Arcturus Therapeutics Receives Orphan Drug Designation from the U.S. FDA for ARCT-032, for the Treatment of Cystic Fibrosis

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First cystic fibrosis patient in Phase 1b study successfully completed two administrations of ARCT-032

On track to share interim Phase 1b data in H1 2024

SAN DIEGO--(BUSINESS WIRE)--Nov. 27, 2023-- Arcturus Therapeutics Holdings Inc. (the “Company”, “Arcturus”, Nasdaq: ARCT), a global late-stage clinical messenger RNA medicines company focused on the development of infectious disease vaccines and opportunities within liver and respiratory rare diseases, today announced the U.S. Food and Drug Administration (FDA) has granted Orphan Drug Designation for the Company’s product candidate ARCT-032 to treat cystic fibrosis (CF).

The FDA’s Office of Orphan Products Development grants orphan status to drugs being developed to treat, prevent, or diagnose a rare disease or condition affecting fewer than 200,000 people in the United States. The designation provides significant incentives to promote the development of the drug including the potential for market exclusivity for seven years upon FDA approval, eligibility for tax credits for qualified clinical trials, waiver of Prescription Drug User Fee Act Application fee, and eligibility to receive regulatory guidance from the FDA in the design of an overall drug development plan.

“Orphan Drug Designation is a very important regulatory milestone in our development plan for ARCT-032,” said Joseph Payne, President, and Chief Executive Officer of Arcturus Therapeutics. "We are executing diligently to accelerate ARCT-032 as a potential new treatment option for people with cystic fibrosis.”

The first CF patient in our Phase 1b study successfully completed two administrations of ARCT-032. We remain on track to share interim Phase 1b data in H1 2024.

About Cystic Fibrosis

Cystic fibrosis is a life-shortening disease with a worldwide distribution. Mutations in the cystic fibrosis transmembrane conductance regulator (CFTR) gene result in a reduction or absence of CFTR protein and/or function in the airways, causing insufficient chloride transport to maintain airway surface homeostasis. CF mucus is more difficult to clear, thus clogging the airways and leading to infection, inflammation, respiratory failure, or other life-threatening complications. Currently approved CFTR modulator therapies are designed to increase function of the CFTR channel to help reduce symptoms yet are ineffective in some people with CF because of their underlying mutations.

About ARCT-032

ARCT-032 utilizes Arcturus' LUNAR® lipid-mediated aerosolized platform to deliver CFTR messenger RNA to the lungs. Expression of a functional copy of the CFTR mRNA in the lungs of people with CF has the potential to restore CFTR activity and mitigate the downstream effects that cause progressive lung disease. The ARCT-032 program is supported by preclinical data in rodents, ferrets and primates, as well as demonstrating restoration of CFTR expression and function in human bronchial epithelial cells.

About Arcturus Therapeutics

Founded in 2013 and based in San Diego, California, Arcturus Therapeutics Holdings Inc. (Nasdaq: ARCT) is a global late-stage clinical mRNA medicines and vaccines company with enabling technologies: (i) LUNAR® lipid-mediated delivery, (ii) STARR® mRNA Technology (sa-mRNA) and (iii) mRNA drug substance along with drug product manufacturing expertise. The Company has an ongoing global collaboration for innovative mRNA vaccines with CSL Seqirus, and a joint venture in Japan, ARCALIS, focused on the manufacture of mRNA vaccines and therapeutics. Arcturus’ pipeline includes RNA therapeutic candidates to potentially treat ornithine transcarbamylase deficiency and cystic fibrosis, along with its partnered mRNA vaccine programs for SARS-CoV-2 (COVID-19) and influenza. Arcturus’ versatile RNA therapeutics platforms can be applied toward multiple types of nucleic acid medicines including messenger RNA, small interfering RNA, circular RNA, antisense RNA, self-amplifying RNA, DNA, and gene editing therapeutics. Arcturus’ technologies are covered by its extensive patent portfolio (patents and patent applications issued in the U.S., Europe, Japan, China, and other countries). For more information, visit www.ArcturusRx.com. In addition, please connect with us on Twitter and LinkedIn.

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. Any statements, other than statements of historical fact included in this press release, are forward-looking statements, including those regarding strategy, future operations, the expectations for or likelihood of success of any collaborations, the continued clinical development of ARCT-032, likelihood of success (including safety and efficacy) of ARCT-032, the planned initiation, design or completion of clinical trials (including the planned ARCT-032 Phase 1b study), the ability to enroll, and timing for enrollment of, subjects in clinical trials, the likelihood of sharing and timing for sharing interim Phase 1b data, and the impact of general business and economic conditions. Arcturus may not actually achieve the plans, carry out the intentions or meet the expectations or projections disclosed in any forward-looking statements such as the foregoing and you should not place undue reliance on such forward-looking statements. These statements are only current predictions or

expectations, and are subject to known and unknown risks, uncertainties, and other factors that may cause our or our industry's actual results, levels of activity, performance or achievements to be materially different from those anticipated by the forward-looking statements, including those discussed under the heading "Risk Factors" in Arcturus' most recent Annual Report on Form 10-K, and in subsequent filings with, or submissions to, the SEC, which are available on the SEC's website at www.sec.gov. Except as otherwise required by law, Arcturus disclaims 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.

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