

Alcobra Ltd. and Arcturus Therapeutics, Inc. Agree to Merge

September 27, 2017

- Transaction to result in NASDAQ-listed company focused on developing novel RNA medicines and technologies
- Arcturus brings a proprietary and diverse pipeline with seven programs, four of which are funded by pharmaceutical and strategic partners
- Plan to accelerate development of internal programs targeting rare diseases
- Combined company well-capitalized with approximately \$40 million in cash projected at closing, which is expected to fund the company through multiple value creation milestones and into early clinical development
- Conference call and webcast to be held on Thursday, September 28, 2017 at 8:30 AM EDT

TEL AVIV, Israel, and SAN DIEGO, Sept. 27, 2017 (GLOBE NEWSWIRE) -- Alcobra Ltd. (NASDAQ: ADHD) and Arcturus Therapeutics, Inc., a privately held biotechnology company developing novel RNA medicines, today announced the signing of a definitive agreement to merge the two companies in an all-stock transaction. The transaction will result in a combined company focused on developing novel RNA medicines in therapeutic areas including infectious disease, cystic fibrosis, nonalcoholic steatohepatitis (NASH) and rare liver diseases.

Arcturus has developed proprietary technology platforms incorporating Unlocked Nucleomonomer Agent (UNA) Oligomer chemistry and lipid-mediated nanoparticle (LUNAR™) nucleic acid delivery systems. The UNA Oligomer platform incorporates improvements to the chemical structure of RNA to generate pharmaceutical and therapeutic benefits. The LUNAR delivery system is optimized for high RNA encapsulation efficiency, which improves manufacturing and cost-of-goods and enables particle size control to potentially improve the targeting of clinically important cells and tissues, including liver hepatocytes, liver stellate cells, myocytes and lung cells.

Arcturus is applying these technologies to develop RNA medicines, including under collaborations with Ultragenyx Pharmaceutical, Inc., Takeda Pharmaceutical Inc. and the Cystic Fibrosis Foundation. In addition, over the next two years, Arcturus plans to advance at least one internal program into clinical testing.

"In contrast to many traditional small molecule and biologic therapeutics, RNA medicines have the potential to cure diseases by addressing the underlying genetic cause rather than treating the symptoms," said Stuart Collinson, Ph.D., Executive Chairman of Arcturus. "Arcturus's technology combines delivery and RNA chemistry to generate innovative medicines with the potential to transform the lives of patients with serious diseases."

"Our goal is to establish Arcturus as a leading RNA medicines company and this merger will enable us to accelerate the development of our RNA medicines," said Joseph Payne, President and CEO of Arcturus. "We believe our proprietary chemistry and drug delivery platforms represent significant advancements in the development of RNA medicines that we and our partners are applying to the treatment of rare and high-incidence diseases where we can have a distinct medical and commercial advantage. In addition to our existing collaborations and internal proprietary programs, we plan to pursue additional strategic partnerships to support other medical applications of our technology."

David Baker, Interim Chief Executive Officer of Alcobra, added: "Following an extensive review of strategic alternatives, we concluded that the transaction with Arcturus is in the best interest of Alcobra's shareholders because it will enable us to participate in the long-term success of an emerging leader in the exciting field of RNA medicines. Arcturus has an impressive RNA platform, validated partnerships with leading biopharmaceutical companies and promising proprietary rare disease programs. We believe its product candidates have great potential to treat multiple diseases and address the unmet needs of many patients."

About the Proposed Transaction

Under the terms of the merger agreement, the holders of Arcturus outstanding capital stock immediately prior to the merger will receive ordinary shares of Alcobra in the merger. On a pro forma and fully-diluted basis for the combined company, Alcobra shareholders are expected to own approximately 40% and Arcturus shareholders are expected to own approximately 60% of the combined company, subject to certain adjustments based on net cash of the two companies at closing. The conversion ratio for the transaction is based on a valuation of Alcobra of \$46.7 million, which includes approximately \$35 million of expected Alcobra cash at the time of closing.

The proposed merger has been unanimously approved by the boards of directors of both companies. The proposed merger is expected to close during the fourth quarter of 2017, subject to the approval of the transaction by the shareholders of both companies, and other customary closing conditions.

Ladenburg Thalmann & Co. Inc., acted as exclusive financial advisor and Zysman, Aharoni, Gayer and Co. (ZAG/S&W), New York and Tel Aviv offices, acted as legal advisors to Alcobra. Cooley LLP and Meitar Liquornik Geva Leshem Tal acted as legal advisors to Arcturus. Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. is serving as legal advisor to Ladenburg Thalmann & Co. Inc.

Management and Organization

Joseph E. Payne is expected to serve as the President and Chief Executive Officer of the combined company, with Pad Chivukula, Ph.D., serving as Chief Scientific Officer and Chief Operating Officer, and Stuart Collinson, Ph.D., serving as the Executive Chairman. The board of directors 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.

If the transaction is consummated, Alcobra's name will be changed to Arcturus Therapeutics, Ltd., and Alcobra intends to apply to change its ticker symbol to ARCT on NASDAQ. Upon completion of the merger, the corporate headquarters will be in San Diego, California and the company will remain domiciled in Israel.

Conference Call and Webcast

The companies will host a conference call and live webcast with slides to discuss the proposed transaction as well as Arcturus' platforms and pipeline assets on Thursday September 28, 2017 at 8:30 AM EDT. The live webcast can be accessed on the News & Events page of Alcobra's website (www.alcobra-pharma.com) or by dialing 877-548-7905 (U.S.) or 719-457-2647 using the conference ID number 8288630. The webcast will be archived on the Alcobra website for at least 30 days.

About Alcobra Ltd.

Alcobra Ltd. is an emerging pharmaceutical company that has been focused on the development and commercialization of new medications for CNS disorders including ADHD and Fragile X Syndrome. In January 2017, Alcobra suspended a substantial portion of its research and development activities relating to its lead investigational product candidate MDX and has been pursuing strategic alternatives.

For more information, please visit the company's website, www.alcobra-pharma.com, the content of which is not incorporated herein by reference.

About Arcturus Therapeutics, Inc.

Founded in 2013 and based in San Diego, Arcturus Therapeutics, Inc. is an RNA medicines company with enabling technologies — UNA Oligomer chemistry and LUNAR nanoparticle delivery. Arcturus's versatile RNA therapeutics platforms can be applied toward multiple types of RNA medicines including small interfering RNA, messenger RNA, antisense RNA, microRNA and gene editing therapeutics. The company owns LUNAR nanoparticle delivery and Unlocked Nucleomonomer Agent (UNA) technology including UNA Oligomers, which are covered by its patent portfolio (>110 patents and patent applications, issued in the U.S., Europe, Japan, China and other countries). Arcturus' proprietary UNA technology can be used to target individual genes in the human genome, as well as viral genes, and other species for therapeutic purposes. The company's commitment to the development of novel RNA therapeutics has led to partnerships with Ultragenyx Pharmaceutical, Inc., Takeda Pharmaceutical Inc., and the Cystic Fibrosis Foundation. For more information, visit www.ArcturusRx.com, the content of which is not incorporated herein by reference.

Forward-looking Statements

This press release contains "forward-looking statements" that involve substantial risks and uncertainties for purposes of the safe harbor provided by the Private Securities Litigation Reform Act of 1995. All statements, other than statements of historical facts, included in this press release regarding strategy, future operations, future financial position, prospects, plans and objectives of management are forward-looking statements. Examples of such statements include, but are not limited to, statements relating to the structure, timing and completion of the proposed merger; the combined company's listing on the NASDAQ Global Market after closing of the proposed merger; expectations regarding the capitalization, resources and ownership structure of the combined company; the adequacy of the combined company's capital to support its future operations and its ability to successfully initiate and complete clinical trials; the nature, strategy and focus of the combined company; the development and commercial potential and potential benefits of any product candidates of the combined company; the entry into or modification or termination of collaborative arrangements; the executive and board structure of the combined company; and expectations regarding voting by Alcobra and Arcturus shareholders. Alcobra and/or Arcturus may not actually achieve the plans, carry out the intentions or meet the expectations or projections disclosed in the forward-looking statements and you should not place undue reliance on these forward-looking statements. Such statements are based on management's current expectations and involve risks and uncertainties. Actual results and performance could differ materially from those projected in the forward-looking statements as a result of many factors, including, without limitation, risks and uncertainties associated with shareholder approval of and the ability to consummate the proposed merger through the process being conducted by Alcobra and Arcturus, the ability to project future cash utilization and reserves needed for contingent future liabilities and business operations and the availability of sufficient resources of the combined company to meet its business objectives and operational requirements.

The forward-looking statements contained or implied in this press release are subject to other risks and uncertainties, including those discussed under the heading "Risk Factors" in Alcobra's Annual Report on Form 20-F for the fiscal year ended December 31, 2016, filed with the Securities and Exchange Commission (SEC) and in subsequent filings with the SEC. Except as otherwise required by law, Alcobra and Arcturus each disclaim any intention or obligation to update or revise any forward-looking statements, which speak only as of the date they were made, whether as a result of new information, future events or circumstances or otherwise.

No Offer or Solicitation

This communication shall not constitute an offer to sell or the solicitation of an offer to sell or the solicitation of an offer to buy any securities, nor shall there be any sale of securities in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such jurisdiction.

A proxy statement and a proxy card will be filed with the SEC and will be mailed to Alcobra's shareholders seeking any required shareholder approvals in connection with the proposed transactions. Before making any voting or investment decision, investors and shareholders are urged to read the proxy statement (including any amendments or supplements thereto) and any other relevant documents that Alcobra may file with the SEC when they become available because they will contain important information about the proposed transactions.

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