Verastem Publishes Scientific Data on Targeting Mesothelioma Cancer Stem Cells in Science Translational Medicine

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- Study Demonstrates Increased Efficacy of FAK Inhibition in Pre-clinical Models of Merlin-negative Mesothelioma -

CAMBRIDGE, Mass.--(BUSINESS WIRE)--May 27, 2014-- Verastem, Inc. (NASDAQ:VSTM), focused on discovering and developing drugs to treat cancer by the targeted killing of cancer stem cells, today announced that a paper, entitled “Merlin Deficiency Predicts FAK Inhibitor Sensitivity: A Synthetic Lethal Relationship,” has been published by Verastem scientists in the latest issue of the journal Science Translational Medicine (Vol. 6, Issue 237, p. 237ra68).

The paper describes the finding that loss of the tumor suppressor merlin predicts for increased responsiveness to drugs targeting cancer stem cells through inhibition of focal adhesion kinase (FAK). Since merlin loss is particularly prevalent in mesothelioma (approximately 50% of patients), the efficacy of FAK inhibition was demonstrated in several cellular and *in vivo* mesothelioma models. The publication further describes the strong tumor-initiating capability of mesothelioma cancer stem cells and the observation that the standard of care agents pemetrexed and cisplatin augment cancer stem cells. In contrast, FAK inhibition effectively reduces cancer stem cells in preclinical models of mesothelioma.

“These data demonstrate that FAK inhibition is particularly effective in models of merlin-negative mesothelioma,” said Jonathan Pachter, Ph.D., Verastem Head of Research. “These results build upon key findings published earlier this year by our collaborators at Fox Chase Cancer Center which demonstrated that merlin loss drives the development of highly aggressive malignant mesothelioma which is enriched for cancer stem cells. Accordingly, in a merlin-negative mesothelioma patient-derived tumor model, FAK inhibitor treatment as maintenance therapy prolonged the inhibition of tumor growth following treatment with pemetrexed and cisplatin.”

Collectively, these observations provide the scientific basis for Verastem’s ongoing registration-directed clinical trial of the FAK inhibitor VS-6063 in patients with mesothelioma following treatment with pemetrexed (Alimta®) plus platinum (ClinicalTrials.gov NCT01870609).

The Science Translational Medicine paper can be accessed at http://bit.ly/RWbTH9

The Cancer Research paper from Fox Chase Cancer Center can be accessed at http://bit.ly/1bnjwiS

About Malignant Pleural Mesothelioma

Malignant pleural mesothelioma is an aggressive form of cancer that occurs in the mesothelium, the thin layer of tissue that covers the lungs. Mesothelioma is associated with exposure to asbestos in most cases. According to the World Health Organization, there are a total of 59,000 cases of mesothelioma worldwide each year. Most mesotheliomas begin as one or more nodules that progressively grow to form a solid coating of tumor surrounding the lung leading to eventual suffocation and death. A high percentage of mesotheliomas contain cancer stem cells which are generally resistant to the currently available treatment options for mesothelioma.

About VS-6063

VS-6063 (defactinib) is an orally available compound designed to target cancer stem cells through the potent inhibition of focal adhesion kinase (FAK). Cancer stem cells are an underlying cause of tumor resistance to chemotherapy, recurrence and ultimate disease progression. Research by Robert Weinberg, Ph.D., scientific cofounder and chair of Verastem’s Scientific Advisory Board, and Verastem has demonstrated that the FAK pathway is critical for the growth and survival of cancer stem cells. VS-6063 is currently being studied in the registration-directed COMMAND trial in mesothelioma (www.COMMANDmeso.com), a Phase 1/1b study in combination with paclitaxel for patients with ovarian cancer and a Phase 2 trial in patients with KRas-mutated non-small cell lung cancer. VS-6063 has been granted orphan drug designation in the U.S. and E.U. for use in mesothelioma.

About COMMAND

COMMAND is a registration-directed, double-blind, placebo-controlled trial of VS-6063 with Progression Free Survival (PFS) and Overall Survival (OS) as the primary endpoints. VS-6063 targets cancer stem cells. Cancer stem cells are an underlying cause of tumor progression and recurrence. The design of COMMAND allows the opportunity to enrich for patients with tumors low in the biomarker, merlin. Preclinical and early clinical research has demonstrated that low merlin levels may be predictive of increased effectiveness of FAK inhibitors such as VS-6063. The COMMAND study stratifies patients to evaluate the effect of VS-6063 in both the overall patient population and the subgroup of patients whose tumors are low in merlin.

COMMAND is expected to enroll approximately 350-400 patients at clinical sites in 12 countries, including the US, UK, Japan, Australia, Canada, South Africa, New Zealand and countries in mainland Europe. Eligible patients who had a partial response or stable disease following standard first-line therapy with platinum/pemetrexed will be stratified to merlin low or high and then randomized to receive either placebo or 400 mg of defactinib. For more information visit www.COMMANDmeso.com

About VS-4718

VS-4718 is an orally available compound designed to target cancer stem cells through the potent inhibition of focal adhesion kinase (FAK). VS-4718 is currently being studied in a Phase 1 dose escalation study in patients with advanced cancers.

About Verastem, Inc.

Verastem, Inc. (NASDAQ:VSTM) is discovering and developing drugs to treat cancer by the targeted killing of cancer stem cells. Cancer stem cells are an underlying cause of tumor recurrence and metastasis. Verastem is developing small molecule inhibitors of signaling pathways that are critical to cancer stem cell survival and proliferation: FAK, PI3K/mTOR and Wnt. For more information, please visit www.verastem.com.

Forward-looking statements:

This press release includes forward-looking statements about the Company's strategy, future plans and prospects, including statements regarding the development of the Company's compounds, including VS-6063, or defactinib, and the Company's FAK inhibition program, the timeline for clinical development and regulatory approval of the Company's compounds, the expected timing for the reporting of data from ongoing trials, and the structure of the Company's planned or pending clinical trials, and potential indications for clinical development. The words "anticipate," "appear," "believe," "estimate," "expect," "intend," "may," "plan," "predict," "project," "target," "potential," "will," "would," "could," "should," "continue," and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Each forward-looking statement is subject to risks and uncertainties that could cause actual results to differ materially from those expressed or implied in such statement. Applicable risks and uncertainties include the risks that the preclinical testing of the Company's compounds and preliminary data from clinical trials may not be predictive of the results or success of ongoing or later clinical trials, that data may not be available when we expect it to be, that enrollment of clinical trials may take longer than expected, that the Company will be unable to successfully complete the clinical development of its compounds, including VS-6063, that the development of the Company's compounds will take longer or cost more than planned, and that the Company's compounds will not receive regulatory approval or become commercially successful products. Other risks and uncertainties include those identified under the heading "Risk Factors" in the Company's Annual Report on Form 10-K for the year ended December 31, 2013 and in any subsequent SEC filings. The forward-looking statements contained in this presentation reflect the Company's current views with respect to future events, and the Company does not undertake and specifically disclaims any obligation to update any forward-looking statements.

Source: Verastem, Inc.

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