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Epizyme Reports Early Data from Global Phase 2 Trial of Tazemetostat in Non-Hodgkin Lymphoma at ASH Lymphoma Biology Meeting

Tazemetostat demonstrates favorable safety profile consistent with prior clinical experience

Four of five cohorts have now surpassed futility, including follicular lymphoma with EZH2 mutation; responses observed in all patient cohorts

Cambridge, MA, June 19, 2016 – Epizyme, Inc. (NASDAQ: EPZM), a clinical-stage biopharmaceutical company creating novel epigenetic therapies, today reported preliminary data from its ongoing, global Phase 2 clinical trial of orally administered tazemetostat, a first-in-class EZH2 inhibitor, in relapsed or refractory patients with non-Hodgkin lymphoma (NHL). Early data from the Phase 2 trial indicate that tazemetostat demonstrated a favorable safety profile and clinical activity consisting of objective responses in a heavily pre-treated patient population. These data were reported at the American Society of Hematology Meeting on Lymphoma Biology.

Epizyme's Independent Data Monitoring Committee confirmed that futility has been surpassed in four of the five study cohorts: diffuse large B-cell lymphoma (DLBCL) with Germinal Center B-cell (GCB) subtype and EZH2 mutations; DLBCL with GCB subtype and wild-type EZH2; DLBCL with non-GCB subtype; and, follicular lymphoma (FL) with EZH2 mutations. The fifth cohort enrolling patients with FL with wild-type EZH2 is ongoing, but has not yet reached futility assessment. The primary endpoint of the Phase 2 study is overall response rate[1], and secondary endpoints include progression-free survival and duration of response.

"Patients with relapsed or refractory NHL are often faced with limited treatment options, particularly those who are highly refractory or whose disease is multiply relapsed as we have seen in this study population," said Franck Morschhauser, M.D., Ph.D., Centre Hospitalier Régional Universitaire de Lille, France, and primary investigator on the Phase 2 study. "These patients are in need of new therapeutic options, and while these data are early, we are encouraged and look forward to further understanding the impact that tazemetostat could have on patients as the trial proceeds."

Trial enrollment is on track and consistent with incidence rates for NHL subtypes, with approximately 20% of enrolled DLBCL GCB and FL patients having EZH2 mutations. As of the data cutoff[2], 82 patients across all five study arms were evaluable for safety. Efficacy has been assessed on 47 evaluable patients from the four cohorts confirmed to have surpassed their pre-specified futility hurdles. The non-evaluable patients include 16 patients in the arms that have surpassed futility that are too early for efficacy evaluation or for whom data are not yet entered and 19 patients from the fifth cohort who have FL with wild-type EZH2.

Tazemetostat has demonstrated a favorable safety profile in all patients treated, consistent with the experience observed in the Phase 1 trial. The majority of adverse events were grade 1 or grade 2 within the 82 safety-evaluable patients. The most common treatment-related adverse events ($\geq$5%) were nausea, asthenia, thrombocytopenia, neutropenia and fatigue, of which seven were grade 3 or higher. All adverse events resulted in low rates of both dose reductions (4%) and dose discontinuations (6%).

Among the 47 efficacy-evaluable patients, both objective responses (complete responses (CR) and partial responses (PR)) and stable disease (SD) have been observed. In the Phase 1 experience, Epizyme observed responses that evolved over time from SD to PRs and CRs. At data cutoff, best responses across the four cohorts were as follows:

- DLBCL with GCB subtype and EZH2 mutations (n=5): one PR and two SD;
- DLBCL with GCB subtype and wild-type EZH2 (n=19): two CRs, one PR and six SD;
- DLBCL with non-GCB subtype (n=20): two CRs, four PRs and five SD; and,
- FL with EZH2 mutations (n=3): three PRs.

All of the patients who have achieved a CR and the majority of patients who have achieved a PR or SD as best response are still on tazemetostat treatment as of the data cutoff.

"We are pleased by the performance of tazemetostat in the Phase 2 trial so far, which has been consistent with our Phase 1 results," added Peter Ho., M.D., Ph.D., Executive Vice President and Chief Medical Officer, Epizyme. "We have observed patients receiving clinical benefit from tazemetostat and continue to believe that prolonged exposure to treatment has the potential to result in decreased tumor burden over time."

Epizyme is continuing to enroll patients in its ongoing Phase 2 study in patients with NHL, as well as in two clinical trials in patients with certain genetically defined solid tumors.

A slide presentation of the early Phase 2 data of tazemetostat in NHL is available for download on the company's website.

About Epizyme, Inc.

Epizyme, Inc. is a clinical-stage biopharmaceutical company creating novel epigenetic therapeutics for people with cancer. Epizyme has built a proprietary product platform to create small molecule inhibitors of chromatin modifying proteins (CMPs), such as histone methyltransferases (HMTs). 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, making them oncogenic (cancer-causing). By focusing on the genetic drivers of cancers, Epizyme's targeted science seeks to match the right medicines with the right patients. For more information, visit www.epizyme.com.

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," "plans," "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, availability and timing of data from ongoing clinical studies, whether interim results from a clinical trial, such as the preliminary results reported in this release, will be predictive of the final results of the trial or the results of future trials, expectations for regulatory approvals, availability of funding sufficient for 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 or companion diagnostics and other factors discussed in the "Risk Factors" section of our Form 10-Q most recently filed with the SEC, and in our 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. 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. These forward-looking statements should not be relied upon as representing the Company's views as of any date subsequent to the date hereof.

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[1] Objective response assessed by the Cheson-IWG 2007 criteria
[2] Data cut off on May 27, 2016

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