May 18, 2017

Epizyme Announces Path Toward Tazemetostat Registration in Epithelioid Sarcoma and Reports New Clinical Data to be Presented at ASCO

Path Toward Submission for Accelerated Approval

Tazemetostat Demonstrates Clinically Meaningful Activity in Epithelioid Sarcoma;
Interim Phase 2 Epithelioid Sarcoma and Synovial Sarcoma Data to be Presented at ASCO

Conference Call to be Held Today, May 18 at 8:30 a.m. ET

CAMBRIDGE, Mass., May 18, 2017 (GLOBE NEWSWIRE) -- Epizyme, Inc. (NASDAQ:EPZM), a clinical-stage biopharmaceutical company creating novel epigenetic therapies, today announced positive interim data on its first-in-class EZH2 inhibitor, tazemetostat, from the epithelioid sarcoma cohort of its ongoing Phase 2 study in adult patients with molecularly defined solid tumors. In addition, the Company announced that it recently conducted a positive meeting with the U.S. Food and Drug Administration (FDA) to discuss the registration strategy for tazemetostat for the treatment of epithelioid sarcoma. Based on discussions with the FDA, the Company has identified a path to submission for accelerated approval of tazemetostat based on the 60-patient cohort from its Phase 2 study, and will target a New Drug Application (NDA) submission in 2018.

An interim assessment of the epithelioid sarcoma cohort of patients (n=31), as of May 1, 2017, shows that treatment with tazemetostat resulted in a 32 percent disease control rate and a 13 percent overall response rate, with a median duration of response of seven months and ongoing. In addition, tazemetostat continues to demonstrate a favorable safety profile.

"Epithelioid sarcoma is a difficult cancer for sarcoma oncologists like me to treat due to there being few available therapeutic options, which are associated with limited benefit and challenging side effects for patients," said Mrinal M. Gounder, M.D., attending physician at Memorial Sloan Kettering Cancer Center and lead investigator in the Phase 2 clinical trial. "INI1 loss is a defining feature of epithelioid sarcoma and the mechanism of tazemetostat makes this a compelling agent. These data show encouraging activity of tazemetostat as characterized by objective responses, duration of responses and prolonged disease stabilization, and I look forward to its continued development."

"Bringing tazemetostat to patients is our number one priority," said Robert Bazemore, president and chief executive officer of Epizyme. "We stand today with a line of sight to an expedited pathway of bringing tazemetostat to patients with this rare and devastating form of cancer. I am very proud of the hard work and dedication of the entire Epizyme team in advancing tazemetostat this far, so that we may provide a new treatment option to patients who are in desperate need of effective and tolerable medicines."

Phase 2 Study in Molecularly Defined Solid Tumors
Epizyme's Phase 2 study is evaluating the efficacy and safety of 800mg of tazemetostat orally administered twice-daily in adult patients with certain molecularly defined solid tumors, stratified into five different cohorts based on tumor type, including: epithelioid sarcoma, synovial sarcoma, malignant rhabdoid tumor, renal medullary carcinoma and other INI1-negative tumors.

Epizyme will present interim efficacy data from the epithelioid sarcoma and synovial sarcoma cohorts and safety data from all cohorts at the American Society for Clinical Oncology (ASCO) Annual Meeting. The remaining three arms of the study have not yet reached futility assessment by the Independent Data Monitoring Committee. Epizyme anticipates providing updates from those cohorts later in 2017.

Epithelioid Sarcoma Efficacy Data
The epithelioid sarcoma cohort in Epizyme's Phase 2 study represents the largest prospective study of epithelioid sarcoma with any approved or investigational treatment to date. Epithelioid sarcoma is an ultra-rare and aggressive soft tissue sarcoma, characterized by a loss of the INI1 protein. It is most commonly diagnosed in young adults (20-40 years old) and is often fatal. There is no established standard-of-care for treating these patients, who are typically resistant to chemotherapy.

The cohort was initially designed to enroll 30 patients, and was expanded to enroll an additional 30 patients in December 2016 based on encouraging early activity. The cohort has enrolled 49 front-line and relapsed or refractory epithelioid sarcoma patients out of a projected total of 60 patients. Interim data to be presented are from 31 patients in the initial study group, as of the data cutoff on May 1, 2017.

In these patients, tazemetostat treatment resulted in a 32 percent disease control rate (DCR), the primary endpoint. DCR is comprised of confirmed objective responses by RECIST 1.1 for any duration or disease stabilization of 32 weeks or more. Thus far, four patients (13%) have achieved confirmed objective responses (all partial), and the time to response ranged from two months to six months. The median duration of response is seven months and ongoing. Prolonged disease stabilization of 32 weeks or more has been observed in six patients (19%), including two patients having stable disease for more than 15 months. These Phase 2 data complement the Company's experience from its Phase 1 study, in which two of three patients with epithelioid sarcoma remain on tazemetostat with stable disease out over two years.

A median progression-free survival (PFS) of 5.7 months has been observed, and initial assessment of overall survival for those patients in the DCR group compared to the non-DCR group showed distinct separation in survival curves, favoring the DCR group. The data from this cohort are still maturing, and an initial assessment suggests the potential for prolonged clinical benefit with tazemetostat treatment.

These interim data will be presented at ASCO by Dr. Gounder in a poster titled "Phase 2 multicenter study of the EZH2 inhibitor tazemetostat in adults with INI1 negative epithelioid sarcoma (NCT02601950)" on June 4 (Abstract No.: 11058, Poster Board No.: 381).

Tazemetostat Safety Profile
Tazemetostat has demonstrated a favorable safety profile in the Phase 2 study, particularly when considering the adverse effects associated with currently utilized chemotherapeutic regimens and other STS therapies. Safety data from patients in all study cohorts (n=121) are consistent with the overall safety profile observed in a nearly 400 patient-safety database from tazemetostat clinical trials to date, showing favorable tolerability without significant safety events. There were no discontinuations due to adverse events in any of the study cohorts. The majority of treatment-emergent adverse events (TEAEs) were grade 1 or 2, with only 12 percent of patients experiencing grade 3 or higher treatment-related TEAEs. Reported TEAEs regardless of attribution with an incidence of 10 percent or greater were fatigue (34%), dyspnea and nausea (27% each), cough (22%), decreased appetite (20%), vomiting (19%), constipation (18%), anemia (17%), diarrhea (16%), back pain and headache (12% each), pleural effusion (11%) and death and peripheral edema (10% each). All deaths that occurred during the study were attributed to the patients' underlying disease and not to treatment with tazemetostat.

There were no clinically relevant differences in the safety profile for either the epithelioid sarcoma or the synovial sarcoma cohorts compared to that of the entire study.

Synovial Sarcoma Efficacy Data
The cohort of patients with synovial sarcoma (n=33) in the Phase 2 study completed enrollment in November 2016. Data show tazemetostat treatment resulted in stable disease as the best response in 10 patients (30%) with five patients (15%) meeting the primary endpoint of disease stabilization for 16 weeks or longer. The level of activity was determined to be insufficient to advance tazemetostat as a monotherapy for this tumor type.

These data will be presented in a poster by Patrick Schöffski, M.D., Department of General Medical Oncology and the Laboratory of Experimental Oncology at the University Hospitals Leuven, KU Leuven, Belgium, titled "Phase 2 multicenter study of the EZH2 inhibitor tazemetostat in adults with synovial sarcoma (NCT02601950)" on June 4 (Abstract No.: 11057, Poster Board No.: 380).

Conference Call Information
Epizyme will host a conference call and audio webcast today at 8:30 a.m. Eastern Time. To participate in the conference call, please dial (877) 844-6886 (domestic) or (970) 315-0315 (international) and refer to conference ID 12186629. The webcast, and accompanying slides for the call, can be accessed under "Events and Presentations" in the Investor Relations section of the company's website at www.epizyme.com.

About Epithelioid Sarcoma
Epithelioid sarcoma is an ultra-rare soft tissue sarcoma characterized by a loss of function of the protein INI1. Patients are most commonly diagnosed as young adults, between 20 and 40 years of age. Median overall survival from initial diagnosis is 30 months. Epithelioid sarcoma becomes more aggressive after recurrence or metastases, with a typical survival of eight to 12 months for patients with metastatic disease. There is no approved treatment indicated specifically for epithelioid sarcoma, and there is no established standard of care.

About the Tazemetostat Clinical Trial Program
Tazemetostat, a first-in-class EZH2 inhibitor, is currently being studied in ongoing Phase 2 programs in both follicular lymphoma and diffuse large B-cell lymphoma (DLBCL) forms of non-Hodgkin lymphoma; certain genetically defined solid tumors, including INI1-negative and SMARCA4-negative tumors and synovial sarcoma; and mesothelioma; as well as in combination studies in DLBCL. Tazemetostat has been granted Fast Track designation by the U.S. Food and Drug Administration for both relapsed/refractory follicular lymphoma with or without an EZH2 activating mutation and DLBCL with EZH2 activating mutations, as well as Orphan Drug designation for malignant rhabdoid tumors.

About Epizyme, Inc.
Epizyme, Inc. is a clinical-stage biopharmaceutical company committed to rewriting cancer treatment through novel epigenetic medicines. Epizyme is broadly developing its lead product candidate, tazemetostat, a first-in-class EZH2 inhibitor, with studies underway in both solid tumors and hematological malignancies, as a monotherapy and combination therapy and in relapsed and front-line disease. Using the Company's proprietary platform, Epizyme has pioneered the identification and development of small molecule inhibitors of chromatin modifying proteins (CMPs), such as tazemetostat. CMPs are part of the system of gene regulation, referred to as epigenetics, that controls gene expression. Genetic alterations can result in changes to the activity of CMPs, which can allow cancer cells to grow and proliferate. By focusing on the genetic drivers of cancers, Epizyme's science seeks to match targeted medicines with the specific patients that need it. For more information, visit www.epizyme.com and connect with us on Twitter at @EpizymeRx.

Cautionary Note on Forward-Looking Statements
Any statements in this press release about future expectations, plans and prospects for Epizyme, Inc. and other statements containing the words "anticipate," "believe," "estimate," "expect," "intend," "may," "plan," "predict," "project," "target," "potential," "will," "would," "could," "should," "continue," and similar expressions, constitute forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, including: uncertainties inherent in the initiation of future clinical studies and in the availability and timing of data from ongoing clinical studies; whether results from preclinical studies or earlier clinical studies will be predictive of the results of future studies; whether interim data from clinical studies such as the data reported in this release will be indicative of the final results of the study; whether results from clinical studies will warrant meetings with regulatory authorities or submissions for regulatory approval; whether submissions for regulatory approval will be made when anticipated or at all and whether these submissions will be reviewed under the accelerated approval framework; whether the Company will receive regulatory approvals to conduct trials or to market products; whether the Company's cash resources will be sufficient to fund the Company's foreseeable and unforeseeable operating expenses and capital expenditure requirements; other matters that could affect the availability or commercial potential of the Company's therapeutic candidates; and other factors discussed in the "Risk Factors" section of the Company's most recent Form 10-Q filed with the SEC and in the Company's other filings from time to time with the SEC. In addition, the forward-looking statements included in this press release represent the Company's views as of the date hereof and should not be relied upon as representing the Company's views as of any date subsequent to the date hereof. The Company anticipates that subsequent events and developments will cause the Company's views to change. However, while the Company may elect to update these forward-looking statements at some point in the future, the Company specifically disclaims any obligation to do so.

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