Aileron Therapeutics Announces Positive Nonclinical Myelopreservation Results for ALRN-6924 at the 2019 AACR-NCI-EORTC Conference

October 29, 2019

Nonclinical research results show that ALRN-6924 prevented the toxic side effects of chemotherapy in normal cells and enhanced the anti-cancer activity of chemotherapy

ALRN-6924 could enable a precision-medicine strategy to prevent the toxic side effects of chemotherapy in patients with p53-mutated cancer, representing approximately 50% of all patients with cancer

WATERTOWN, Mass., Oct. 29, 2019 (GLOBE NEWSWIRE) -- Aileron Therapeutics (NASDAQ:ALRN), the clinical-stage leader in the field of stabilized, cell-permeating peptides, presented new data at the 2019 AACR-NCI-EORTC Conference from nonclinical studies in which ALRN-6924, a dual inhibitor of MDM2 and MDMX, prevented chemotherapy-related toxicities in cellular studies and mouse models of cancer without limiting – and even enhancing – anti-cancer efficacy.

“Chemotherapy is widely used to treat – and often cure – millions of cancer patients each year, but chemotherapy is toxic and commonly causes severe or life-threatening side effects,” said Dr. Manuel Aivado, President and CEO of Aileron Therapeutics. “Based on the findings of our nonclinical studies and mechanism of ALRN-6924, we believe that patients with p53-mutant cancers who are treated with chemotherapy may suffer fewer and less severe chemotherapy-related side effects if ALRN-6924 is administered prior to chemotherapy.”

“Our nonclinical results show that ALRN-6924 significantly reduces the toxic effects of chemotherapy in normal, healthy bone marrow cells and gastrointestinal tissues,” stated Allen Annis, Aileron’s SVP of Research. “The results of these *in vivo* studies are impressive and suggest that ALRN-6924 activates the p53 gene to temporarily induce cell cycle arrest and prevent the toxic effects of chemotherapy in normal cells. Importantly, about half of all cancer patients have a mutation in the p53-gene. Our findings suggest that prophylactic use of ALRN-6924 can protect p53-wildtype normal cells while allowing chemotherapy to be effective against p53 mutant cancer cells. With this mechanism, we believe ALRN-6924 may enable a precision-medicine strategy to prevent chemotherapy-related toxicities in patients with p53-mutated cancer.”

The results presented at the conference show that low doses of ALRN-6924 trigger reversible cell cycle arrest in human bone marrow cells *ex vivo* and in mouse bone marrow cells *in vivo* to limit toxicity caused by topotecan, a chemotherapy used in small-cell lung cancer (SCLC) and other cancer indications. The results also show that gastrointestinal toxicity caused by topotecan is also reduced as a result of pretreatment with ALRN-6924, which we believe could potentially translate to the clinic as an improvement in gastrointestinal side effects of chemotherapy. In three p53-mutant tumor models, the anti-cancer activity of topotecan is not diminished, and in fact the results show that the anti-cancer activity is improved by administering ALRN-6924 prior to topotecan, a result that we believe may be due to stimulation of the immune system, which has previously been shown for ALRN-6924 and other p53-activating agents.

“Improving the tolerability of chemotherapy with ALRN-6924 has the potential to reduce dose delays and dose reductions. Such improved chemotherapy delivery and the potential stimulation of the immune system are two independent mechanisms that may enhance the anti-tumor effects of chemotherapy,” stated Dr. Vojislav Vukovic, Chief Medical Officer of Aileron. “While our first myelopreservation trial for ALRN-6924 is in SCLC patients treated with topotecan, we plan to develop ALRN-6924 as a tumor type-agnostic and chemotherapy-agnostic drug.”

Millions of cancer patients worldwide receive chemotherapy each year. Published literature indicates that p53 mutations are found in about 50% of those cancer patients.

ALRN-6924 is currently being evaluated in the dose-optimization phase 1b portion of a Phase 1b/2 myelopreservation trial designed to identify a recommended phase 2 dose for ALRN-6924 and to evaluate the safety and efficacy of ALRN-6924 in preventing or limiting toxicities caused by treatment with topotecan in SCLC patients. Based on Aileron’s nonclinical data, and contingent on results from the ongoing dose-optimization phase 1b, the Company plans to expand its clinical program in myelopreservation to include an additional Phase 1b cohort in non-small cell lung cancer patients treated with docetaxel, and a randomized expansion cohort of the Phase 1b SCLC trial to treat patients with alternating cycles of chemotherapy with and without ALRN-6924 (the “on/off” cohort) where each patient will serve as his/her own control. The Company expects to present key findings from the ongoing dose-optimization Phase 1b SCLC portion of the Phase 1b/2 myelopreservation trial in the second quarter of 2020.

Poster Presentation Details:
Conference: 2019 AACR-NCI-EORTC Conference on Molecular Targets and Cancer Therapeutics

Poster Title: “The Investigational Peptide Drug ALRN-6924, a Dual Inhibitor of MDMX and MDM2, is an Effective Myelopreservation Agent.”

The Aileron poster can be accessed via the following link:
http://share.aileronrx.com/posters/Aileron_AACR-NCI-EORTC_2019_Carvajal_Final.pdf

About ALRN-6924
ALRN-6924 is a first-in-class dual MDM2/MDMX inhibitor that is currently being evaluated as an anti-cancer agent in a Phase 2a clinical trial in combination with Pfizer’s palbociclib (Ibrance®) for the treatment of MDM2-amplified advanced solid tumors, and in a Phase 1b/2 clinical trial to evaluate ALRN-6924 as a myelopreservative agent to protect against chemotherapy-related toxicities.

About Aileron
Aileron is a clinical-stage biopharmaceutical company advancing a proprietary platform of cell-permeating alpha-helical peptides. The stabilized helical structure of our peptides allows the design of cell-permeating therapeutic agents with large molecular surfaces for optimal target binding properties, resulting in drug candidates like ALRN-6924. Our current focus is to improve the standard of care for patients with cancer by developing safe and effective therapies and cancer supportive care treatments that leverage our proprietary peptide platform. For more information, visit www.aileronrx.com, and for more information about our clinical trials please visit www.clinicaltrials.gov.

Forward-Looking Statements
Statements in this press release about Aileron's future expectations, plans and prospects, as well as any other statements regarding matters that are not historical facts, may constitute forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995. These statements include, but are not limited to, statements about the Company’s strategy and clinical development plans. The words “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “plan,” “potential,” “predict,” “project,” “should,” “target,” “would” and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, including whether Aileron’s cash resources will be sufficient to fund its continuing operations for the periods and/or trials anticipated, including the additional myelopreservation trials planned; whether results obtained in preclinical and nonclinical studies and clinical trials will be indicative of results obtained in future clinical trials; whether Aileron’s product candidates will advance through the clinical trial process on a timely basis, or at all; whether the results of such trials will warrant submission for approval from the United States Food and Drug Administration or equivalent foreign regulatory agencies; whether Aileron's product candidates will receive approval from regulatory agencies on a timely basis or at all; whether, if product candidates obtain approval, they will be successfully distributed and marketed; and other factors discussed in the "Risk Factors" section of Aileron's quarterly report on Form 10-Q for the period ended June 30, 2019, filed on August 6, 2019, and risks described in other filings that Aileron may make with the Securities and Exchange Commission. Any forward-looking statements contained in this press release speak only as of the date hereof, and Aileron specifically disclaims any obligation to update any forward-looking statement, whether because of new information, future events or otherwise.

Investors:
Aileron Therapeutics
Rick Wanstall, VP Finance & Operations
617-995-0900
rwanstall@aileronrx.com

Hans C. Vitzthum
LifeSci Advisors, LLC.
617-430-7578
hans@lifesciadvisors.com

Source: Aileron Therapeutics, Inc.