutated genes from being translated into defective proteins that cause disease. It can also stop viruses from replicating inside the body.

RNA-based therapies have an advantage over DNA therapies because RNA does not need to enter the nucleus to function. This means that RNA medicines do not carry any risk of random integration into DNA and do not cause mutagenesis. RNA is delivered to the cell cytosol where it works with normal cellular machinery to either increase or decrease target protein levels. This approach promotes normal post-translational modifications of the target therapeutic protein.

Naked RNA is quickly degraded by enzymes in the bloodstream and can cause a strong immune response. Therefore, RNA medicines developed for systemic use must use a vector to deliver the RNA to target cells. Viral vectors and lipid-mediated delivery systems are the two main delivery systems used in RNA therapeutic development.

Viral vectors are very effective at delivering RNA to cells. However, they can cause liver damage and activate an immune response in human patients. Viral vectors may also cause accidental mutations in host DNA. Patients treated with viral vectors can also develop antibodies against these vectors that make the treatment less effective over time.

Lipid-mediated delivery systems are the most common non-viral vectors because they are biocompatible and do not cause insertional mutagenesis. They can also be manipulated to target specific cells in the body. Despite these advantages, older lipid-mediated delivery systems also stimulate adverse immune responses and cause liver damage in patients.

Arcturus's RNA technology platforms

To address these RNA medicine delivery challenges and improve safety and tolerance *in vivo*, Arcturus has developed two RNA technology platforms. Arcturus believes that its LUNAR delivery platform and UNA oligomer technology can be used together or separately to create the next-generation of safe, effective RNA medicines. These technologies are wholly-owned by Arcturus and covered by Arcturus's patent portfolio of 120 patents and patent applications, issued in the United States, Europe, Japan and other countries.

Arcturus's LUNAR delivery and UNA oligomer chemistry can be paired with multiple classes of nucleic acid medicine-based therapeutics, including mRNA, siRNA, microRNA, antisense oligonucleotides and other oligonucleotide therapeutic approaches. Arcturus can combine its technology with nucleic acids that encode for transmembrane proteins (such as transporters, GPCRs, and receptors), secreted proteins (such as hormones and antibodies), engineered nucleases (CRISPR and TALEN), engineered antigens (CAR-T) and intracellular proteins (chaperones and enzymes). Arcturus is also evaluating the potential for LUNAR to deliver DNA-based vaccines and therapeutics.

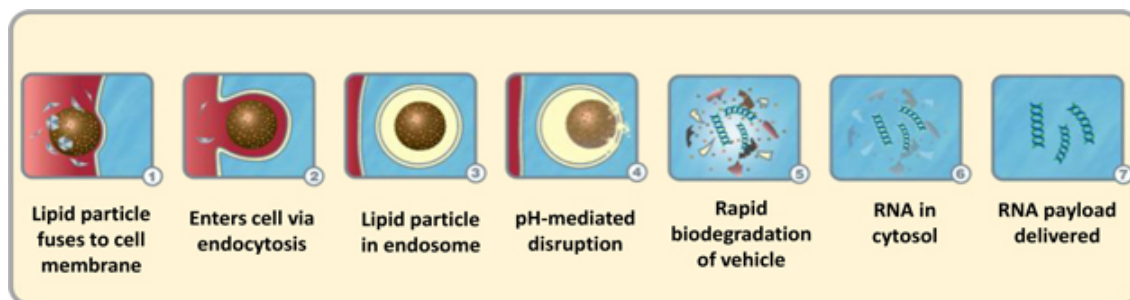
Arcturus is using LUNAR and UNA technologies to develop RNA-based therapeutic candidates both in internal development programs and in partnerships with Ultragenyx, Takeda, Janssen and CFFT.

Arcturus's RNA delivery technology – LUNAR

Arcturus has designed its LUNAR RNA delivery platform to solve major challenges with RNA medicine delivery, including transfection efficiency, adverse immune reactions and liver damage. LUNAR formulations are optimized for high RNA-encapsulation efficiency, which is important for the cost of manufacturing, and for precise size control. This means that LUNAR can be used to deliver very small RNAs such as siRNAs and microRNAs and also larger mRNAs and gene editing technologies such as CRISPR and TALENs.

To deliver a nucleic acid payload, the LUNAR particle fuses to a cell membrane, causing the cell membrane to invaginate and form an endosome (figure below).

LUNAR-mediated delivery of RNA into cells

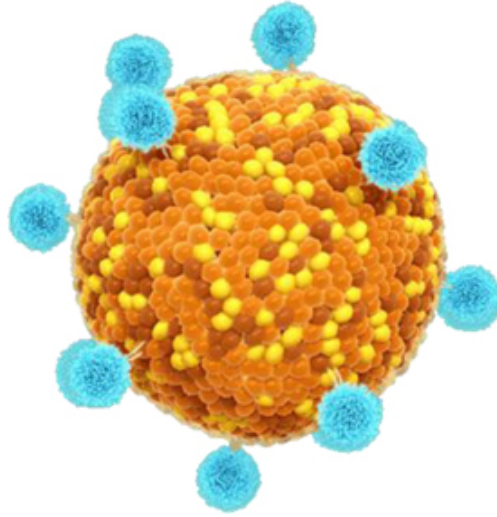


LUNAR then delivers its RNA payload to the cytoplasm by using a pH-mediated disruption of the endosome followed by biodegradation of the lipid inside the cell. The biodegradable nature of the key Arcturus lipid excipient is a key differentiating factor of the LUNAR technology and allows for high doses, multiple administrations and improved safety margins. Preclinical studies in several mouse models and in non-human primates have shown that LUNAR can effectively deliver both mRNA and siRNA *in vivo* to clinically important cells and tissues, including liver hepatocytes, liver stellate cells, myocytes and lung cells, resulting in the production or suppression of target proteins respectively.

Arcturus's LUNAR formulations are a multi-component drug delivery system that utilizes Arcturus's proprietary lipid, called ATX. The ATX lipid contains an ionizable amino head group and a biodegradable lipid backbone. The amino head group makes the ATX lipid pH-sensitive. At acidic pH, LUNAR lipids interact with RNA, which is negatively charged, and encapsulate the RNA. Once the compound is at a physiological pH (e.g., pH 7.4) inside cells, LUNAR formulations bear a neutral charge. This pH-sensitivity avoids the toxicity often seen with positively charged cationic lipid-mediated delivery vectors. The pH-sensitivity of the amino head group also enables protonation of the lipid once inside the endosomes, thereby promoting release of the RNA payload into the cytosol. Furthermore, the ATX lipid backbone has been designed to be biodegradable. This prevents the lipids from accumulating inside the cell and causing damage. Ester groups in the ATX lipid backbone can be cleaved by esterases inside the cell once the RNA payload has been released, and resulting lipid fragments are quickly metabolized by the cell.

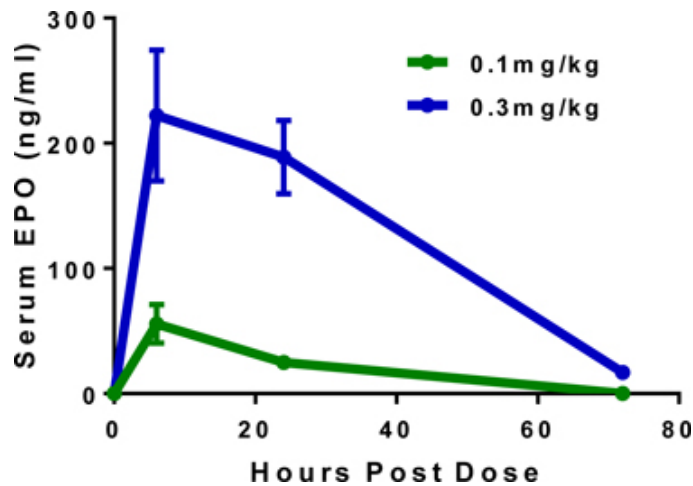
Arcturus has generated a library of over 150 proprietary ATX lipids. Formulation screening has been performed for each lead program to determine the optimal combination of ATX lipid and ratio of LUNAR components. LUNAR 1.0 formulations are considered the first generation of LUNAR lipid-mediated delivery systems. Additional improvements in LUNAR 2.0 and 3.0 formulations have been made to potentially maximize efficacy and tolerability, and the most efficacious formulations will be characterized in greater detail to confirm the safety profile in non-human primates and validate scalability for manufacturing.

Graphic of LUNAR



Unlike viral vectors, LUNAR formulations do not accumulate inside targeted cells, are not immunogenic, and cannot cause insertional mutagenesis. Preclinical *in vivo* studies have shown that LUNAR technology can potentially prevent potency drift with repeat RNA medicine dosing. Preclinical safety studies showed that two doses over 14 days of up to 30 mg/kg of LUNAR 1.0-RNA compounds were well-tolerated in non-human primates, with no signs of adverse immune reactions or liver toxicity. Doses as low as 0.3 mg/kg can induce high expression levels of target protein. For example, a single intravenous dose of LUNAR 1.0-encapsulated human erythropoietin mRNA in non-human primates resulted in 2,000-fold higher-than-normal serum levels of erythropoietin (“EPO”) (n=3 animals per group, see graph below). These results indicate that LUNAR 1.0, unlike other lipid-mediated delivery systems, has a wide therapeutic index.

Serum EPO levels following intravenous LUNAR 1.0 delivery of human EPO (LUNAR-EPO) in non-human primates

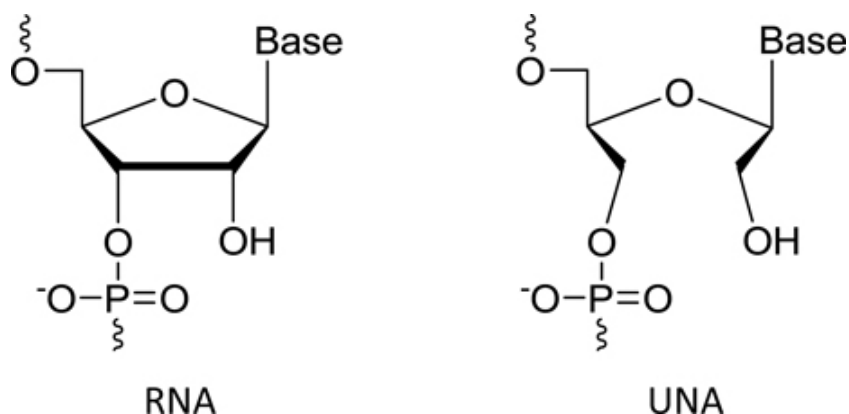


In addition, Arcturus has demonstrated particle size control in LUNAR 1.0 formulation batches at manufacturing scale. This is critical for quality assurance and regulatory compliance, and can be challenging to achieve for other lipid-mediated delivery systems made in large scale-batches.

Arcturus's UNA oligo chemistry

UNAs are RNA analogues in which the C2'-C3' bond of the ribose ring is absent (figure below). UNA chemistry technology can be applied toward all types of RNA medicines including mRNA, siRNA, microRNA and gene editing RNA compounds. One or more UNAs can be positioned strategically along a nucleic acid strand to manipulate the chemical properties of the molecule. Addition of a single UNA can potentially make mRNA and siRNA compounds more efficient at inducing or suppressing target-protein production respectively.

RNA structure compared with UNA structure



UNAs can potentially improve the efficiency of mRNA-mediated protein production. Arcturus's preclinical testing in rodents has shown that mRNA formulated with one or more UNAs can induce significantly more target-protein production (protein replacement) than natural mRNA sequences. This means that UNA-modified mRNA can be given at less frequently than native mRNA to achieve the same therapeutic effect. The addition of UNAs to mRNA may overcome a key issue in mRNA medicine development which is duration of action.

UNAs can potentially improve the efficiency of siRNA-mediated protein suppression. siRNAs are short double-stranded RNA molecules. Once inside the cell, they become part of the RNA-induced silencing complex ("RISC") and are split into two single siRNA strands. One of these strands stays with RISC and binds to any mRNA with a complementary sequence. If the wrong siRNA strand stays with RISC, it can bind to different mRNAs than the target mRNA and therefore inhibit translation of other proteins. This is called off-target effects and is one of the major barriers to developing effective siRNA medicines. Incorporating a single UNA into siRNA molecules can make one of the strands preferentially bind to RISC. This makes UNA-containing siRNA compounds more effective at preventing the translation of target proteins (gene silencing) and reduces the chances of off-target effects.

Arcturus owns a comprehensive suite of UNA technology patents for therapeutic and reagent use, enabling Arcturus to operate freely and to independently pursue RNA therapeutic candidates. Arcturus is also actively pursuing other novel chemistry technologies with the aim of overcoming the development and therapeutic challenges of RNA. Arcturus's goal is to expand its RNA technology portfolio and strengthen its ability to develop safer and more effective RNA therapeutic candidates.

Arcturus's Internal Development Programs

Arcturus is developing mRNA and siRNA therapeutic candidates to treat rare and global diseases through internal development programs and in partnerships with Ultragenyx, Takeda, Janssen and CFFT.

LUNAR-OTC

Arcturus's most advanced internal research program addresses OTC deficiency, a life-threatening genetic disease that affects approximately 1 in 60,000 people. OTC deficiency is the most common urea cycle disorder. A lack of the OTC enzyme in liver cells results in high blood ammonia levels, called hyperammonemia. This causes neurotoxicity and can lead to seizures, coma and death in untreated patients. There is no cure for OTC deficiency. Current standard of care aims to manage symptoms and control blood ammonia levels.

Arcturus's goal is to develop RNA medicines that enable OTC patients to make healthy functional OTC enzyme in their liver cells. Preclinical studies have shown that Arcturus's proprietary LUNAR technology safely and effectively delivers RNA to liver cells in animal models.

In preclinical proof of concept studies, Arcturus used its LUNAR delivery platform to target human OTC mRNA to the liver cells of a mouse model of hyperammonemia. This treatment induced the production of human OTC enzyme at normal/physiological levels in the liver cells of treated mice and normalized levels of two key clinical biomarkers: blood ammonia and urinary orotic acid.

Overview of OTC Deficiency

OTC deficiency is caused by mutations in the OTC gene which leads to a non-functional or deficient OTC enzyme. OTC is a critical enzyme in the urea cycle, which takes place in liver cells, and converts ammonia to urea. This conversion does not occur properly in patients with OTC deficiency and ammonia accumulates in their blood, acting as a neurotoxin and liver toxin. This can cause severe symptoms including vomiting, headaches, coma and death. OTC deficiency is an inherited disease that can cause developmental problems, seizures and death in newborn babies. It is an X-linked disorder, so is more common in boys. Patients with less severe symptoms may present later in life, as adults.

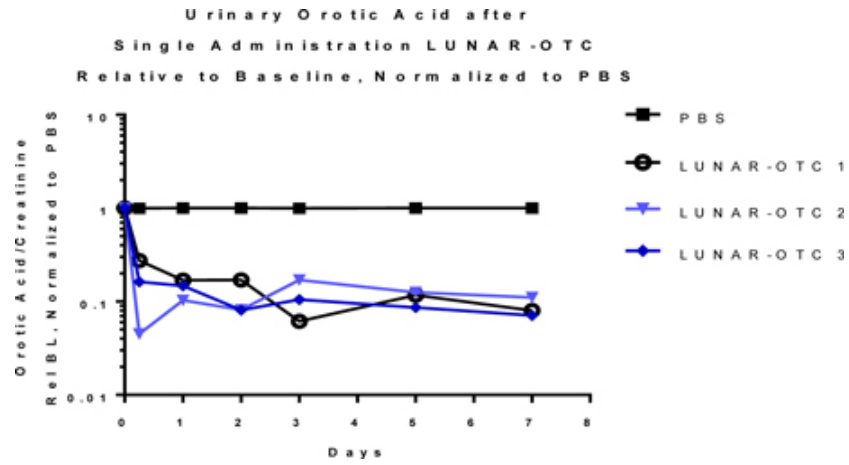
There is no current cure for OTC deficiency, apart from liver transplant. However, this treatment comes with significant risk of complications such as organ rejection. Transplant recipients must take immunosuppressant drugs for the rest of their lives. Current standard of care for OTC patients is a low-protein diet and drug treatment to try and prevent their bodies from accumulating ammonia. These treatments do not address the cause of the disease.

The LUNAR-OTC Solution

Patients with uncontrolled OTC deficiency have high levels of ammonia in their blood and orotic acid in their urine. In 2016, Arcturus's preclinical proof of concept studies showed that LUNAR-delivered human OTC mRNA can potentially reverse blood ammonia levels and urinary orotic acid levels in a well-established mouse model of hyperammonemia: *OTC-spf^{ash}* mice. Like human OTC deficiency patients, *OTC-spf^{ash}* mice have high levels of blood ammonia and urinary orotic acid.

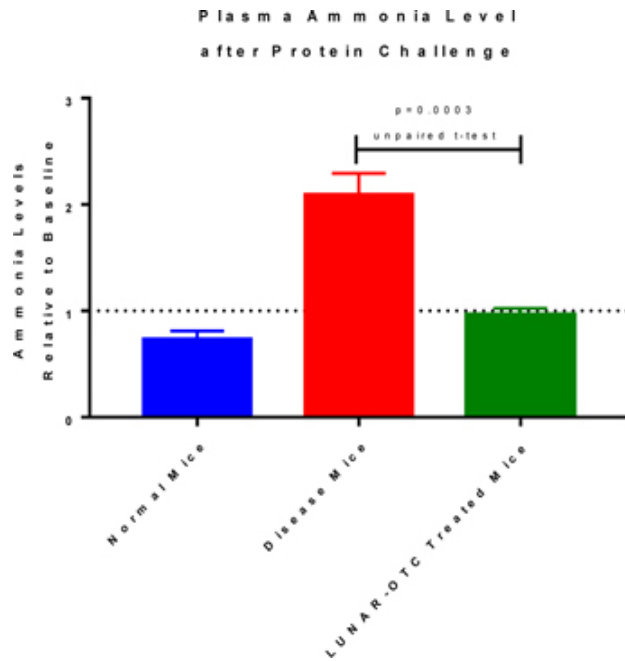
Arcturus treated *OTC-spf^{ash}* mice with one intravenous dose of LUNAR-encapsulated human OTC mRNA (three lead candidate mRNA sequences tested). As shown in the figure below, this single treatment significantly reduced urinary orotic acid levels for at least seven days post-treatment (n=4-6 animals per group).

Urinary orotate levels in *OTC-spf^{ash}* mice after a single dose administration of LUNAR-OTC



LUNAR-OTC treatment also restored plasma ammonia levels to wildtype levels as seen in the graph below. Blood was collected from *OTC-spf^{ash}* six hours post-treatment and plasma ammonia levels were evaluated (n=6 animals per group).

Plasma ammonia levels in *OTC-spf^{ash}* mice after a single dose administration of LUNAR-OTC



LUNAR-CF

Arcturus has received funding from CFFT to support its LUNAR-CF development program. CF is caused by mutations in the CFTR gene. Arcturus is using its LUNAR delivery platform to deliver normal CFTR mRNA into airway epithelial cells. This allows airway cells to produce functional CFTR protein using their native translational machinery and protein trafficking pathways.

This approach has the potential to treat the underlying defect that causes CF (dysfunctional or absent CFTR protein) in *all* such patients, regardless of mutation type.

Overview of CF

According to the National Institutes of Health, CF is the most common lethal genetic disease in the United States. Currently, more than 30,000 people are living with CF in the United States, 75,000 people worldwide, and approximately 1,000 people are newly diagnosed each year. There are 2,000 known mutations in the CFTR gene. These mutations affect the function of the CFTR protein. CFTR is an ion channel that controls chloride and sodium movement in-and-out of cells. When this channel is absent or dysfunctional, thick mucus can accumulate in airways and pancreatic ducts, which can cause coughing, chronic bacterial infections, inflammation, tissue scarring, digestive problems and other serious complications. The median age of death for a person with CF in the United States is 37 years, and the cause of death is usually lung damage.

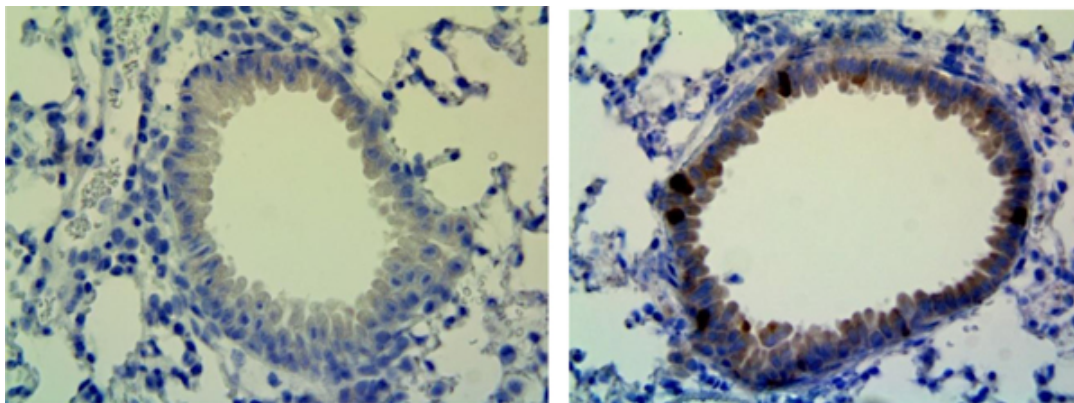
There are currently no FDA-approved drugs that can treat all 2,000 CFTR mutations. The FDA has approved two CFTR modulator therapies, Kalydeco[®] and Orkambi[®], to treat fewer than 40 CF-causing mutations. These drugs do not treat the underlying genetic cause of CF, but instead assist the mutant CFTR protein to reach the cell membrane and/or increase ion channel gating, thus increasing functional activity. For patients with other mutations, antibiotics and mucolytics are the primary standards of care. Many of these patients ultimately suffer from decreased lung function and require lung transplant.

Arcturus's LUNAR-CF Solution

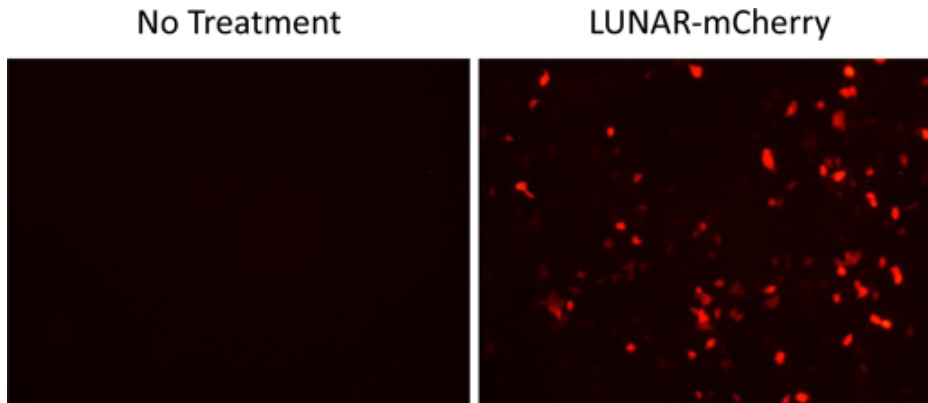
With the support of CFFT, Arcturus is developing an mRNA therapeutic to treat and prevent lung disease in CF patients. Arcturus's LUNAR-CF compound comprises normal CFTR mRNA encapsulated in its LUNAR delivery technology. This approach is a form of protein replacement therapy as it stimulates lung cells to produce normal CFTR protein.

Arcturus has completed preclinical proof of concept studies, demonstrating that LUNAR is able to deliver a functional reporter mRNA efficiently into mouse lung epithelial cells and into primary lung epithelial cells from CF patients grown at an air-liquid interface (see three figures below). In addition, Arcturus has restored CFTR function (chloride channel signaling) in a 3D culture system of human lung epithelial cells from CF patients after treatment with LUNAR-CF (data not shown).

Immunohistochemistry analysis of lungs from wildtype mice. Right panel shows GFP expression in bronchial epithelial cells six hours after treatment with a single dose of LUNAR-GFP mRNA by intratracheal administration.



Transfection efficiency of LUNAR-mCherry mRNA in polarized primary human bronchial epithelial cells grown at air-liquid interface. Cells were isolated from a CF patient with two copies of the F508del mutation, and images were acquired 48 hours after a single treatment.



These preclinical proof of concept studies show the potential of LUNAR-CF to treat CF. With access to additional expertise as part of Arcturus's ongoing collaboration with CFFT, Arcturus is in the process of completing the preclinical activities required to select a drug candidate for clinical trials.

LUNAR-TTR

Arcturus is developing novel siRNA drug candidates to treat the genetic cause of ATTR. siRNA can be used to target any mutation in the transthyretin (“**TTR**”) gene. Preclinical studies in non-human primates show that Arcturus's siRNA compounds can potentially be safely delivered to liver cells using its LUNAR delivery platform and that a single dose of LUNAR-TTR can lower serum TTR levels for up to thirty days.

Overview of ATTR

ATTR is an inherited genetic disease caused by over 125 different mutations in the TTR gene. It is an autosomal dominant condition, so one copy of a mutated TTR gene is sufficient to cause the disease. In ATTR patients, mutant TTR protein can form into amyloid deposits that build up in the nervous system, heart, kidneys and gastrointestinal tract. Specific symptoms and symptom severity are different for each mutation and depend on which organs accumulate amyloid. Patients with ATTR can have severe heart and neurological problems including heart failure, muscle weakness and wasting and weight loss.

The incidence of ATTR varies in populations around the world. It affects 1 in 538 people in northern Portugal, 3% to 4% of African Americans, 1 in 100,000 Americans of European descent, and 5% of people in parts of West Africa.

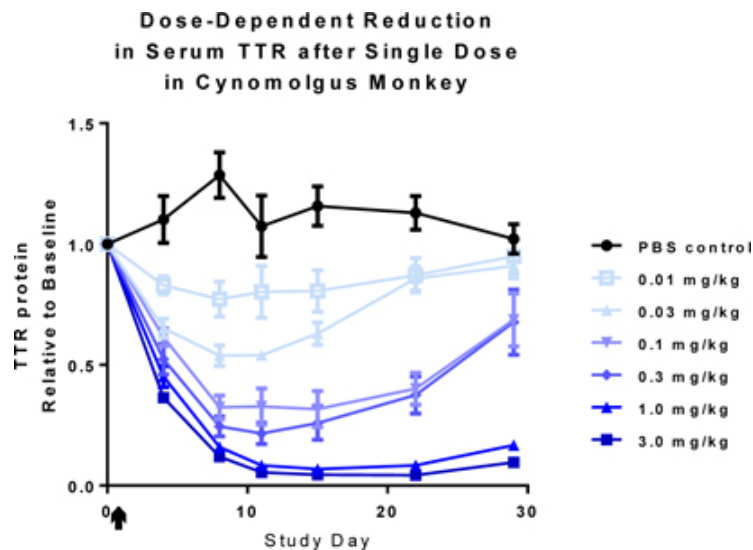
There are currently no FDA-approved drugs to treat ATTR. ATTR patients are currently treated with supportive care that alleviates symptoms, and by liver and heart transplants. Liver transplants act as a form of gene therapy because donor's livers produce normal TTR. However, this treatment carries significant risks such as organ failure and organ recipients must take immune suppressant drugs long-term.

Arcturus's LUNAR-TTR Solution

Over 95% of the TTR protein is formed in the liver and then secreted into the bloodstream. Arcturus aims to use novel siRNAs to inhibit mutant TTR protein production in liver cells of ATTR patients. Arcturus's LUNAR delivery technology can deliver siRNA specifically to liver cells. Once inside liver cells, TTR siRNA works by activating the natural RISC machinery to degrade TTR mRNA. This prevents the mutant TTR protein from being produced and secreted into the bloodstream where it can travel to other organs.

Arcturus performed preclinical safety and efficacy testing in non-human primates. These studies showed safety up to doses of 30 mg/kg and one-month duration of action at a dose level of less than 1mg/kg (n=3 animals per group, see figure below), indicating a high therapeutic index. Arcturus is actively pursuing partnership opportunities to complete IND-enabling studies and help initiate clinical studies.

Serum TTR protein levels in non-human primates after a single dose of LUNAR-TTR



LUNAR-RLD

Arcturus aims to achieve functional correction of rare diseases using its proprietary LUNAR-delivered RNA therapeutic candidates. To accomplish this goal, Arcturus has prioritized a list of serious disorders of the gastrointestinal system. All have significant unmet medical needs and few treatment options are available to patients. Arcturus will use its LUNAR delivery platform to deliver normal mRNA into target cells of interest, allowing these cells to produce functional protein using their native translational machinery and protein trafficking pathways.

Arcturus's LUNAR-RLD Solution

Arcturus is now developing an mRNA medicine for an undisclosed severe liver disease that affects infants and children. This disease is genetic and is one of a family of related diseases with similar clinical presentations. Current treatment options can improve symptoms, but there is no currently available drug to treat the genetic cause of this disease.

This program is now at the lead candidate identification stage, and studies in preclinical models of disease are ongoing to determine efficacy and duration of activity.

External Partnered Development Programs

In addition to Arcturus's internal development programs, Arcturus has three external development partnerships. Arcturus is collaborating with Ultragenyx to develop mRNA therapeutic candidates for rare disease targets, with Takeda to develop RNA therapeutic candidates for NASH and other gastrointestinal disorders, and with Janssen to develop nucleic acid-based candidates for HBV and potentially other infectious or respiratory diseases. Arcturus also receives funding from CFFT to support Arcturus's LUNAR-CF development program described above.

Ultragenyx Partnership

In October 2015, Arcturus entered into a research collaboration and license agreement with Ultragenyx to discover and develop mRNA therapeutic candidates for certain rare disease targets. In this collaboration, Arcturus is exploiting the versatility of its proprietary LUNAR lipid-mediated delivery platform and UNA oligomer chemistry to design and optimize mRNA compounds for two rare disease targets. Ultragenyx has the option to add up to eight additional rare disease targets during the collaborative research period. All products under the collaboration will be developed and commercialized by Ultragenyx. Arcturus will be entitled to preclinical, clinical, regulatory, and sales milestone payments of up to \$156 million for each target, as well as reimbursement of all research expenses and mid-single to low double-digit royalties on commercial sales.

Takeda Partnership

In December 2016, Arcturus partnered with Takeda to develop RNA-based therapeutic candidates for the treatment of NASH and other GI-related disorders, utilizing Arcturus's wholly-owned therapeutic delivery platform, LUNAR, and UNA oligomer chemistry.

Overview of NASH

NASH is a disorder characterized by fat accumulation in the liver that causes inflammation and damage to liver cells. The fibrosis and scarring associated with NASH can progress to cirrhosis and liver cancer. NASH is the most serious form of nonalcoholic fatty liver disease (“**NAFLD**”). NAFLD is similar to the liver disease seen due to alcohol abuse but occurs in people who do not consume significant amounts of alcohol. NAFLD is the most common liver disease in the world, affecting approximately 20% of the U.S. population and 75-90% of morbidly obese people in the U.S. NASH affects 3.5-5% of Americans. NASH, and all forms of NAFLD, are associated with obesity, insulin resistance, and type 2 diabetes. As the number of patients with these disorders continues to rise, the prevalence of NASH is also predicted to increase, and it is likely to become the leading cause of end-stage liver disease, liver transplant and hepatocellular carcinoma in the next two decades.

The cause of NASH is not completely understood. Both genetic and environmental factors have been shown to contribute to disease progression. Epidemiological and twin studies have also shown that it is a heritable condition but the exact genetic causes are unknown. A number of genetic variations are associated with an increased risk of developing NAFLD and NASH, including variants in genes involved in oxidative stress, insulin signaling and fibrogenesis.

There are currently no FDA-approved drugs to treat NASH. Doctors currently recommend weight loss and increased exercise to control fat deposition, fibrosis and inflammation in the liver. Takeda and Arcturus are collaborating to develop RNA-based therapeutic candidates to treat NASH, and current program activities include lead candidate identification and duration of action studies in various models of disease.

Janssen Partnership

In October 2017, Arcturus entered into a partnership agreement with Janssen, a Johnson & Johnson company, to develop and commercialize nucleic acid-based drug products for the treatment of specified diseases, including HBV, using Arcturus’s LUNAR lipid-mediated delivery platform and UNA oligomer chemistry. Under the agreement, facilitated by J&J Innovation, Arcturus received an upfront cash payment and will receive R&D support, as well as pre-clinical, development, and sales milestone payments, and royalty payments on any future licensed product sales. Janssen will assume responsibility for development costs and all commercialization costs associated with the program.

Overview of HBV

HBV is transmitted by bodily fluids including blood. The virus can survive for at least seven days outside the body and still cause infection. When a patient is infected with HBV, the virus enters liver cells where it can continue to replicate if it is not cleared by the immune system. This happens in 30% to 50% of infected children and 5% of infected adults. Between 20% and 30% of chronically infected adults develop serious complications such as cirrhosis and liver cancer. There is an effective vaccine available for HBV, which contributed to a 75% drop in acute HBV cases in the U.S. between 1990 and 2004. However, a similar drop has not been seen in chronic cases, and the disease still causes over 880,000 deaths worldwide each year.

HBV is diagnosed by the presence of the HBV surface antigen (“**HBsAg**”) in patient blood. HBsAg can suppress the immune system and promote cancer formation in chronically infected people. Chronic HBsAg carriers are 10 times more likely to develop hepatocellular carcinoma, a form of liver cancer, than the general uninfected population.

There is currently no specific treatment or cure for patients with acute HBV. These patients are given supportive treatment to manage symptoms and to replace fluid and nutrients lost from vomiting and diarrhea. There is also no current cure for chronic HBV. The disease is managed with antiviral medication (interferons or polymerase inhibitors) to delay the development of cirrhosis and liver cancer. In most cases of chronic HBV, antiviral medication suppresses the virus, but does not clear it completely. Once a patient is treated with polymerase inhibitors, these medications are usually taken for life.

Intellectual Property

Arcturus's business success depends in part on Arcturus's ability to obtain and maintain intellectual property protection for its proprietary technologies, inventions and know-how, and on its ability to operate without infringing on the proprietary rights of others. Arcturus strives to protect its intellectual property through a combination of patents, trademarks, trade secrets, licensing agreements and confidentiality agreements with employees, advisors, consultants and contractors.

Arcturus relies on continuing technological innovation to strengthen its proprietary position in the field of RNA medicines. Therefore, Arcturus plans to continue to file patent applications in jurisdictions around the world as Arcturus discovers and develops novel RNA technology platforms and novel RNA therapeutic candidates. Arcturus cannot guarantee that future applications will be issued.

Arcturus's Patent Portfolio

As of September 30, 2017, Arcturus is the sole owner of 120 patents and pending patent applications including 12 U.S. patents, 14 pending U.S. patent applications, 38 foreign patents and 58 pending foreign patent applications. The claims of these patents and pending applications include compositions of matter, methods of use and drug product formulations. These claims cover the use of Arcturus's core platform technologies including the use of LUNAR and lipid components to deliver RNA and the use of UNA oligomers for therapeutics. Claims also cover the composition of matter and use of Arcturus's therapeutic candidates to treat target diseases including ATTR, amyloidosis and HBV. Arcturus's issued patents are expected to expire between 2028 and 2037, without taking into account any possible patent term extensions.

Arcturus's patent portfolio includes the following patents and pending patent applications for LUNAR, UNA and LNA:

- LUNAR – As of September 30, 2017, Arcturus owns seven U.S. patents, five U.S. pending patent applications and 21 foreign pending patent applications covering the composition of matter and use of Arcturus's LUNAR technology for RNA delivery and drug delivery.
- UNA – As of September 30, 2017, Arcturus owns five U.S. patents, eight U.S. pending patent applications, 38 foreign patents and 30 foreign pending patent applications covering the use of UNA oligomers for therapeutics, methods and uses for therapeutic oligomers and the composition and use of UNA oligomers to target transthyretin, HBV and CF transmembrane conductance regulator, and the use of UNA oligomers to treat amyloidosis.
- LNA – As of September 30, 2017, Arcturus has one pending patent application in the U.S. and seven pending foreign patent applications covering the composition of matter of novel locked nucleomonomer agents.

Patent Terms

The term of individual patents depends on the countries in which they are obtained. The patent term is 20 years from the earliest date of filing a non-provisional patent application in most of the countries in which Arcturus files.

Under the Drug Price Competition and Patent Term Restoration Act (also known as the Hatch-Waxman Act), U.S. patent holders can apply for a patent term extension to compensate for the patent term lost during the FDA regulatory review process. Patent extension is only available for patents covering FDA-approved drugs. The extension can be up to five years beyond the original expiration date of the patent and cannot extend a patent term for longer than 14 years from the date of product approval. Only one patent extension is granted per approved drug. Similar provisions may be available in foreign jurisdictions including Europe. Arcturus intends to apply for patent term extensions where possible.

Liquidity and Capital Resources

Since Arcturus's inception, it has funded its operations primarily through upfront payments, research funding and milestones from its strategic alliances and collaborations, and through the sale of its equity and convertible securities.

As of December 31, 2016 and June 30, 2017, Arcturus had \$8.3 million and \$10.1 million of cash and cash equivalents, respectively, and no long-term debt. Immediately following the closing of the Transaction, the combined company is estimated to have approximately \$40 million of cash and cash equivalents and no long-term debt. The combined company's cash and cash equivalents balance is expected to increase in connection with the Janssen partnership agreement that was recently entered into. Arcturus's cash equivalents are short-term, highly liquid investments that are readily convertible into cash with original maturities of three months or less. Arcturus's cash equivalents are deposited in major banks in the United States, and Arcturus's management believes that the financial institutions that hold these investments are financially sound and, accordingly, that minimal risk exists with respect to them.

The combined company's capital resources are intended to be used primarily to fund the research and development of the product candidates in the combined company's pipeline and for working capital and general corporate purposes. The combined company's capital resources at the closing of the Transaction are expected to be sufficient to fund the combined company's business through multiple value creation milestones and into early clinical development.

The estimated balances in this section may differ from what will be reflected in the financial statements of the combined company in future periods.

Employees

As of September 30, 2017, Arcturus had 51 total employees: 49 full-time employees, 41 of whom were engaged in full-time research and development activities and eight of whom were engaged in general administration, and two part-time employees. None of Arcturus's employees are represented by any collective bargaining unit. Arcturus believes that it maintains good relations with its employees.

Properties

Arcturus currently leases office and laboratory space in San Diego, CA, which consists of approximately 10,400 square feet. The term of the current lease for Arcturus's office and laboratory facility commenced on November 1, 2014, and extends through February 28, 2018. On October 4, 2017 Arcturus entered into a new lease for approximately 24,700 square feet of office and laboratory space and concurrently amended Arcturus's existing lease to allow for early termination upon commencement of the new lease. The term of the new lease is for seven years. Arcturus anticipates moving into the new facility in early 2018. Rent expense for the year ended December 31, 2016 was approximately \$405,000. Aggregate minimum payments under Arcturus's leases are approximately \$410,000 for calendar year 2017.

Arcturus believes that its existing facilities, together with the facilities subject to the new lease, are adequate for its current needs and that suitable additional space will be available as and when needed.

Legal Proceedings

Arcturus is not currently a party to any material legal proceedings.

Management Following the Merger

Executive Officers and Directors

Termination of Current Executive Officers and Directors of Alcobra

The employment of the current executive officers of Alcobra is expected to be terminated immediately prior to the completion of the Transaction. In addition, the current directors of Alcobra will be resigning immediately prior to the completion of the Transaction, except for Ms. Tori and Mr. Geffken, as noted below.

Executive Officers and Directors of the Combined Company Following the Merger

The following table lists the names and ages as of September 30, 2017, and positions of the individuals who are expected to serve as executive officers and directors of the combined company upon completion of the Transaction:

Name	Age	Position(s)
<i>Executive Officers</i>		
Joseph E. Payne	45	President, Chief Executive Officer and Director
Padmanabh Chivukula, Ph.D.	38	Chief Scientific Officer and Chief Operating Officer
<i>Non-Employee Directors</i>		
Stuart Collinson, Ph.D.	57	Executive Chairman of the Board
Craig Willett ⁽¹⁾⁽²⁾⁽³⁾	57	Director
David Shapiro, M.D. ⁽¹⁾⁽²⁾⁽³⁾	63	Director
Orli Tori ⁽¹⁾	53	Director
Daniel E. Geffken ⁽¹⁾⁽²⁾⁽³⁾	60	Director

(1) Indicates independent director under NASDAQ rules.

(2) Member of the Audit Committee upon completion of the Transaction.

(3) Member of the Compensation Committee upon completion of the Transaction.

Executive Officers

Joseph E. Payne serves as President and Chief Executive Officer of Arcturus. He has served on Arcturus's board of directors since March 2013. Prior to joining Arcturus, Mr. Payne served as Senior Manager of Nitto Denko Corporation, a life sciences research company, from June 2009 until February 2013. Mr. Payne's background includes over 20 years of drug discovery experience at Arcturus, Nitto Denko Corporation, Kalypsys Inc., Merck Research Labs, Bristol-Myers Squibb Co. and DuPont Pharmaceuticals Co. Mr. Payne received a Bachelor's Degree in Chemistry, *magna cum laude* from Brigham Young University, a Master of Science in Synthetic Organic Chemistry from the University of Calgary and an Executive Training Certificate from MIT Sloan School of Management.

Padmanabh Chivukula, Ph.D. serves as Chief Scientific Officer and Chief Operating Officer of Arcturus. He has served on Arcturus's board of directors since March 2013. Prior to Arcturus, from June 2008 until February 2013, Dr. Chivukula was employed by Nitto Denko Corporation, where his titles included Group Leader and Chief Scientist, and where he led the polymeric RNAi research department. Dr. Chivukula's background includes over 15 years of experience in drug delivery and therapeutic drug development at Nitto Denko Corporation and the University of Utah. Dr. Chivukula has a Ph.D. in Pharmaceutical Chemistry from the University of Utah where he specialized in nanoparticle technology.

Stuart Collinson, Ph.D. has served on Arcturus's board of directors since May 2014 and has served as Executive Chairman since January 2015. Dr. Collinson is currently a partner at Forward Ventures, a position he has held since 2002, the Executive Chairman of Tioga Pharmaceuticals, Inc., a private clinical stage pharmaceutical company, a position he has held since 2005, a director of Soleno Therapeutics, Inc., a public pharmaceutical company, a position he has held since March 2017, and an advisor to ZoBio, B.V., a position he has held since 2001. Previously he was Chairman, Chief Executive Officer and President of Aurora Biosciences Corp. (acquired by Vertex Pharmaceuticals Inc.), a public biotechnology company, from 1999 to 2001. Before Aurora, Dr. Collinson was Chief Executive Officer of Andaris Limited (acquired by Quadrant, now part of Perrigo), a private biotechnology company, in 1998. He held senior management positions at GlaxoWellcome plc (now GlaxoSmithKline plc) from 1994 until 1998 and Baxter International Inc. from 1989 to 1994, and was a consultant with The Boston Consulting Group from 1985 to 1987. Dr. Collinson was previously a director of Essentialis Inc. (acquired by Capnia, Inc., now Soleno Therapeutics, Inc.) from 2005 to March 2017, Affinium Pharmaceuticals, Inc. (acquired by Debiopharma Group) from 2007 to February 2014, Cabrellis Pharmaceuticals Corp. (acquired by Pharmion Corp., now part of Celgene Corp.) in 2006, Conforma Therapeutics Corp. (acquired by BiogenIdec, Inc.) from 2002 to 2006, GeneOhm Sciences, Inc. (acquired by Becton, Dickinson and Company) from 2001 to 2006, NovaCardia, Inc. (acquired by Merck & Co, Inc.) from 2003 to 2007, Proprius Pharmaceuticals, Inc. (acquired by Cypress Bioscience, Inc.) from 2007 to 2008, and Vertex Pharmaceuticals Inc. from 2002 to 2011. Dr. Collinson received an M.B.A. from Harvard Business School and a D.Phil. (Ph.D.) in Physical Chemistry from the University of Oxford.

Craig Willett has served on Arcturus's board of directors since March 2013. He is the President and CEO of Elizann, Inc., a company providing start-up coaching services to entrepreneurs and financial restructuring and improvement services to growth stage businesses, a position which he has held since September 1999. He is the past President and CEO of UTAZ Development Corporation, a real estate development company, a position which he held from August 1994 until December 2013. In September 1997, Mr. Willett founded Willett and Richards, CPA, LLC (formerly known as Craig Willett, CPA), an accounting firm specializing in business and real estate tax issues. Craig was also a founding director of Capital Community Bank, where he served in that capacity from April 1995 until December 2002. Mr. Willett served as a delegate to the White House Conference on Small Business in 1994. Mr. Willett also served as a member of the board of directors of Wing Enterprises, Inc., creators of the Little Giant Ladder system, from January 1994 until January 2002. Mr. Willett is a real estate broker and CPA and holds bachelor's and master's degrees in accounting from Brigham Young University.

David Shapiro, M.D. currently serves as the chief medical officer and executive vice president, development of Intercept Pharmaceuticals, Inc., a public pharmaceutical company, a position he has held since 2008. He has over 25 years of clinical development experience in the pharmaceutical industry. Dr. Shapiro founded a consulting company, Integrated Quality Resources, that focused on development stage biopharmaceutical companies and was active in this role from 2005 to 2008. From 2000 to 2005, Dr. Shapiro was executive vice president, medical affairs and chief medical officer of Idun Pharmaceuticals, Inc., prior to its acquisition by Pfizer Inc. From 1995 to 1998, he was president of the Scripps Medical Research Center at Scripps Clinic. He also served as vice president, clinical research at Gensia Pharmaceuticals, Inc. and as director and group leader, hypertension clinical research at Merck Research Laboratories from 1985 to 1990. Dr. Shapiro has authored more than 20 peer-reviewed publications and organized and chaired several conferences aimed at improving product development. Dr. Shapiro served on the board of directors of Altair Therapeutics, Inc. from 2008 to 2010 and served for two terms on the Executive Committee of the Board of the American Academy of Pharmaceutical Physicians, from 1997 to 2000 and from 2004 to 2005. He is an elected Fellow of both the Royal College of Physicians of London and the Faculty of Pharmaceutical Physicians of the United Kingdom. He received his medical degree from Dundee University & Medical School, and undertook his postgraduate medical training in the university affiliated hospitals in Oxford, United Kingdom and the University of Vermont.

Orli Tori has served on Alcobra's Board since August 2016. Ms. Tori currently serves as a member of the Audit Committee. Ms. Tori is an executive consultant to leading IP and life science companies. From 2012 until 2017, she served as Chief Executive Officer of BIRAD Ltd., managing Bar Ilan University's IP and commercialization efforts as well as all research collaborations with industry partners. During her tenure, the company built a wide portfolio of companies based on University IP. Before joining BIRAD, Ms. Tori spent 20 years in the pharmaceutical industry, serving in different positions including General Manager of Neopharm Israel Ltd. from 2007 through 2012, and SVP Corporate BD of the Neopharm Group from 2003 through 2006, where she was responsible for the group's overall corporate development activities, including structuring, negotiating and closing transactions. Ms. Tori is a former chairperson of the Israeli Technology Transfer Organization. Ms. Tori obtained her M.Sc. in Microbiology, cum laude and B.Sc. in Life Sciences at Tel Aviv University in Tel Aviv, Israel, and graduated from the Executive Program for Senior Business Managers at the Tel Aviv University School of Business.

Daniel E. Geffken has served on Alcobra's Board since May 2013. Since October 2011, he has been Managing Director of Danforth Advisors, LLC, a management consulting firm that provides financial and strategic support to emerging life science companies. Mr. Geffken has also been the chief financial officer or chief operating officer of eight companies, four of which were U.S. public reporting companies and six of which were life science companies. He has a B.S. in Economics from The Wharton School, University of Pennsylvania, and an M.B.A. from Harvard Business School.

Board of Directors of the Combined Company Following the Merger

Unless otherwise noted herein, and except for the composition of the Board of the combined company and its committees, the practices of Alcobra's Board and its committees will remain unchanged for the combined company immediately following the closing of the Transaction. Please refer to "Board practices" in Part I, Item 6.C of Alcobra's Annual Report on Form 20-F for the year ended December 31, 2016 for a more detailed description of such practices.

Board of Directors

Under the Articles, the Board must consist of at least five and not more than eleven directors. Immediately following the closing of the Transaction, the Board of the combined company will be composed of seven members, consisting of (i) Craig Willet, Stuart Collinson, Ph.D., Joseph Payne and Padmanabh Chivukula, Ph.D., each designated by Arcturus, (ii) Mr. Daniel Geffken, and Ms. Orli Tori, both currently serving on the Board, and David Shapiro, M.D., each designated by Alcobra. Because Alcobra directors may be elected only at the annual shareholders meeting of the Alcobra, the new directors of the Board of the combined company will be nominated, effective immediately after the closing of the Transaction, by the existing Board of Alcobra and will serve until the next annual shareholders meeting of the combined company, subject to the provisions of the Articles.

Under the Companies Law, the Board must determine the minimum number of directors who are required to have accounting and financial expertise. Under applicable regulations, a director with accounting and financial expertise is a director who, by reason of his or her education, professional experience and skill, has a high level of proficiency in and understanding of business accounting matters and financial statements, sufficient to be able to thoroughly comprehend the financial statements of the combined company and initiate debate regarding the manner in which financial information is presented. In determining the number of directors required to have such expertise, the Board must consider, among other things, the type and size of the combined company and the scope and complexity of its operations. The existing Board of Alcobra has determined that the combined company will require one director with such expertise, and that Mr. Willett has such accounting and financial expertise.

External Directors

Under the Companies Law, except as provided below, companies incorporated under the laws of the State of Israel that are publicly traded, including Israeli companies with shares listed on the NASDAQ, are required to appoint at least two external directors, who meet the qualifications requirements set forth in the Companies Law.

The definitions of an external director under the Companies Law and independent director under the Listing Rules of NASDAQ are similar such that it would generally be expected that the two external directors will also comply with the independence requirement under the Listing Rules of NASDAQ.

Pursuant to regulations under the Companies Law, the board of directors of a company such as the combined company is not required to have external directors if: (i) the company does not have a controlling shareholder (as such term is defined in the Companies Law); (ii) a majority of the directors serving on the board of directors are “independent,” as defined under NASDAQ Listing Rule 5605(a)(2); and (iii) the company complies with the NASDAQ Listing Rules as to the required composition of the audit and compensation committees of the Board (which require that such committees consist solely of independent directors (at least three and two members, respectively), as described under the NASDAQ Listing Rules. The combined company is expected to meet all of these requirements. On June 7, 2016, the Board resolved to adopt the corporate governance exemption set forth above, and, because the combined company will continue to comply with the conditions for such exemption as described above following completion of the Transaction, the combined company will not have external directors as members of the Board of the combined company.

Leadership Structure of the Board

In accordance with the Companies Law and the Articles, the Board is required to appoint one of its members to serve as Chairman of the Board. The existing Board of Alcobra will appoint Dr. Collinson to serve as Executive Chairman of the Board of the combined company.

Audit Committee

Under the Listing Rules of NASDAQ, the combined company will be required to maintain an audit committee consisting of at least three independent directors, all of whom are financially literate and one of whom has accounting or related financial management expertise.

Immediately following the closing of the Transaction, the audit committee of the combined company (the “**Audit Committee**”) will consist of Mr. Willett, who will serve as the chairperson of the Audit Committee, Mr. Geffken and Dr. Shapiro, all of whom are independent under the listing standards of the Listing Rules of NASDAQ. The existing Board of Alcobra has determined that Mr. Willett is an audit committee financial expert as defined by the SEC rules and has the requisite financial sophistication as defined by the Listing Rules of NASDAQ. All of the members of the Audit Committee meet the requirements for financial literacy under the applicable Listing Rules of NASDAQ.

Each member of the Audit Committee is required to be “independent” as such term is defined in Rule 10A-3(b)(1) under the Exchange Act.

Compensation Committee

Under the Listing Rules of NASDAQ, the combined company will be required to maintain a compensation committee consisting entirely of independent directors (or the determination of such compensation solely by the independent members of the Board of the combined company).

Immediately following the closing of the Transaction, the compensation committee of the combined company (the “**Compensation Committee**”) will consist of Mr. Geffken, who will serve as the chairperson of the Compensation Committee, Mr. Willett and Dr. Shapiro, all of whom are independent under the listing standards of the Listing Rules of NASDAQ.

Principal Shareholders of Combined Company

The following table and the related notes present information on the beneficial ownership of Ordinary Shares of the combined company by:

- each shareholder known by us that will beneficially own more than 5% of the combined company's outstanding Ordinary Shares upon the closing of the Transaction;
- each prospective director of the combined company;
- each prospective executive officer of the combined company; and
- all of the combined company's prospective directors and executive officers as a group.

Beneficial ownership is determined in accordance with the rules of the SEC and includes voting or investment power with respect to the securities. The number of Ordinary Shares beneficially owned and the percentage of Ordinary Shares beneficially owned assumes, in each case, the consummation of the Transaction, for a total of approximately 9,692,239 Ordinary Shares issued and outstanding immediately following the consummation of the Transaction after giving effect to the proposed reverse share split described in Item No. 1.

Ordinary Shares of the combined company that may be acquired by an individual or group within 60 days of September 30, 2017, pursuant to the exercise of options or warrants or the conversion of a security, are deemed outstanding for the purposes of computing the percentage of Ordinary Shares beneficially owned by such individual or group, but are not deemed outstanding for purposes of computing the percentage of Ordinary Shares beneficially owned by any other individual or group shown in the table. The table below also gives effect to the proposed reverse share split described in Item No. 1.

Beneficial Owner	Number of Ordinary Shares Beneficially Owned	Percentage of Ordinary Shares Beneficially Owned
<i>Alcobra's 5% or Greater Stockholders</i>		
Exodus Capital L.P., Exodus Management Israel Ltd. and their affiliates ⁽¹⁾	650,608	6.7%
Franklin Resources, Inc., Charles B. Johnson, Rupert H. Johnson, Jr., Franklin Advisers, Inc. ⁽²⁾	639,643	6.6%
<i>Arcturus's 5% or Greater Stockholders</i>		
Bradley T. Sorenson ⁽³⁾	504,695	5.2%
<i>Prospective Directors and Executive Officers</i>		
Joseph E. Payne ⁽⁴⁾	1,271,000	13.1%
Padmanabh Chivukula, Ph.D. ⁽⁵⁾	635,500	6.6%
Craig Willett ⁽⁶⁾	751,551	7.8%
Stuart Collinson, Ph.D. ⁽⁷⁾	143,039	1.5%
Daniel Geffken	*	*
Orli Tori	*	*
David Shapiro, M.D.	–	*
All of the combined company's prospective directors and executive officers as a group (7 persons)	2,815,376	29%

* Less than 1%.

- (1) Based solely on an Amendment 6 to Schedule 13D filed with the SEC July 3, 2017, and which reflects holdings as of June 12, 2017.
- (2) Based solely on an Amendment 1 to Schedule 13G filed with the SEC November 9, 2016, and which reflects holdings as of October 31, 2016.
- (3) Consists of: (i) 1,000,000 shares of Arcturus's Common Stock, which represent 254,200 Ordinary Shares of the combined company, (ii) 770,835 shares of Arcturus's SSP Stock, which represent 195,946 Ordinary Shares of the combined company, (iii) 73,655 shares of Arcturus's Series A Preferred Stock, which represent 18,723 Ordinary Shares of the combined company, (iv) 125,000 shares of Arcturus's Common Stock issuable upon the exercise of a warrant, which represent 31,775 Ordinary Shares of the combined company and (v) 15,938 shares issuable upon the exercise of an option, which represent 4,051 Ordinary Shares of the combined company.
- (4) Consists of 5,000,000 shares of Arcturus's Common Stock held directly by Mr. Payne, which represent 1,271,000 Ordinary Shares of the combined company, certain of which are subject to an option to repurchase in favor of Arcturus.
- (5) Consists of 2,500,000 shares of Arcturus's Common Stock held directly by Dr. Chivukula, which represent 635,500 Ordinary Shares of the combined company, certain of which are subject to an option to repurchase in favor of Arcturus.
- (6) Consists of (i) 369,539 shares of Arcturus's Common Stock held directly by Mr. Willett, which represent 93,937 Ordinary Shares of the combined company, certain of which are subject to an option to repurchase in favor of Arcturus, (ii) 833,335 shares of Arcturus's SSP Stock held by DUR Holdings, LC, which represent 211,834 Ordinary Shares of the combined company, (iii) 125,000 shares of Arcturus's Common Stock issuable upon the exercise of a warrant held by DUR Holdings, LC, which represent 31,775 Ordinary Shares of the combined company, (iv) 833,335 shares of Arcturus's SSP Stock held by Phoenician Enterprises, Ltd., which represent 211,834 Ordinary Shares of the combined company, (v) 125,000 shares of Arcturus's Common Stock issuable upon the exercise of a warrant held by Phoenician Enterprises, Ltd., which represent 31,775 Ordinary Shares of the combined company, (vi) 45,324 shares of Arcturus's Common Stock issuable upon the conversion of a convertible promissory note held by Phoenician Enterprises, Ltd., which represent 11,521 Ordinary Shares of the combined company and (vii) 625,000 shares of Arcturus's Series A Preferred Stock held by 6-W Discretionary Trust (the "6-W Trust"), which represent 158,875 Ordinary Shares of the combined company.
- (7) Consists of (i) 516,527 shares of Arcturus's Common Stock, which represent 131,301 Ordinary Shares of the combined company, certain of which are subject to an option to repurchase in favor of Arcturus, (ii) 9,023 shares of Arcturus's Common Stock issuable upon the conversion of a convertible promissory note upon the closing of the merger transaction, and which represent 2,294 Ordinary Shares of the combined company and (iii) 37,154 shares of Arcturus's Common Stock issuable upon the exercise of an option, which represent 9,444 Ordinary Shares of the combined company.

Where You Can Find More Information; Incorporation by Reference

We file reports and other information with the SEC under the Exchange Act. You may read and copy this information at the SEC's public reference room located at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. For further information concerning the SEC's public reference room, you may call the SEC at 1-800-SEC-0330. Our SEC filings are also available to the public from commercial document retrieval services and on the internet at the website maintained by the SEC at sec.gov.

Our Annual Report on Form 20-F for the fiscal year ended December 31, 2016 is incorporated herein by reference and contains a detailed description of our business, and certain risk factors in connection with the purchase or retention of Ordinary Shares. In addition, our report on Form 6-K filed on September 28, 2017 (Report Number 2) is incorporated herein by reference.

Alcobra shareholders who would like additional copies, without charge, of this proxy statement or if such shareholders have questions about the merger, including the procedures for voting Alcobra shares, should contact Alcobra's proxy solicitor:

Morrow Sodali
470 West Avenue
Stamford CT, 06902

Banks and Brokerage Firms Call: (203) 658-9400
Shareholders Call Toll Free: (800) 662-5200
E-mail: adhd@morrowsodali.com

Annex A

Opinion of Financial Advisor



Strictly Confidential

September 27, 2017

Board of Directors, Alcobra Ltd.
Attn: Yaron Daniely Ph.D. MBA
Chairman
Azrieli Triangle Building, 39th Floor
132 Derech Menachem Begin
Tel Aviv 6701101 Israel

Members of the Board of Directors:

We have been advised that Alcobra Ltd., an Israeli corporation (“Alcobra” or the “Company”), proposes to enter into an Agreement and Plan of Merger and Reorganization, expected to be dated as of September 27, 2017 (the “Agreement”), by and among the Company, Aleph MergerSub, Inc., a Delaware corporation and a wholly owned subsidiary of Alcobra (“Merger Sub”) and Arcturus Therapeutics, Inc., a Delaware corporation (“Arcturus Therapeutics”). Pursuant to the Agreement, upon the closing of the Merger, Merger Sub will be merged with and into Arcturus Therapeutics, with Arcturus Therapeutics continuing as the surviving corporation (the “Merger”). We further understand that as a result of the Merger, Arcturus Therapeutics will become a wholly owned subsidiary of Alcobra and each share of common stock of Arcturus Therapeutics outstanding immediately prior to the Merger (the “Arcturus Therapeutics Shares”) will be converted into the right to receive a number of ordinary shares of Alcobra equal to the Exchange Ratio of 0.2542 such that, following the consummation of the Merger, the holders of Arcturus Therapeutics Shares (including the holders of any unexercised options to purchase Arcturus Therapeutics Shares) immediately prior to the Merger shall hold approximately 60% of the fully diluted shares of Alcobra ordinary shares outstanding immediately following the Merger and the holders of ordinary shares immediately prior to the Merger shall hold approximately 40% of the fully diluted shares of Alcobra ordinary shares outstanding immediately following the Merger. The terms and conditions of the Merger are more fully set forth in the Agreement and capitalized terms used but not defined herein shall have the meanings ascribed to such terms in the Agreement.

In your capacity as members of the Board of Directors (the “Board of Directors”) of Alcobra, you have requested our opinion (our “Opinion”), as investment bankers, as to the fairness, from a financial point of view and as of the date hereof, of the Exchange Ratio to the Company Shareholders.

In connection with our Opinion, we took into account an assessment of general economic, market and financial conditions as well as our experience in connection with similar transactions and securities valuations generally and, among other things:

- Reviewed a draft dated September 27, 2017 of the Agreement, which was the most recent draft made available to us prior to delivery of our Opinion;
- Reviewed and analyzed certain publicly available financial and other information for each of Alcobra and Arcturus Therapeutics, respectively, including equity research, and certain other relevant financial and operating data furnished to us by the management of each of Alcobra and Arcturus Therapeutics, respectively;
- Reviewed and analyzed certain relevant historical financial and operating data concerning Arcturus Therapeutics furnished to us by the management of Arcturus Therapeutics;
- Discussed with certain members of the management of Alcobra the historical and current business operations, financial condition and prospects of Alcobra and Arcturus Therapeutics;
- Reviewed and analyzed certain operating results of Arcturus Therapeutics as compared to operating results and the reported price and trading histories of certain publicly traded companies that we deemed relevant;
- Reviewed and analyzed certain financial terms of the Agreement as compared to the publicly available financial terms of certain selected business combinations that we deemed relevant;
- Reviewed and analyzed certain financial terms of completed initial public offerings for certain companies that we deemed relevant;
- Reviewed certain pro forma financial effects of the Merger;
- Reviewed and analyzed such other information and such other factors, and conducted such other financial studies, analyses and investigations, as we deemed relevant for the purposes of our Opinion; and,
- Took into account our experience in other transactions, as well as our experience in securities valuations and our general knowledge of the industries in which Alcobra and Arcturus Therapeutics operate.

In conducting our review and arriving at our Opinion, we have, with your consent, assumed and relied, without independent investigation, upon the accuracy and completeness of all financial and other information provided to us by the Company and Arcturus Therapeutics, respectively, or which is publicly available or was otherwise reviewed by us. We have not undertaken any responsibility for the accuracy, completeness or reasonableness of, or independent verification of, such information. We have relied upon, without independent verifications, the assessment of the Company management and Arcturus Therapeutics management as to the viability of, and risks associated with, the current and future products and services of Arcturus Therapeutics (including without limitation, the development, testing and marketing of such products and services, the receipt of all necessary governmental and other regulatory approvals for the development, testing and marketing thereof, and the life and enforceability of all relevant patents and other intellectual and other property rights associated with such products and services). In addition, we have not conducted, nor have we assumed any obligation to conduct, any physical inspection of the properties or facilities of the Company or Arcturus Therapeutics. Furthermore, Ladenburg Thalmann has assumed, with Alcobra's consent, that there will be no further adjustments to the exchange ratio between the date hereof and the date the final exchange ratio is determined. We have, with your consent, relied upon the assumption that all information provided to us by the Company and Arcturus Therapeutics is accurate and complete in all material respects. With respect to the financial forecasts supplied to us by the Company and Arcturus Therapeutics, we have, with your consent, assumed that they were reasonably prepared on the basis reflecting the best currently available estimates and judgments of the management of the Company and Arcturus Therapeutics, as applicable, as to the future operating and financial performance of the Company and Arcturus Therapeutics, as applicable, and that they provided a reasonable basis upon which we could form our Opinion. We expressly disclaim any undertaking or obligation to advise any person of any change in any fact or matter affecting our Opinion of which we become aware after the date hereof. We assumed there were no material changes in the assets, liabilities, financial condition, results of operations, business or prospects of the Company or Arcturus Therapeutics since the date of the last financial statements made available to us. We have not made or obtained any independent evaluations, valuations or appraisals of the assets or liabilities of the Company or Arcturus Therapeutics, nor have we been furnished with such materials. In addition, we have not evaluated the solvency or fair value of the Company or Arcturus Therapeutics under any state or federal laws relating to bankruptcy, insolvency or similar matters. Our Opinion does not address any legal, tax or accounting matters related to the Agreement or the Merger, as to which we have assumed that the Company and the Board of Directors have received such advice from legal, tax and accounting advisors as each has determined appropriate. Our Opinion addresses only the fairness of the Exchange Ratio, from a financial point of view, to Alcobra's Shareholders. We express no view as to any other aspect or implication of the Merger or any other agreement or arrangement entered into in connection with the Merger. Our Opinion is necessarily based upon economic and market conditions and other circumstances as they exist and can be evaluated by us on the date hereof. It should be understood that although subsequent developments may affect our Opinion, we do not have any obligation to update, revise or reaffirm our Opinion and we expressly disclaim any responsibility to do so.

We have not considered any potential legislative or regulatory changes currently being considered or recently enacted by Israel, the United States or any foreign government, or any domestic or foreign regulatory body, or any changes in accounting methods or generally accepted accounting principles that may be adopted by the Securities and Exchange Commission, the Financial Accounting Standards Board, International Financial Reporting Standards (IFRS) or any similar foreign regulatory body or board.

For purposes of rendering our Opinion we have assumed in all respects material to our analysis, that the representations and warranties of each party contained in the Agreement are true and correct, that each party will perform all of the standards of the covenants and agreements required to be performed by it under the Agreement and that all conditions to the consummation of the Merger will be satisfied without waiver thereof. We have assumed that the final form of the Agreement will be substantially similar to the last draft reviewed by us. We have also assumed that all governmental, regulatory and other consents and approvals contemplated by the Agreement will be obtained and that in the course of obtaining any of those consents no restrictions will be imposed or waivers made that would have an adverse effect on the contemplated benefits of the Merger. We have assumed that the Merger will be consummated in a manner that complies with the applicable provisions of the Securities Act of 1933, as amended, the Securities Exchange Act of 1934, as amended, the Israeli Companies Law and the Israeli Securities Law and all regulations promulgated thereunder and all other applicable Israeli, federal and state statutes, rules and regulations. You have informed us, and we have assumed, that the Merger is intended to constitute a reorganization within the meaning of Section 368(a) of the Code and the Treasury Regulations promulgated thereunder.

It is understood that this letter is intended for the benefit and use of the Board of Directors in its consideration of the financial terms of the Merger and, except as set forth in the engagement letter with the Company, dated as of April 27, 2017 as amended on August 1, 2017 (as amended, the "Engagement Letter"), may not be used for any other purpose or reproduced, disseminated, quoted or referred to at any time, in any manner or for any purpose without our prior written consent. This letter does not constitute a recommendation to the Board of Directors of whether or not to approve the Merger or to any shareholder or any other person as to how to vote with respect to the Merger or to take any other action in connection with the Merger or otherwise. Our Opinion does not address the Company's underlying business decision to proceed with the Merger or the relative merits of the Merger compared to other alternatives available to the Company. We express no opinion as to the prices or ranges of prices at which shares or the securities of any person, including the Company, will trade at any time, including following the announcement or consummation of the Merger. We have not been requested to opine as to, and our Opinion does not in any manner address, the amount or nature of compensation to any of the officers, directors or employees of any party to the Merger, or any class of such persons, relative to the compensation to be paid to the holders of the Arcturus Therapeutics Shares in connection with the Merger or with respect to the fairness of any such compensation.

Ladenburg Thalmann & Co. Inc. (“Ladenburg”) is a full service investment bank providing investment banking, brokerage, equity research, institutional sales and trading, and asset management services. As part of our investment banking services, we are regularly engaged in the valuation of businesses and their securities in connection with mergers, negotiated underwritings, secondary distributions of listed and unlisted securities, private placements and valuations for corporate and other purposes. We have acted as the Company’s financial advisor in connection with the Merger and will receive a fee for our services pursuant to the terms of our Engagement Letter, a significant portion of which is contingent upon consummation of the Merger. In addition, the Company has agreed to reimburse our expenses and indemnify us for certain liabilities that may arise out of our engagement. We will also receive an additional fee for rendering our Opinion set forth below pursuant to the Engagement Letter. In the three years preceding the date hereof, Ladenburg has not had a relationship with Alcobra and has not received any fees from Alcobra, aside from the \$50,000 up-front retainer and a \$300,000 Interim Fee which was paid to Ladenburg in connection with its engagement. In the three years preceding the date hereof, Ladenburg has not had a relationship with Arcturus Therapeutics and has not received any fees from Arcturus Therapeutics. Ladenburg and its affiliates may in the future seek to provide investment banking or financial advisory services to the Company and Arcturus Therapeutics and/or certain of their respective affiliates and expect to receive fees for the rendering of these services.

In the ordinary course of business, Ladenburg or certain of our affiliates, as well as investment funds in which we or our affiliates may have financial interests, may acquire, hold or sell long or short positions, or trade or otherwise effect transactions in debt, equity, and other securities and financial instruments (including bank loans and other obligations) of, or investments in, Alcobra, Arcturus Therapeutics or any other party that may be involved in the Merger and/or their respective affiliates.

Consistent with applicable legal and regulatory requirements, Ladenburg has adopted policies and procedures to establish and maintain the independence of our research department and personnel. As a result, our research analysts may hold views, make statements or investment recommendations and/or publish research reports with respect to the Company and the proposed Merger that may differ from the views of Ladenburg’s investment banking personnel.

The Opinion set forth below was reviewed and approved by a fairness opinion committee of Ladenburg.

Based upon and subject to the foregoing, including the various assumptions and limitations set forth herein, it is our opinion that, as of the date hereof, the Exchange Ratio is fair to the Alcobra Shareholders, from a financial point of view.

Very truly yours,

/s/ Ladenburg Thalmann & Co. Inc.

YOUR VOTE IS IMPORTANT. PLEASE VOTE TODAY.

ALCOBRA LTD

2017 Extraordinary General Meeting of Shareholders of Alcobra Ltd.

**November 2, 2017,
10:00 am Israel time**

This Proxy is Solicited On Behalf Of The Board Of Directors

PLEASE SIGN, DATE AND RETURN PROMPTLY IN THE ENCLOSED ENVELOPE.

▲ FOLD HERE · DO NOT SEPARATE · INSERT IN ENVELOPE PROVIDED ▲

PROXY

1. To approve certain resolutions in connection with the merger of a wholly owned subsidiary of the Company with and into Arcturus Therapeutics, Inc. ("Arcturus", the "Transaction"), as more fully set forth in the Proxy Statement, including: (i) effecting a reverse split of Alcobra's share capital at the ratio of seven to one, so each seven Ordinary Shares, par value NIS 0.01 per share, shall be consolidated into one Ordinary Share, par value NIS 0.07 per share (the "Reverse Split"), (ii) increasing the authorized share capital of Alcobra by an additional NIS 1,600,000 (the "Share Capital Increase"), (iii) amending the Articles of Association of the Company (the "Articles") to reflect the Reverse Split and the Share Capital Increase, by replacing Article 2.1.1 with the following: "The registered capital of the Company is NIS 2,100,000 divided into 30,000,000 ordinary shares with a par value of NIS 0.07 each.", (iv) changing Alcobra's name to ARCTURUS THERAPEUTICS, LTD. and amending the Articles accordingly, and (v) the purchase by Alcobra of a "run-off" directors' and officers' liability insurance policy for a period of seven years following the effective time of the Transaction.

Please mark your votes like this

FOR	AGAINST	ABSTAIN
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(1A.) The undersigned confirms that the undersigned is not a controlling shareholder in the Company (where a shareholder, or a group of shareholders holding 25% or more of the Company's share capital is assumed to be a controlling shareholder) and does not have a conflict of interest (referred to in the Israeli Companies Law as a personal interest) in the approval to purchase a run-off insurance policy.

YES

In their discretion, the proxies are authorized to vote upon such other matters as may properly come before the Extraordinary Meeting or any adjournment or postponement thereof.

Important Instructions for Item 1A relating to Proposal 1:

PLEASE BE CERTAIN TO CHECK IN THE BOX OPPOSITE TO ITEM 1A TO CONFIRM THAT YOU ARE

Under the Israeli Companies Law, your vote on Proposal 1 cannot be counted towards the special majority required for the approval of Proposal 1 unless you provide the foregoing important confirmation. If you are a controlling shareholder or have a conflict of interest you should contact the Company's proxy solicitation firm (as indicated below) for instruction how to submit your vote.

Additional Information

If you have any questions on how to fill out this proxy card, please contact Morrow Sodali, LLC, the Company's proxy solicitation firm, at (800) 862-5200 (for shareholders) or (203)658-9400 (for banks and brokerage firms) or adhd@morrow sodali.com, who will advise you as to how to submit your vote. You may also direct questions to the Company at (NUMBER) or (EMAIL ADDRESS) @alcobra-pharma.com

CONTROL NUMBER

Signature _____ **Signature, if held jointly** _____ **Date** _____, 2017.
Please sign exactly as your name appears on this Proxy. When shares are held jointly, each holder should sign. When signing as executor, administrator, trustee, or guardian, please give title as such. If the signed is a corporation, please sign full corporate name as duly authorized officer, giving full title as such. If signer is a partnership, please sign in partnership name by authorized person.

**EXTRAORDINARY GENERAL MEETING OF SHAREHOLDERS OF
ALCOBRA LTD.
NOVEMBER 2, 2017**

▲ FOLD HERE · DO NOT SEPARATE · INSERT IN ENVELOPE PROVIDED ▲

PROXY

THIS PROXY IS SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS

ALCOBRA LTD.

The undersigned appoints Mr. David Baker, Interim Chief Executive Officer, Dr. Tomer Berkovitz, Chief Operating Officer, and Chief Financial Officer, and Ms. Irena Katsman, VP of Finance, and each of them, agents and proxies of the undersigned, with full power of substitution to each of them, to represent and to vote on behalf of the undersigned all the Ordinary Shares of Alcobra Ltd. (the "**Company**" or "**Alcobra**") which the undersigned is entitled to vote at the Extraordinary General Meeting of Shareholders (the "**Extraordinary Meeting**"), to be held at the offices of Alcobra's counsel (Zysman, Aharoni, Gayer & Co.) at "Beit Zion", 41-45 Rothschild Blvd., 8th Fl., Tel Aviv, Israel, on November 2, 2017, at 10:00 am (Israel time), and at any adjournments or postponements thereof, upon the following matters, which are more fully described in the Notice of Extraordinary General Meeting of Shareholders and Proxy Statement relating to the Extraordinary Meeting.

This PROXY when properly executed will be voted in the manner directed herein by the undersigned. If no direction is made with respect to the matter that is subject to approval, this Proxy will be considered ABSTAINED in such matter. Any and all proxies heretofore given by the undersigned are hereby revoked.

(Continued and to be marked, dated and signed, on the other side)
