Aileron Therapeutics Provides Business Update and Outlines 2021 Strategic Priorities

December 21, 2020

- Aileron's 2021 strategic priorities aim to advance its vision to bring chemoprotection to all patients with p53-mutant cancers regardless of cancer indication or chemotherapy. Key anticipated milestones include:

  -- Initiate Phase 1b randomized, placebo-controlled clinical trial of novel chemoprotective agent ALRN-6924 in patients with advanced non-small cell lung cancer (NSCLC) receiving first-line carboplatin doublet chemotherapy in second quarter 2021, advancing ALRN-6924 clinical development into a large cancer indication
  -- Report initial results from Phase 1b NSCLC clinical trial in fourth quarter 2021
  -- Report additional results from ongoing Phase 1b proof-of-concept clinical trial of ALRN-6924 in patients with small cell lung cancer receiving topotecan in first quarter 2021

WATERTOWN, Mass., Dec. 21, 2020 (GLOBE NEWSWIRE) -- Aileron Therapeutics (NASDAQ:ALRN) today provided a business update and outlined its strategic priorities for 2021, including announcing more details about the design and conduct of a Phase 1b randomized, double-blind, placebo-controlled clinical trial of ALRN-6924 in patients with advanced non-small cell lung cancer (NSCLC) undergoing treatment with first-line carboplatin doublet chemotherapy (with or without immune checkpoint inhibitors), planned to begin enrolling in the second quarter of 2021. Aileron is developing ALRN-6924 as a novel medicine 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 activity on cancer cells, a concept known as chemoprotection.

"2020 has been a year of important progress for Aileron, most notably achieving clinical proof-of-concept for ALRN-6924 as a chemoprotective agent in patients with p53-mutated small cell lung cancer (SCLC) undergoing treatment with topotecan," said Manuel Aivado, M.D., Ph.D., President and Chief Executive Officer of Aileron. "In 2021, we aim to make further strides in our clinical development efforts by initiating a randomized, placebo-controlled trial of ALRN-6924 in patients with advanced NSCLC. This trial represents a key step toward advancing our vision to bring chemoprotection to all patients with p53-mutant cancer regardless of cancer type or chemotherapy. We believe chemoprotection has the potential to transform chemotherapy similar to the way anesthesia transformed surgery."

Dr. Aivado further commented, "February 2021 will mark a critical milestone for the emerging chemoprotection field – the first PDUFA date of a chemoprotective agent. While that therapeutic's focus is myelopreservation, or the concept of protecting bone marrow cells from chemotherapy-induced toxicities, we view chemoprotection's potential through a broader lens. We believe that, due to its mechanism of action, ALRN-6924 may have the potential not only to protect bone marrow cells from chemotherapy but also to protect other cell types, such as hair follicle cells and cells lining the oral cavity, among others. Currently there are no therapies to prevent hair loss or the painful mouth sores that patients undergoing chemotherapy often experience due to chemotherapy's destruction of healthy cells."

Aileron Strategic Priorities and Anticipated Key Value Drivers in 2021

Initiate Phase 1b Randomized, Double-Blind, Placebo-Controlled Clinical Trial in First-Line NSCLC and Report Initial Data

Today, Aileron announced additional details about its planned Phase 1b clinical trial of ALRN-6924 in patients with advanced NSCLC. The company plans to begin patient enrollment in the second quarter of 2021, subject to obtaining funding for the trial, and expects that the randomized, double-blind, placebo-controlled trial will be part of a registration program designed to ultimately support approval for ALRN-6924 in NSCLC. Aileron anticipates enrolling approximately 40 patients with stage IV NSCLC undergoing treatment with first-line carboplatin doublet chemotherapy with or without an immune checkpoint inhibitor. Patients will be randomized 1:1 to receive either 0.3 mg/kg of ALRN-6924 or placebo. Endpoints will include the effect of ALRN-6924 to limit chemotherapy-induced bone marrow toxicities. Aileron anticipates reporting initial results from the trial late in the fourth quarter of 2021 and full results mid-2022.

In the U.S. alone, there are nearly 200,000 new cases of NSCLC diagnosed each year, and an estimated 50% or more of patients with NSCLC have p53-mutated cancer.[1,2] Across all cancer types, there are an estimated 1.8 million patients in the U.S. diagnosed each year, and an estimated 50% of all cancer patients have p53-mutated cancer.[1,3]

Report Data Readouts from Ongoing Phase 1b Clinical Trial of ALRN-6924 in SCLC and Ongoing Healthy Volunteer Study

In 2021, Aileron plans to report additional results from its ongoing Phase 1b clinical trial in patients with SCLC. In October 2020, Aileron presented positive clinical data from the trial 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. The data set from this trial, which Aileron plans to announce in the first quarter of 2021, will include results across all dose levels evaluating ALRN-6924 administered 24 hours prior to topotecan administration ("24-hr schedule"), including an exploratory 0.2 mg/kg dose level, as well as results from a cohort evaluating 0.3 mg/kg ALRN-6924 administered six hours prior to topotecan administration ("6-hr schedule"), which has now completed enrollment, with a total of six patients. In addition, Aileron initiated a healthy volunteer study in November 2020 to characterize the time to onset, and magnitude and duration of cell cycle arrest in human bone marrow relative to ALRN-6924 administration. Due to COVID-19-related delays, Aileron is updating its guidance on the readout of the healthy volunteer study from the second quarter of 2021 to mid-2021.

"We expect that, taken together, these additional results from the Phase 1b clinical trial of ALRN-6924 in patients with small cell lung cancer and the results from the healthy volunteer study, will further inform and support future randomized, controlled trials of ALRN-6924 when given prior to various chemotherapies," said Dr. Aivado.

How ALRN-6924 Is Designed to Protect Healthy Cells from Chemotherapy

ALRN-6924 is being developed by Aileron as 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 or 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 p53 has lost its function in those cells. Therefore, cancer cells continue to cycle uninterrupted and remain fully susceptible to destruction by chemotherapy.

About Aileron Therapeutics

At Aileron, we are focused on transforming the experience of chemotherapy for cancer patients, enabling them to fight cancer without the fear or burden of chemotherapy-induced side effects. 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. With this unique, targeted strategy, ALRN-6924 is designed to protect multiple healthy cell types throughout the body from chemotherapy while chemotherapy continues to destroy cancer cells.

In addition to potentially reducing or eliminating multiple side effects, ALRN-6924 may also improve patients' quality of life and help them better tolerate chemotherapy, potentially allowing patients to complete their treatment without dose reductions or delays. Our vision is to bring chemoprotection to patients with p53-mutated cancers – approximately 50% of cancer patients – regardless of cancer type or chemotherapy. Visit us at 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; whether the Company will obtain sufficient cash resources to conduct its planned clinical trials; whether initial results of clinical trials will be indicative of final results of those trials or 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 be accepted by and 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; what 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 period ended September 30, 2020, filed on November 12, 2020, 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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[1] American Cancer Society. “Cancer Facts & Figures 2020.” Atlanta: American Cancer Society.

[2] The AACR Project GENIE Consortium. “AACR Project GENIE: powering precision medicine through an international consortium.” Cancer Discovery. 2017;7(8):818-831.

[3] Hoe, K., Verma, C., and Lane, D.P., “Drugging the p53 pathway: understanding the route to clinical efficacy.” Nature Reviews Drug Discovery. 2014;13:218-236.