Gritstone bio Presents Advances in Neoantigen Prediction and Cancer Vaccine Immunogenicity at the 2023 AACR Annual Meeting

April 17, 2023

-- Longitudinal analysis of GRANITE recipients (personalized vaccine candidate now in Phase 2/3 for MSS-CRC) demonstrates vaccine-elicited priming and boosting of antigen-specific T cell populations associated with conversion of "cold" to "hot" tumors and molecular responses --

-- Advances in EDGE™ models (Gritstone's AI-driven neoantigen prediction platform) enable best-in-class prediction of class II HLA-presented neoantigens that could drive CD4$^+$ T cell responses --

-- A novel KRAS G12C class II epitope is described, with evidence of clinical benefit associated with vaccine-elicited T cell response --

EMERYVILLE, Calif., April 17, 2023 (GLOBE NEWSWIRE) -- Gritstone bio, Inc. (Nasdaq: GRTS), a clinical-stage biotechnology company working to develop the world's most potent vaccines, is delivering three presentations related to the company's neoantigen vaccine programs and capabilities at the 2023 American Association for Cancer Research (AACR) Annual Meeting in Orlando, Florida. An oral presentation (minisymposium) on April 16 highlighted data from the Phase 1/2 study of GRANITE, the company's personalized (also referred to as "individualized") neoantigen vaccine program which is now in a randomized Phase 2/3 study for first-line microsatellite-stable colorectal cancer (MSS-CRC). The poster presentations, occurring April 17 and 18, will address the company's proprietary neoantigen prediction capabilities (EDGE™) and "off-the-shelf" neoantigen vaccine program, SLATE.

"Gritstone was originally founded to create best-in-class personalized and 'off-the-shelf' cancer vaccines through deep learning-enabled neoantigen prediction and deployment of potent vaccine platforms that drive robust T cell responses against delivered neoantigens. These presentations at AACR highlight our continued progress in this endeavor," said Andrew Allen, M.D., Ph.D., Co-founder, President, and Chief Executive Officer of Gritstone bio. "Our antigen prediction platform, EDGE™, which we believe leads the field in neoantigen prediction, is being enhanced to identify class II HLA-presented neoantigens. Within the SLATE program, we have identified a novel KRAS class II epitope that may carry additional clinical utility beyond CD8$^+$ T cell responses. And continued evaluation of GRANITE, our personalized vaccine candidate for which we expect preliminary Phase 2/3 data in the fourth quarter of 2023, reinforces the potential of our personalized approach to unlock MSS-CRC and other cold tumors."

"These presentations demonstrate our commitment to understanding and leveraging foundational immunology and biology aspects to enhance our development of best-in-class vaccines for solid tumors," said Karin Jooss, Ph.D., Executive Vice President, and Head of R&D. "Optimizing the ability of EDGE™ to better predict HLA class II restricted neoantigens can help drive more comprehensive T cell responses. The importance of broad T cell immunity is reinforced by vaccine induction of both cytolytic CD8$^+$ and CD4$^+$ T cells following treatment with SLATE, offering the potential to expand patient eligibility irrespective of HLA alleles. We believe longitudinal ctDNA monitoring can offer effective real-time assessment of clinical response and monitor for acquired resistance, as evident by the ongoing survival benefit seen in GRANITE to date that correlates with expansion of T cells in the periphery and tumor."

GRANITE Phase 1/2 Presentation (Minisymposium): Disease monitoring with comprehensive genomics provides evidence of mechanism of action and immune evasion in patients receiving an individualized neoantigen cancer vaccine
Presenter: Matthew Davis, PhD
Key Highlights:

- Comprehensive ctDNA longitudinal monitoring enables real-time assessment of clinical response and acquired resistance
- Paired pre- and post-vaccine biopsy analyses show upregulation of gene signatures associated with immune infiltration, supporting T cell expansion and induction of dynamic T cell receptor (TCR) repertoire changes in the tumor and periphery
- Majority of neoantigens are retained in tumor even after patient receives treatment prior to GRANITE administration
- Neoantigen-directed immunotherapy drives durable immune pressure on the tumor of patients with advanced disease where checkpoint inhibitors alone have provided minimal benefit

EDGE™ (Epitope Discovery for Genomes Platform) Presentation (Poster Presentation): Language modeling of peptide-HLA interactions achieves state-of-the-art performance on prediction of peptide presentation by HLA Class II
Presenter: Ankur Dhanik, PhD
Key Highlights:

- While cytotoxic CD8+ T cells are critical to tumor control and clearance, CD4+ T cells can play a key role for the induction component of durable anti-tumor responses
- Accurate prediction of immunogenic HLA Class II restricted neoantigens, which drive CD4$^+$ T cell response, can further vaccine immunogenicity and durability
- Gritstone's EDGE™ platform capabilities have been enhanced to include state-of-the-art immunogenicity prediction of peptide presentation by HLA Class II with significant performance improvements over current approaches
- Expanding the prediction capabilities of EDGE™ to include both HLA Class I and II neoantigens can help identify neoantigens with potential to mount broader and more robust overall immune responses

SLATE Phase 1/2 Presentation (Poster Presentation): HLA-DR-restricted $CD4^+$ T cell responses to KRAS G12C in healthy donors linked to bacterial mimotope: lessons for KRAS neoantigen vaccines in cancer patients
Presenter: Christine Palmer, PhD
Key Highlights:

- Vaccines targeting KRAS mutations may overcome the challenges of acquired resistance encountered with small molecule-based approaches targeting KRAS mutations
- Study links $CD4^+$ T cell responses to KRAS G12C in healthy donors to a bacterial mimotope
- Data from healthy donors and from a SLATE patient show responses to KRAS G12C are driven by $CD4^+$ T cells with cytotoxic capabilities likely driven by TCRs with cross-reactivity to a bacterial mimotope
- SLATE induction of both $CD8^+$ (Class I driven) and $CD4^+$ (Class II driven) T cell responses may expand patient eligibility to potentially include subjects harboring a KRAS G12C mutation irrespective of HLA alleles

**Both the GRANITE and SLATE-KRAS studies administered Gritstone's cancer vaccine in combination with nivolumab and subcutaneous anti-CTLA-4 antibody ipilimumab.*

Copies of these presentations will be available on the Gritstone bio website following the conclusion of each presentation. To view Gritstone's AACR presentations, visit ir.gritstonebio.com/investors/events.

About Gritstone bio
Gritstone is working to create the world's most potent vaccines. We leverage our innovative vectors and payloads to train multiple arms of the immune system to attack critical disease targets and have programs in viral diseases and solid tumors. Independently and with our partners, we are advancing a portfolio of product candidates with the aim of improving patient outcomes and eliminating disease. www.gritstonebio.com

Gritstone Forward-Looking Statements
This press release contains forward-looking statements, including, but not limited to, statements related to the potential of Gritstone's therapeutic programs; the advancements in Gritstone's ongoing clinical trials; the timing of data announcements related to ongoing clinical trials and the initiation of future clinical trials. Such forward-looking statements involve substantial risks and uncertainties that could cause Gritstone's research and clinical development programs, 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 drug development process, including Gritstone's programs' clinical stage of development, the process of designing and conducting preclinical and clinical trials, the regulatory approval processes, the timing of regulatory filings, the challenges associated with manufacturing drug products, Gritstone's ability to successfully establish, protect and defend its intellectual property and other matters that could affect the sufficiency of existing cash to fund operations. Gritstone 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 the business of the company in general, see Gritstone's most recent Annual Report on Form 10-K filed on March 9, 2023 and any current and periodic reports filed with the Securities and Exchange Commission.

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