Mural Oncology Presents Clinical Data from ARTISTRY-3 at the American Society of Clinical Oncology Annual Meeting

May 23, 2024

ARTISTRY-3 trial is being conducted to evaluate less frequent dosing of nemvaleukin alfa, Mural's late-stage lead candidate

Nemvaleukin demonstrated pharmacodynamic proof of mechanism in ARTISTRY-3 and was generally well-tolerated at all doses tested

Less frequent dosing regimen, a shift from five daily infusions to two infusions per three-week cycle, is being evaluated as both a single agent and in combination with pembrolizumab in patients with cutaneous melanoma in ARTISTRY-6. Preliminary data readouts from the cohorts are expected in 2025

WALTHAM, Mass. and DUBLIN, May 23, 2024 (GLOBE NEWSWIRE) -- Mural Oncology plc (Nasdaq: MURA), a clinical-stage immuno-oncology company developing novel, investigational engineered cytokine therapies designed to address areas of unmet need for patients with a variety of cancers, today shared data from ARTISTRY-3, a clinical trial designed to evaluate the effects of less frequent intravenous dosing (LFIV) of nemvaleukin alfa (nemvaleukin), in advance of the American Society of Clinical Oncology (ASCO) annual meeting taking place May 31-June 4 in Chicago.

Nemvaleukin, Mural's lead candidate, is an investigational, engineered interleukin-2 (IL-2) cytokine designed to capture and expand the therapeutic benefits of high-dose native IL-2 while mitigating the cytokine's hallmark toxicities. In ARTISTRY-1, the company sought to recapitulate the results of high-dose IL-2 by mimicking its dosing regimen with five daily intravenous (IV) infusions (days 1-5) per three-week cycle. In the ARTISTRY-3 trial, the company evaluated escalating LFIV infusions, all of which were generally well tolerated. The safety profile in all dosing schedules evaluated was consistent with nemvaleukin's known mechanism of action, and no dose limiting toxicities were observed. Despite administering higher doses per three-week dosing cycle than in previous trials evaluating nemvaleukin with daily infusions, no new safety signals were identified. The desired pharmacodynamic (PD) effects were also seen across all evaluated doses. Expansion of antitumor CD8+ T cells and natural killer (NK cells) was observed concurrent with minimal expansion of immunosuppressive regulatory T cells (T_{regs}).

"Nemvaleukin demonstrated deep and durable responses in previous trials, so we sought an adapted dosing schedule to make treatment administration easier on patients and providers alike. All dosing schedules tested in ARTISTRY-3 demonstrated the desired pharmacodynamic effects, including expansion of immune-stimulating NK and CD8+ cells, with only minimal expansion of immunosuppressive T_{regs}. Notably, despite significantly increasing the doses, we observed no new tolerability issues compared to previous studies of nemvaleukin," said Sarina Piha-Paul, MD, Associate Professor, Department of Investigational Cancer Therapeutics at The University of Texas MD Anderson Cancer Center and the poster's lead author.

After a comprehensive review of the safety, pharmacokinetics, PD, and efficacy data across the evaluated schedules and doses, and in collaboration with Mural's safety review committee, Mural selected a 30 µg/kg dose on day 1 and day 8 as the recommended phase 2 dose. Mural believes that this seven-day window offers more time for patient recovery and allows for more flexibility both for patients and providers.

The new less frequent dosing regimen with the 30 µg/kg dose, which delivers twice the dose of nemvaleukin over a three-week cycle as the standard five-day dosing regimen, is being evaluated as both a single agent and in combination with pembrolizumab in patients with cutaneous melanoma in cohort 3 and cohort 4 of Mural's ARTISTRY-6 clinical trial. Mural expects to provide preliminary data readouts from cohort 3 in the first half of 2025 and from cohort 4 in the second half of 2025.

"ARTISTRY-3 was designed to assess whether a more patient-friendly dosing schedule could maximize the dose of nemvaleukin without any additional tolerability issues. The data presented at ASCO demonstrated PD proof of mechanism and promising tolerability across all three dosing schedules. We are immediately incorporating this new dosing regimen into additional cohorts of ARTISTRY-6, our phase 2 trial of nemvaleukin," said Caroline Loew, Ph.D., CEO of Mural Oncology. "IL-2 has proven to be efficacious in cutaneous melanoma and these open label cohorts of the ARTISTRY-6 trial may yield an early signal regarding the potential of our alternative dosing both as a monotherapy therapy and in combination with pembrolizumab."

The details for the presentation are as follows, and the poster will be available on June 1 at https://www.muraloncology.com/publications/.

Recommended Phase 2 Dose (RP2D) of Nemvaleukin Alfa in Patients With Advanced Solid Tumors Treated With Less Frequent Intravenous Dosing (ARTISTRY-3)

Session: Developmental Therapeutics – Immunotherapy

Date and time: June 1, 2024, 9 a.m. CDT

Abstract #: 2587

Speaker/lead author: Sarina Piha-Paul, MD

About Nemvaleukin

Nemvaleukin alfa is a novel, engineered cytokine designed to leverage antitumor effects of the IL-2 pathway while mitigating its hallmark toxicities that limit its use. Nemvaleukin selectively binds to the intermediate-affinity IL-2 receptor (IL-2R) and is sterically occluded from binding to the high-affinity IL-2R. Because of this molecular design, nemvaleukin treatment leads to preferential expansion of antitumor CD8+ T cells and natural killer cells, with minimal expansion of immunosuppressive regulatory T cells. Nemvaleukin demonstrated deep and durable responses in both monotherapy and combination therapy in ARTISTRY-1, Mural Oncology's first Phase 1/2 trial of nemvaleukin.

Nemvaleukin is currently being evaluated in two potentially registrational trials in platinum- resistant ovarian cancer and mucosal melanoma.

About the ARTISTRY-3 Clinical Trial

ARTISTRY-3 is a Phase 1/2 open-label trial of IV nemvaleukin in patients with selected advanced solid tumors who have previously received standard of care treatment(s). The trial is evaluating doses between 10 µg/kg and 40 µg/kg across three dosing regimens: once per three-week dosing cycle; days 1 and 8 of a three-week dosing cycle; and days 1 and 4 of a three-week dosing cycle.

About Mural Oncology

Mural Oncology is leveraging its novel protein engineering platform to develop cytokine-based immunotherapies for the treatment of cancer. By combining our expertise in cytokine biology and immune cell modulation and our protein engineering platform, we are developing medicines to deliver meaningful and clinical benefits to people living with cancer. Our mission is to broaden the potential and reach of cytokine-based immunotherapies to improve the lives of patients. Our lead candidate, nemvaleukin, is currently in potentially registrational trials in mucosal melanoma and platinum-resistant ovarian cancer. Mural Oncology has its registered office in Dublin, Ireland, and its primary facilities in Waltham, Mass. For more information, visit Mural Oncology's website at www.muraloncology.com and follow us on LinkedIn and X.

Forward-Looking Statements

Statements contained in this press release regarding matters that are not historical facts are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Because such statements are subject to risks and uncertainties, actual results may differ materially from those expressed or implied by such forward-looking statements. Such statements include, but are not limited to, statements regarding: the company's pipeline and development programs, including the expected timing of clinical updates from the ARTISTRY-6 trial, the potential of the company's product candidates and programs to address unmet medical needs, and the continued progress of its pipeline and programs. Any forward-looking statements in this statement are based on management's current expectations of future events and are subject to a number of risks and uncertainties that could cause actual results to differ materially and adversely from those set forth in or implied by such forward-looking statements. Risks that contribute to the uncertain nature of the forward-looking statements include, among others, the inherent risks and uncertainties associated with competitive developments, preclinical development, clinical trials, recruitment of patients, product development activities and regulatory approval requirements; that preclinical or interim results and data from ongoing clinical studies of the company's cytokine programs and product candidates, including ARTISTRY-3, may not be predictive of future or final results from such studies, results of future clinical studies or real-world results; future clinical trials or future stages of ongoing clinical trials may not be initiated or completed on time or at all; the company's product candidates, including nemvaleukin, could be shown to be unsafe or ineffective; changes in the cost, scope and duration of development activities; the U.S. Food and Drug Administration may make adverse decisions regarding the company's product candidates; and those other risks and uncertainties set forth in the company's filings with the Securities and Exchange Commission ("SEC"), including its Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2024 and in subsequent filings the company may make with the SEC. All forward-looking statements contained in this press release speak only as of this press release. The company anticipates that subsequent events and developments will cause its views to change. However, the company undertakes no obligation to update such statements to reflect events that occur or circumstances that exist after the date of this press release, except as required by law.

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