

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549**

**FORM S-8**

**REGISTRATION STATEMENT  
UNDER  
THE SECURITIES ACT OF 1933**

**ARCTURUS THERAPEUTICS LTD.**

(Exact name of registrant as specified in its charter)

**State of Israel**

(State or other jurisdiction of  
incorporation or organization)

**Not applicable**

(I.R.S. Employer Identification No.)

**10628 Science Center Drive, Suite 200  
San Diego, California**

(Address of Principal Executive Offices)

**92121**

(Zip Code)

**Arcturus Therapeutics Ltd. 2018 Omnibus Equity Incentive Plan**

(Full title of the plan)

**Joseph E. Payne**

**President and Chief Executive Officer**

**Arcturus Therapeutics Ltd.**

**10628 Science Center Drive, Suite 200**

**San Diego, California 92121**

**(858) 900-2660**

(Name, Address and Telephone Number of Agent for Service)

**COPIES TO:**

Dentons US LLP  
1221 Avenue of the Americas  
New York, NY 10020-1089  
Jeffrey A. Baumel, Esq.

Barnea Jaffa Lande & Co Law Offices,  
58 HaRakevet St. Electra City Tower, 21st Floor  
Tel Aviv 6777016, Israel  
Michael Barnea, Esq.

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

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

**CALCULATION OF REGISTRATION FEE**

<b>Title of Securities to be Registered</b>	<b>Amount to be registered (1)</b>	<b>Proposed maximum offering price per share</b>	<b>Proposed maximum aggregate offering price</b>	<b>Amount of registration fee</b>
<b>Arcturus Therapeutics Ltd. 2018 Omnibus Equity Incentive Plan</b> Ordinary Shares, par value NIS 0.07 per share	1,100,000(2)	\$ 6.72(3)	\$ 7,392,000(3)	\$ 895.91

- (1) Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the “Securities Act”), this Registration Statement also covers an indeterminate number of additional securities which may be offered and issued to prevent dilution resulting from stock splits, stock dividends, recapitalizations or similar transactions.
- (2) Represents a maximum of 1,100,000 shares of Ordinary Shares that may be delivered in settlement of awards granted under the Arcturus Therapeutics Ltd. 2018 Omnibus Equity Incentive Plan (the “2018 Plan”).
- (3) Estimated solely for the purpose of calculating the amount of the registration fee pursuant to Rule 457(h) of the Securities Act. The proposed maximum aggregate offering price per share and proposed maximum aggregate offering price for the 1,100,000 ordinary shares reserved under the 2018 Plan are calculated using the closing price of an Ordinary Share (defined below) on October 11, 2018.

## EXPLANATORY NOTE

This Registration Statement on Form S-8 is filed by Arcturus Therapeutics Ltd. (the “Company,” “Registrant,” “we,” “us,” or “our”) relating to maximum of 1,100,000 shares of the Company’s ordinary shares, NIS 0.07 par value (the “Ordinary Shares”), issuable under the 2018 Plan to our employees (including officers), non-employee consultants and non-employee directors and those of our affiliates.

### PART I

#### INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

The documents containing the information required in Part I of this Registration Statement have been or will be sent or given to participants in the plan as specified in Rule 428(b)(1) under the Securities Act, in accordance with the rules and regulations of the United States Securities and Exchange Commission (the “Commission”). Such documents are not being filed with the Commission either as part of this Registration Statement or as prospectuses or prospectus supplements pursuant to Rule 424 of the Securities Act. These documents and the documents incorporated by reference into this Registration Statement pursuant to Item 3 of Part II of this Registration Statement, taken together, constitute a prospectus that meets the requirements of Section 10(a) of the Securities Act.

### PART II

#### INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

##### Item 3. Incorporation of Documents by Reference.

The following documents (including, except where indicated otherwise, all exhibits thereto) filed with or furnished to the Securities and Exchange Commission, or the SEC, by the Registrant are incorporated herein by reference and made a part hereof:

- (1) The Registrant’s Annual Report on Form 20-F for the fiscal year ended December 31, 2017, filed with the SEC on May 14, 2018 and amended on July 10, 2018;
- (2) The Registrant’s reports of foreign private issuer on Form 6-K furnished with the Commission on January 24, 2018, January 31, 2018, February 2, 2018, February 5, 2018, February 13, 2018, February 28, 2018, March 13, 2018, March 29, 2018, April 2, 2018, April 9, 2018, May 14, 2018, May 21, 2018, May 24, 2018, May 29, 2018, June 1, 2018, June 15, 2018, July 10, 2018, July 20, 2018, July 27, 2018, August 29, 2018, September 28, 2018, October 1, 2018 and October 15, 2018 (to the extent expressly incorporated by reference into the Registrant’s effective registration statements filed by us under the Securities Act); and
- (3) The description of the Registrant’s ordinary shares, par value NIS 0.07 per share, contained in the Registrant’s registration statement on Form 8-A filed pursuant to the Securities Exchange Act of 1934, as amended, or the Exchange Act, on May 17, 2013 (File No. 001-35932), including any amendment or report filed for the purpose of updating such description.

In addition to the foregoing, all documents subsequently filed by the Registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act, and all reports on Form 6-K subsequently furnished by the Registrant which state that they are incorporated by reference herein, prior to the filing of a post-effective amendment which indicates that all securities offered hereunder have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference herein and to be part hereof from the date of filing of such documents and reports.

Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement herein, or in any subsequently filed document which also is or is deemed to be incorporated by reference, modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this registration statement.

**Item 4. Description of Securities.**

Not Applicable.

**Item 5. Interests of Named Experts and Counsel.**

Not Applicable.

**Item 6. Indemnification of Directors and Officers.**

Under the Israeli Companies Law, 5759-1999 (the "Companies Law") and the Israeli Securities Law, 5728-1968 (the "Securities Law"), a company may indemnify, or undertake in advance to indemnify, an office holder (defined as a director, chief executive officer, deputy chief executive officer or other officer directly subordinate to the chief executive officer of the company) for the following liabilities and expenses, imposed on an office holder or incurred by an office holder due to acts performed by him or her as an office holder, provided its articles of association include a provision authorizing such indemnification:

- financial liability incurred by or imposed on him or her in favor of another person pursuant to a judgment, including a settlement or arbitrator's award approved by a court. However, if an undertaking to indemnify an office holder with respect to such liability is provided in advance, then such an undertaking must be limited to events which, in the opinion of the board of directors, can be foreseen based on the company's activities when the undertaking to indemnify is given, and to an amount or according to criteria determined by the board of directors as reasonable under the circumstances, and such undertaking shall detail the abovementioned foreseen events and amount or criteria;
- reasonable litigation expenses, including attorneys' fees, incurred by the office holder as a result of an investigation or proceeding instituted against him or her by an authority authorized to conduct such investigation or proceeding, provided that (i) no indictment was filed against such office holder as a result of such investigation or proceeding; and (ii) no financial liability was imposed upon him or her as a substitute for the criminal proceeding as a result of such investigation or proceeding or, if such financial liability was imposed, it was imposed with respect to an offense that does not require proof of criminal intent or as a monetary sanction; and
- reasonable litigation expenses, including attorneys' fees, incurred by the office holder or imposed by a court in proceedings instituted against him or her by the company, on its behalf, or by a third party, or in connection with criminal proceedings in which the office holder was acquitted, or as a result of a conviction for an offense that does not require proof of criminal intent.

Under the Companies Law and the Securities Law, a company may insure an office holder against the following liabilities incurred for acts performed by him or her as an office holder if and to the extent provided in the company's articles of association:

- a breach of the duty of loyalty to the company, provided that the office holder acted in good faith and had a reasonable basis to believe that the act would not harm the company;
- a breach of duty of care to the company or to a third party;
- a financial liability imposed on the office holder in favor of a third party;
- a financial liability imposed on the office holder in favor of a third party harmed by a breach in an administrative proceeding; and
- reasonable litigation expenses, including attorneys' fees, incurred by the office holder as a result of an administrative proceeding instituted against him or her.

Nevertheless, under the Companies Law, a company may not indemnify, exculpate or insure an office holder against any of the following:

- a breach of fiduciary duty, except for indemnification and insurance for a breach of the duty of loyalty to the company in the event the office holder acted in good faith and had a reasonable basis to believe that the act would not prejudice the company;
- a breach of duty of care committed intentionally or recklessly, excluding a breach arising out of the negligent conduct of the office holder;
- an act or omission committed with intent to derive unlawful personal benefit; or
- a fine, monetary sanction, penalty or forfeit levied against the office holder.

Under the Companies Law, exculpation, indemnification and insurance of office holders require the approval of the compensation committee, and, generally, the board of directors and, in certain circumstances, the shareholders.

The Registrant's amended and restated articles of association permit the Registrant to exculpate, indemnify and insure its office holders to the fullest extent permitted by the Companies Law and the Securities Law.

The Registrant has obtained directors' and officers' liability insurance for the benefit of its office holders and intends to continue to maintain such coverage and pay all premiums thereunder to the fullest extent permitted by the Companies Law. In addition, the Registrant intends to enter into agreements with its certain office holders, and may enter into agreements in the future with office holders, exculpating them and undertaking to indemnify them to the fullest extent permitted by Israeli law, including with respect to liabilities resulting from this offering to the extent that these liabilities are not covered by insurance. This indemnification will be limited to events determined as foreseeable by the board of directors based on our activities, and to an amount or according to criteria determined by the board of directors as reasonable under the circumstances.

There is no current pending litigation or proceeding against any of the Registrant's office holders as to which indemnification is being sought, nor is the Registrant aware of any pending or threatened litigation that may result in claims for indemnification by any office holder.

**Item 7. Exemption from Registration Claimed.**

Not Applicable.

**Item 8. Exhibits.**

- 4.1 [Articles of Association of Arcturus Therapeutics Ltd. \(filed as Exhibit 4.1 to Form S-8 filed on November 30, 2017 \(File No. 333-221830\) and incorporated herein by reference.\)](#)
- 5.1 [Opinion of Barnea Jaffa Lande & Co.](#)
- 23.1 [Consent of Kost Forer Gabbay & Kasierer, Certified Public Accountants \(Israel\) \(a Member of Ernst & Young Global\)](#)
- 23.2 [Consent of Ernst & Young LLP, Independent Public Accounting Firm](#)
- 23.3 [Consent of Barnea Jaffa Lande & Co. \(included in the opinion filed as Exhibit 5.1 to this Registration Statement\)](#)
- 24.1 [Power of Attorney \(included on signature page\)](#)
- 99.1 [Arcturus Therapeutics Ltd. 2018 Omnibus Equity Incentive Plan \(filed as Exhibit 99.3 to Form 6-K filed on July 27, 2018 and incorporated herein by reference.\)](#)

## Item 9. Undertakings.

- (a) The undersigned Registrant hereby undertakes:
- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
    - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act;
    - (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in this registration statement; and
    - (iii) To include any material information with respect to the plan of distribution not previously disclosed in this registration statement or any material change to such information in this registration statement;

*provided, however*, that subparagraphs (a)(1)(i) and (a)(1)(ii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in the periodic reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in this registration statement.
  - (2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
  - (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (b) The undersigned Registrant hereby further undertakes that, for the purposes of determining any liability under the Securities Act, each filing of the Company's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in this registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
- (c) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

## SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement on Form S-8 to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of San Diego, State of California, on October 15, 2018.

### ARCTURUS THERAPEUTICS LTD.

By: /s/ Joseph E. Payne  
Name: Joseph E. Payne  
Title: Chief Executive Officer

### POWER OF ATTORNEY AND SIGNATURES

We, the undersigned officers and directors of Arcturus Therapeutics Ltd., hereby severally constitute and appoint Joseph E. Payne and Dr. Padmanabh Chivukula, and each of them individually, our true and lawful attorney to sign for us and in our names in the capacities indicated below any and all amendments or supplements, including any post-effective amendments, to this Registration Statement on Form S-8 and to file the same, with exhibits thereto and other documents in connection therewith, with the SEC, granting unto said attorney full power and authority to do and perform each and every act and thing requisite or necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming our signatures to said amendments to this Registration Statement signed by our said attorney and all else that said attorney may lawfully do and cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act, this Registration Statement on Form S-8 has been signed below by the following persons in the capacities and on the dates indicated.

<b>Signature</b>	<b>Title</b>	<b>Date</b>
<u>/s/ Joseph E. Payne</u> Joseph E. Payne	President, Chief Executive Officer and Director ( <i>principal executive officer</i> )	October 15, 2018
<u>/s/ Dr. Padmanabh Chivukula</u> Dr. Padmanabh Chivukula	Chief Scientific Officer, Chief Operating Officer and Secretary	October 15, 2018
<u>/s/ Dr. Peter Farrell</u> Dr. Peter Farrell	Chairman of the Board	October 15, 2018
<u>/s/ Andy Sassine</u> Andy Sassine	Director	October 15, 2018
<u>/s/ Dr. Magda Marquet</u> Dr. Magda Marquet	Director	October 15, 2018
<u>/s/ James Barlow</u> James Barlow	Director	October 15, 2018
<u>/s/ KC Kummerfeld</u> KC Kummerfeld	Vice President of Finance and Corporate Controller ( <i>principal financial officer and principal accounting officer</i> )	October 15, 2018

**SIGNATURE OF AUTHORIZED REPRESENTATIVE IN THE UNITED STATES**

Pursuant to the Securities Act of 1933, as amended, the undersigned, the duly authorized representative in the United States of Arcturus Therapeutics Ltd., has signed this Registration Statement on Form S-8 on October 15, 2018.

**ARCTURUS THERAPEUTICS LTD.**

By: /s/ Joseph E. Payne  
Name: Joseph E. Payne  
Title: President

October 15, 2018

To:  
Arcturus Therapeutics Ltd.  
58 Harakevet St.  
Tel Aviv-Yafo  
Israel

CC: Arcturus Therapeutics, Inc.  
10628 Science Center Drive, Suite 200  
San Diego, CA 92121  
USA

Ladies and Gentlemen:

We have acted as Israeli counsel to Arcturus Therapeutics Ltd., a company organized under the laws of the State of Israel (the "**Company**"), in connection with its registration statement on Form S-8 (the "**Registration Statement**") filed with the Securities and Exchange Commission under the Securities Act of 1933 (the "**Securities Act**") registering the offer, issuance and sale of 1,100,000 Ordinary Shares of the Company, par value New Israeli Shekel 0.07 per share (the "**Plan Shares**"), reserved for issuance under the Arcturus Therapeutics Ltd. 2018 Omnibus Equity Incentive Plan (the "**Plan**").

In connection with this opinion, we have examined originals or copies, certified or otherwise identified to our satisfaction, of the Plan, the Registration Statement, the Company's Articles of Association (as amended), and such other agreements, certificates, resolutions, minutes and other statements of corporate officers and other representatives of the Company and others as well as other documents provided to us by the Company as we have deemed necessary or appropriate as a basis for this opinion.

In connection with this opinion, we have relied upon the Registration Statement, the Company's amended and restated articles of association, and such statutes, regulations, corporate records, documents, certificates and such other instruments that we have deemed relevant and necessary for the basis of our opinions hereinafter expressed. In the course of our examination of the abovementioned documents, we have assumed: (a) the legal capacity of each natural person; (b) the legal existence of all parties referred to in the documents; (c) the power and authority of each person to execute, deliver and perform each document; (d) the authorization, execution and delivery by each person of each document; (e) the legality, validity, binding effect and enforceability as to each person of each document executed and delivered or to be executed or delivered and of each other act done or to be done by such person; (f) the payment of all the required documentary stamp taxes and fees imposed upon the execution, filing or recording of the documents; (g) that there have been no undisclosed modifications of any provision of any of the documents, and no undisclosed prior waiver of any right or remedy contained in the documents; (h) the genuineness of each signature, the completeness of each document, the authenticity of each document reviewed by us as an original, the conformity to the original of each document reviewed by us as a copy and the authenticity of the original of each document received by us as a copy; (i) the truthfulness of each statement contained in the documents as to all factual matters; (j) the accuracy, on the date stated in all governmental certifications of each statement, as to each factual matter contained in such governmental certifications; (k) that no action, discretionary or otherwise, was or will be taken by or on behalf of the Company in the future that might result in a violation of law; (l) that there are no other agreements or understandings of which we are not aware that would modify the terms of the documents; (m) that with respect to the documents, there has been no mutual mistake of fact and there exists no fraud or duress; (n) the truth, accuracy and completeness of the information, representations and warranties contained in the corporate records, documents, certificates and instruments we have reviewed; (o) that prior to the issuance of any of Plan Shares under the Plan, the price, number of Plan Shares and certain other terms of issuance will be authorized and approved by the Company's board of directors and in accordance with Israeli law (the "Corporate Proceedings") and (p) that upon the issuance of any Plan Shares, the total number of Ordinary Shares issued and outstanding will not exceed the total number of Ordinary Shares that the Company is then authorized to issue under its Amended and Restated Articles of Association.

We are members of the Israel Bar and we express no opinion as to any matter relating to the laws of any jurisdiction other than the laws of the State of Israel and have not, for the purpose of giving this opinion, made any investigation of the laws of any other jurisdiction than the State of Israel.

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Based upon the foregoing and in reliance thereon, assuming the completion of the Corporate Proceedings in connection with the delivery of a specific placement notice, we are of the opinion that the Plan Shares, have been duly authorized and reserved for issuance, and, when issued and paid for, pursuant to the terms of the Plan, and the terms of any agreements relating to such issuance, will be validly issued, fully paid and non-assessable.

We hereby consent to the filing of this opinion with the Commission as an exhibit to the Registration Statement. In giving such consent, we do not believe that we are “experts” within the meaning of such term as used in the Securities Act, as amended, or the rules and regulations of the Securities and Exchange Commission issued thereunder with respect to any part of the Registration Statement, including this opinion as an exhibit or otherwise.

Yours sincerely,

/s/ Barnea, Jaffa, Lande & Co.

**Barnea, Jaffa, Lande & Co. Law Offices**

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statement (Form S-8) pertaining to the 2018 Omnibus Equity Incentive Plan of Arcturus Therapeutics Ltd. of our report dated May 14, 2018, with respect to the consolidated financial statements of Arcturus Therapeutics Ltd. included in its Annual Report (Form 20-F) for the year ended December 31, 2017, filed with the Securities and Exchange Commission.

Tel-Aviv, Israel  
October 15, 2018

/s/ Kost Forer Gabbay & Kasierer  
A member of Ernst & Young Global

Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statement (Form S-8) pertaining to the Arcturus Therapeutics Ltd. 2018 Omnibus Equity Incentive Plan of our report dated May 14, 2018, with respect to the consolidated financial statements of Arcturus Therapeutics Ltd. audited by us and included in its Annual Report (Form 20-F) for the year ended December 31, 2017, filed with the Securities and Exchange Commission.

San Diego, California  
October 15, 2018

/s/ Ernst & Young LLP

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