Aileron Therapeutics Announces Initiation of Randomized, Double-Blind, Placebo-Controlled Trial of ALRN-6924 in Patients with Advanced Non-Small Cell Lung Cancer (NSCLC)

July 1, 2021

- Phase 1b trial anticipated to enroll 60 patients with advanced p53-mutated NSCLC undergoing chemotherapy with first-line carboplatin plus pemetrexed
- Study will evaluate proportion of treatment cycles free of severe hematological and other toxicities, transfusions and the use of growth factors, as well as the impact on quality of life
- First interim safety data anticipated at the end of 2021 and final results mid-2022
- ALRN-6924 uses p53 mutation as biomarker to ensure selective chemoprotection of healthy cells without protecting cancer cells
- Nearly 1 million patients in the U.S. are diagnosed every year with p53-mutated cancer, including half of the approximately 190,000 NSCLC patients diagnosed in the U.S., annually[1]
- Aileron plans to ultimately pursue a tumor-agnostic indication for ALRN-6924 as chemoprotective agent for patients with p53-mutated cancer regardless of type of cancer or chemotherapy

BOSTON, July 01, 2021 (GLOBE NEWSWIRE) -- Aileron Therapeutics, Inc. (Nasdaq: ALRN) today announced that it has initiated a randomized, double-blind, placebo-controlled clinical trial in the US and in Europe of ALRN-6924 as a chemoprotective agent to treat patients with non-small cell lung cancer (NSCLC) undergoing chemotherapy. Aileron plans to enroll 60 patients with advanced p53-mutated NSCLC undergoing treatment with first-line carboplatin plus pemetrexed with or without immune checkpoint inhibitors in this Phase 1b trial. Aileron is developing ALRN-6924 to selectively protect healthy cells in patients with cancers that harbor p53 mutations to reduce or eliminate chemotherapy-induced side effects while preserving chemotherapy's attack on cancer cells, a concept known as chemoprotection.

"We are pleased to initiate this trial, which builds on promising data we previously reported from our proof-of-concept trial of ALRN-6924 in patients with small cell lung cancer (SCLC)," said Manuel Aivado, M.D., Ph.D., President and CEO of Aileron. "This NSCLC trial represents important progress in our clinical development strategy, as it involves a p53-mutated cancer indication that affects one of the largest cancer patient populations, and it is our first randomized, double-blind, placebo-controlled trial. In addition, the trial is designed to help us further advance our ultimate goal of pursuing a tumor-agnostic indication for ALRN-6924 as a chemoprotective agent for patients with p53-mutated cancers regardless of type of cancer or chemotherapy, with the potential to help millions of patients."

[1] American Cancer Society

Nashat Gabrail, M.D., founder of the Gabrail Cancer Center in Canton, Ohio, President of Innovative Community Oncology Practices (ICOP) and an investigator in the ALRN-6924 NSCLC trial, commented, "Proactively protecting patients against chemotherapy-induced toxicities that impact bone marrow cells and other cells throughout the body closely aligns with our mission to improve the health and quality of life for patients. This is a significantly unaddressed need impacting nearly every patient who undergoes chemotherapy. When devising treatment strategies for today's cancer patients, the use of targeted therapies is certainly preferred when possible. We are proud to participate in this trial to help explore the potential of ALRN-6924 as a novel chemoprotective agent that utilizes a biomarker-driven approach, thereby potentially bringing the promise of precision medicine to the field of supportive care drugs."

Patients enrolled in Aileron's NSCLC trial will be randomized 1:1 to receive carboplatin/pemetrexed plus 0.3 mg/kg ALRN-6924 or placebo for at least four 21-day treatment cycles. Primary endpoints are the proportion of treatment cycles free of severe hematological and other toxicities, including Grade ≥ 3 neutropenia, Grade ≥ 3 thrombocytopenia, Grade ≥ 3 anemia, Grade 4 neutropenia and febrile neutropenia, as well as duration of Grade 4 neutropenia. An additional primary endpoint is the proportion of completed treatment cycles without chemotherapy dose reduction or without the use of growth factors or transfusions. Other endpoints include the proportion of patients with National Cancer Institute (NCI) Common Terminology Criteria Adverse Events (CTCAE) Grade 3/4 treatment-emergent adverse events (TEAEs), quality of life, overall response rate, and progression-free survival.

Aileron anticipates reporting first interim safety data from the trial late in the fourth quarter of 2021 and full results in mid-2022.

The NSCLC trial follows Aileron's presentation in October 2020 of clinical data from its completed Phase 1b clinical trial of ALRN-6924 in SCLC

demonstrating clinical proof-of-concept that treatment with ALRN-6924 resulted in a protective effect against severe anemia, thrombocytopenia and neutropenia in patients with p53-mutated SCLC treated with topotecan. A link to the SCLC presentation can be found here.

About ALRN-6924
Aileron is developing ALRN-6924, a novel chemoprotective medicine, to selectively protect healthy cells in patients with cancers that harbor p53 mutations to reduce or eliminate chemotherapy-induced side effects.

Chemotherapy preferentially acts on cells that are cycling, i.e. undergoing the process of cell division. In cancer cells, the cell cycle is unchecked, which leads to uncontrolled cell proliferation, a hallmark of cancer. Certain types of healthy cells also naturally need to cycle, such as bone marrow cells, hair follicle cells, skin cells, and cells lining the oral cavity and the gastrointestinal tract. As a result, chemotherapy preferentially targets and kills both cycling healthy cells and cycling cancer cells. This, in turn, can lead to a spectrum of chemotherapy-induced side effects, from unpleasant to life-threatening and fatal.

ALRN-6924, an investigational first-in-class MDM2/MDMX dual inhibitor, is administered prior to chemotherapy to patients with p53-mutant cancers. ALRN-6924 is designed to activate normal p53 protein in patients' healthy cells, temporarily and reversibly pausing cell cycling to selectively shield the patients' healthy cells from chemotherapy. The protection is limited to healthy cells, as ALRN-6924 cannot work in p53-mutated cancer cells given that mutated p53 has lost its function in those cells. Therefore, p53-mutated cancer cells continue to cycle uninterrupted and remain fully susceptible to being killed by chemotherapy.

About Aileron
Aileron is a clinical stage chemoprotection oncology company focused on fundamentally transforming the experience of chemotherapy for cancer patients. ALRN-6924, our first-in-class MDM2/MDMX dual inhibitor activating p53, is the only reported chemoprotective agent in clinical development to employ a biomarker strategy, in which we exclusively focus on treating patients with p53-mutated cancers. Our precision medicine-driven strategy is designed to selectively protect multiple healthy cell types throughout the body from chemotherapy while ensuring we do not protect cancer cells. As a result, healthy cells are spared from chemotherapeutic destruction while chemotherapy continues to kill cancer cells. By reducing or eliminating multiple chemotherapy-induced side effects, ALRN-6924 may improve patients' quality of life by enabling them to better tolerate chemotherapy. It also may save patients' lives by helping them avoid life-threatening chemotherapy-related events such as severe neutropenia and febrile neutropenia. Additionally, enhanced tolerability may result in fewer dose reductions or delays of chemotherapy and the potential for improved efficacy.

Our vision is to bring chemoprotection to patients with p53-mutated cancers, which represent approximately 50% of cancer patients, regardless of type of cancer or chemotherapy. Visit us at www.aileronrx.com to learn more.

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 anticipated or with respect to the matters anticipated; whether results of clinical trials will be indicative of results obtained in later clinical trials, including trials in different indications; whether ALRN-6924 will advance through the clinical trial process on a timely basis, or at all; whether the results of such trials will be accepted by and warrant submission for approval from the United States Food and Drug Administration or equivalent foreign regulatory agencies; whether ALRN-6924 will receive approval from regulatory agencies on a timely basis or at all; whether, if ALRN-6924 obtains approval, it will be successfully distributed and marketed; uncertainties as to the impact the coronavirus pandemic may have on the timing of our clinical development, clinical supply and our operations; and other factors discussed in the "Risk Factors" section of Aileron's quarterly report on Form 10-Q for the quarter ended March 31, 2021, filed on May 11, 2021, 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.

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