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Mirna Therapeutics Appoints Peter Greenleaf to Its Board of Directors

AUSTIN, Texas--(BUSINESS WIRE)-- Mirna Therapeutics, Inc. (Nasdaq:MIRN), a clinical-stage biopharmaceutical company developing a broad pipeline of microRNA-based oncology therapeutics, today announced the appointment of Peter Greenleaf to the Company's Board of Directors. Mr. Greenleaf brings over 20 years of experience in drug development and commercialization and currently serves as the Chairman and Chief Executive Officer of Sucampo Pharmaceuticals, Inc. (Nasdaq: SCMP), a global biopharmaceutical company.

"We are pleased to welcome an executive with Peter's extensive senior leadership experience to our Board of Directors," said President and CEO Paul Lammers, M.D., M.Sc. "His expertise driving the evolution of early-stage research to product development and commercialization will be invaluable as we advance our pipeline of microRNA-based oncology therapeutics."

Prior to joining Sucampo, Mr. Greenleaf served as CEO and a board member at Histogenics Corporation, a regenerative medicine company. Previously, he served as President of MedImmune LLC, the global biologics arm of AstraZeneca, where he led the expansion of MedImmune's pipeline to over 120 clinical and preclinical programs, and the commercialization of its marketed products.

"I am delighted to join the Board of Mirna Therapeutics, a pioneer in the emerging field of microRNA-based therapies," said Mr. Greenleaf. "And I look forward to working with the Board and management on Mirna's strategy and growth initiatives in the years ahead."

Mr. Greenleaf is a member of the Board of Directors of Mast Therapeutics, Inc. (NYSE MKT: MSTX). Additionally, he is a member of the Board of Directors of the Pharmaceutical Research and Manufacturers of America (PhRMA) and Biotechnology Industry Organization (BIO), for which he serves on the Governing Boards of the Emerging Companies Section and the Health Section. Mr. Greenleaf earned a bachelor's degree from Western Connecticut State University and a master's degree in business administration from St. Joseph's University.

About Mirna Therapeutics, Inc.

Mirna is a clinical-stage biopharmaceutical company developing a broad pipeline of microRNA-based oncology therapeutics and is the first to establish clinical proof-of-concept for a microRNA replacement therapy for cancer. Mirna's lead product candidate, MRX34, a mimic of naturally occurring microRNA-34 (miR-34), is currently being studied in a Phase 1 clinical trial in patients with primary liver cancer, advanced solid tumors and hematological malignancies. miR-34 is one of the most widely published microRNAs and is considered a key regulator of multiple oncogenes across key oncogenic pathways, with the capacity to regulate more than 30 different oncogenes and repress the immune checkpoint signaling molecule PD-L1. The potential capacity to simultaneously affect multiple pathways and processes that are critical to cancer cell viability may make mimics of tumor suppressor microRNAs potent anti-cancer agents and less susceptible to drug resistance. Mirna plans to develop MRX34 as a monotherapy and in combination with other therapeutic modalities, such as targeted therapies and immuno-oncology agents. The company was founded in 2007 and is located in Austin, Texas.

For more information, visit www.mirnarx.com.

Cautionary Note on Forward-Looking Statements

To the extent that statements contained in this press release are not descriptions of historical facts regarding Mirna, they are forward-looking statements reflecting the current beliefs and expectations of management made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995, including statements regarding the therapeutic potential of MRX34, our ability to advance our pipeline, and the nature of Mr. Greenleaf's service on our Board. Such forward-looking statements involve substantial risks and uncertainties that could cause our clinical development program, future results, performance or achievements to differ significantly from those expressed or implied by the forward-looking statements. Such risks and uncertainties include, among others, the uncertainties inherent in the clinical drug development process, including the outcomes of clinical trials, the regulatory approval process, our substantial dependence on MRX34, our commercialization plans and efforts and other matters that could affect the availability or commercial potential of our product candidates. Mirna undertakes no obligation to update or revise any forward-looking statements. For a further description of the risks and uncertainties that could cause actual results to differ from those expressed in these forward-

looking statements, as well as risks relating to our business in general, see our reports filed with the U.S. Securities and Exchange Commission (SEC), including our Quarterly Report on Form 10-Q filed with the SEC on November 13, 2015.

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