Verastem Presents Phase 2 DYNAMO® Clinical Data at ASH 2016 Annual Meeting

December 6, 2016

Duvelisib Treatment Results in a 46% ORR in Patients with Double Refractory Indolent Non-Hodgkin Lymphoma

BOSTON--(BUSINESS WIRE)--Dec. 5, 2016-- Verastem, Inc. (NASDAQ:VSTM), focused on discovering and developing drugs to treat cancer, today announced the presentation of results from the DYNAMO® study, a Phase 2 clinical trial evaluating the safety and efficacy of duvelisib in patients with indolent non-Hodgkin lymphoma (iNHL) that is double refractory to both rituximab and chemotherapy, at the American Society of Hematology (ASH) 2016 Annual Meeting held December 3-6, 2016 in San Diego. Duvelisib is an investigational, oral, dual inhibitor of phosphoinositide-3-kinase (PI3K)-delta and PI3K-gamma that has demonstrated clinical activity as a monotherapy in multiple hematologic cancers, including chronic lymphocytic leukemia (CLL), iNHL and T cell lymphomas.

Results from the study were presented by Dr. Ian Flinn in an oral presentation, “DYNAMO: A phase 2 study demonstrating the clinical activity of duvelisib in patients with refractory indolent non-Hodgkin lymphoma.” (Abstract number: 1218) Ian Flinn, M.D., Ph.D., Director of the Blood Cancer Research Program at Sarah Cannon Research Institute and the principal investigator on the DYNAMO study, described the results demonstrating duvelisib’s clinical activity in patients with double refractory iNHL, which included robust and durable responses, and a manageable safety profile.

The DYNAMO study included 129 evaluable patients with double refractory iNHL (median 3 prior anticancer regimens, range 1-18). The overall response rate (ORR) was 46% as determined by independent review committee (IRC; p=0.0001; 95% CI 0.37-0.55). Among disease subgroups, the ORR was 41% in follicular lymphoma (n=83), 68% in small lymphocytic lymphoma (n=28), and 33% in marginal zone lymphoma (n=18). Median duration of response (DOR) among all patients was 9.9 months. Notably, 83% of patients had reductions in the size of their target lymph nodes per IRC.

Duvelisib was generally well tolerated, with an expected and manageable safety profile with appropriate risk mitigation. The most common Grade ≥3 adverse events (occurring in ≥10% of patients) included neutropenia (28%), infection (18%), diarrhea (15%), thrombocytopenia (13%) and anemia (12%).

Dr. Flinn commented, “These results from the DYNAMO study presented at ASH this year clearly show that duvelisib is clinically active with benefit observed across a variety of disease subtypes. It is important to recognize how heavily pre-treated the DYNAMO patients were, being refractory to both rituximab and chemotherapy. This patient population needs more treatment options.”

“We are very encouraged by these results,” said Gregory I. Berk, M.D., Chief Medical Officer of Verastem. “The activity and safety of duvelisib observed in the DYNAMO trial are just more evidence of the potential of this drug. We are committed to continuing duvelisib’s development with the belief that it may represent a valuable treatment for patients with very few treatment options.”

A copy of the DYNAMO oral presentation is available here.

The following is a summary of other presentations at ASH 2016:

Poster Presentations

Title: Preliminary results in first-line treatment of follicular lymphoma with the oral dual PI3K-delta,gamma inhibitor, duvelisib, in combination with rituximab or obinutuzumab
Lead Author: Carla Casulo, M.D., Assistant Professor, Wilmot Cancer Institute, University of Rochester
Abstract Number: 2979
Date and Time: Sunday, December 4, 2016, 6:00 - 8:00 pm PT

The poster can be viewed here.

Title: Inhibition of FAK Exerts Anti-Leukemic Activity and Potentiates ABT-199-Induced Apoptosis in AML
Lead Author: Bing Carter, Ph.D., Associate Professor, Department of Leukemia - Research, Division of Cancer Medicine, The University of Texas M.D. Anderson Cancer Center
Abstract Number: 1574
Date and Time: Saturday, December 3, 2016, 5:30 – 7:30 pm PT

The poster can be viewed here.

More About the Phase 2 DYNAMO® Study

The DYNAMO® study is a Phase 2, single-arm study which evaluated the efficacy and safety of duvelisib (25 mg twice daily) as a monotherapy in 129 patients with follicular lymphoma (n=83), small lymphocytic lymphoma (n=28) or marginal zone lymphoma (n=18) whose disease has progressed and who are refractory to rituximab and to either chemotherapy or radioimmunotherapy. The primary endpoint of the study was overall response rate as assessed by an independent review committee.

About the Tumor Microenvironment

The tumor microenvironment encompasses various cellular populations and extracellular matrices within the tumor or cancer niche that support cancer cell survival. This includes immunosuppressive cell populations such as regulatory T cells, myeloid-derived suppressor cells, M2 tumor-

associated macrophages, as well as tumor-associated fibroblasts and extracellular matrix proteins which can hamper the entry and therapeutic benefit of cytotoxic immune cells and anti-cancer drugs. In addition to targeting the proliferative and survival signaling of cancer cells, Verastem's compounds duvelisib and defactinib target the tumor microenvironment as a mechanism of action to potentially improve a patient's response to therapy.

About Duvelisib

Duvelisib is an investigational, dual inhibitor of phosphoinositide 3-kinase (PI3K)-delta and PI3K-gamma, two enzymes that are known to help support the growth and survival of malignant B cells and T cells. PI3K signaling may lead to the proliferation of malignant B cells and is thought to play a role in the formation and maintenance of the supportive tumor microenvironment.[1,2,3] Duvelisib is currently being evaluated in late- and mid-stage clinical trials, including DUO®, a randomized, Phase 3 monotherapy study in patients with relapsed/refractory chronic lymphocytic leukemia (CLL)[4], and DYNAMO®, a single-arm, Phase 2 monotherapy study in patients with refractory indolent non-Hodgkin lymphoma (iNHL) that achieved its primary endpoint of overall response rate upon topline analysis of efficacy data[5]. Duvelisib is also being evaluated for the treatment of hematologic malignancies through investigator-sponsored studies, including T cell lymphoma.[6] Information about duvelisib clinical trials can be found on www.clinicaltrials.gov.

About Defactinib

Defactinib (VS-6063) is an investigational inhibitor of Focal Adhesion Kinase (FAK), a non-receptor tyrosine kinase encoded by the PTK-2 gene that mediates oncogenic signaling in response to cellular adhesion and growth factors.[7] Based on the multi-faceted roles of FAK, defactinib is used to treat cancer through modulation of the tumor microenvironment, enhancement of anti-tumor immunity, and reduction of cancer stem cells.[8,9] Defactinib is currently being evaluated in three separate clinical collaborations in combination with immunotherapeutic agents for the treatment of several different cancer types including pancreatic, ovarian, non-small cell lung cancer, and mesothelioma. These studies are combination clinical trials with pembrolizumab and avelumab from Merck & Co. and Pfizer/Merck KGaA, respectively.[10,11,12] Information about these and additional clinical trials evaluating the safety and efficacy of defactinib can be found on www.clinicaltrials.gov.

About Verastem, Inc.

Verastem, Inc. (NASDAQ:VSTM) is a biopharmaceutical company focused on discovering and developing drugs to improve outcomes for patients with cancer. Verastem is currently developing duvelisib, a dual inhibitor of phosphoinositide-3-kinase (PI3K)-delta and PI3K-gamma, which has successfully met its primary endpoint in a Phase 2 study and is currently being evaluated in a Phase 3 clinical trial in patients with chronic lymphocytic leukemia (CLL). Other clinical product candidates include focal adhesion kinase (FAK) inhibitors defactinib (VS-6063) and VS-4718, and dual PI3K/mTOR inhibitor VS-5584. Defactinib is currently being evaluated in three separate clinical collaborations in combination with immunotherapeutic agents for the treatment of several different cancer types, including pancreatic, ovarian and non-small cell lung cancer, and mesothelioma. Verastem's product candidates seek to treat cancer by modulating the local tumor microenvironment, enhancing anti-tumor immunity and reducing cancer stem cells. For more information, please visit www.verastem.com.

Verastem, Inc. forward-looking statements notice:

This press release includes forward-looking statements about Verastem's strategy, future plans and prospects, including statements regarding results of the Phase 2 DYNAMO® study, and Verastem's PI3K/mTOR and FAK programs generally, the structure of our planned and pending clinical trials and the timeline and indications for clinical development, including reporting top-line data, and regulatory submissions and, our rights to develop or commercialize our product candidates. 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 Verastem's product candidates and preliminary or interim 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 expected, including for the Phase 3 DUO study; that enrollment of clinical trials may take longer than expected; that our product candidates will cause unexpected safety events or result in an unmanageable safety profile as compared to their level of efficacy; that duvelisib will be ineffective at treating patients with lymphoid malignancies; that Verastem will be unable to successfully initiate or complete the clinical development of its product candidates; that the development of Verastem's product candidates will take longer or cost more than planned; that Verastem may not have sufficient cash to fund its contemplated operations; that Verastem or Infinity will fail to fully perform under the license agreement; that the transition of the duvelisib program from Infinity will not be completed; that Verastem will not pursue or submit regulatory filings for its product candidates, including for duvelisib in patients with CLL or iNHL; and that Verastem's product candidates will not receive regulatory approval, become commercially successful products, or result in new treatment options being offered to patients. Other risks and uncertainties include those identified under the heading "Risk Factors" in Verastem's Annual Report on Form 10-K for the year ended December 31, 2015 as filed on March 3, 2016, the Company's quarterly report on Form 10-Q filed on November 7, 2016, and in any subsequent SEC filings. The forward-looking statements contained in this press release reflect Verastem's current views with respect to future events, and Verastem does not undertake and specifically disclaims any obligation to update any forward-looking statements.

References

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[4] www.clinicaltrials.gov, NCT02004522

[5] www.clinicaltrials.gov, NCT01882803

[6] www.clinicaltrials.gov, NCT02783625, NCT02783625, NCT02158091

[7] Schaller M.D. and Parsons JT. Focal adhesion kinase: an integrin-linked protein tyrosine kinase. Trends Cell Biol. 1993 3: 258-62.

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[9]Sulzmaier FJ et al. FAK in cancer: mechanistic findings and clinical applications. Nature Rev Cancer. 2014 14: 598-610.
[10]www.clinicaltrials.gov, NCT02546531
[11]www.clinicaltrials.gov, NCT02943317
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