Epizyme Announces Clinical and Pre-Clinical Data to be Featured in Oral and Poster Presentations at American Society of Hematology (ASH) Annual Meeting

-- Oral presentation of data from Phase 1 clinical trial of DOT1L inhibitor EPZ-5676 in adults with MLL-r leukemia --

-- Oral presentation of pre-clinical data on first-in-class PRMT5 inhibitor in lymphoma models --

-- Poster presentation on pharmacokinetic modeling in Phase 1 study of EPZ-5676 in pediatric patients with MLL-r leukemia --

Cambridge, Mass., October 10, 2014 - Epizyme, Inc. (NASDAQ: EPZM), a clinical stage biopharmaceutical company creating innovative personalized therapeutics for patients with genetically defined cancers, today announced that clinical and pre-clinical data on its first-in-class histone methyltransferase (HMT) inhibitors will be highlighted in oral and poster presentations at the 56th annual meeting of the American Society of Hematology (ASH), to be held December 6-9 in San Francisco, Calif.

“Epizyme continues its scientific and clinical leadership in the field of HMTs, and the next two months will be particularly important for us as we share clinical data from our two lead programs, with a late-breaking oral presentation of our EPZ-6438 data at the EORTC-NCI-AACR Symposium in November and the oral presentation of the EPZ-5676 data at ASH in December,” said Robert Gould, Ph.D., President and Chief Executive Officer, Epizyme. “We are also pleased to be able to share at ASH pre-clinical data on our first-in-class PRMT5 inhibitor, a promising development candidate from the Epizyme pipeline, as well as pharmacokinetic modeling for the EPZ-5676 pediatric Phase 1 study.”

The DOT1L Inhibitor EPZ-5676: Safety and Activity in Relapsed/Refractory Patients with MLL-Rearranged Leukemia

Presenter: Eytan Stein, M.D., Memorial Sloan Kettering Cancer Center, New York
Session title: Acute Myeloid Leukemia: Novel Therapy, excluding Transplantation: New Drugs II
Presentation time: Monday, December 8, 2014 at 11:00 a.m. PT
Abstract Number: 387

Identification of a First-in-Class PRMT5 Inhibitor with Potent In Vitro and In Vivo Activity in Pre-clinical Models of Mantle Cell Lymphoma

Presenter: Elayne Penebre, Ph.D., Senior Scientist, Epizyme
Session title: Chemical Biology and Experimental Therapeutics: Identification and Preclinical Evaluation of Novel Genetic and Epigenetic Targeted Therapies
Presentation time: Monday, December 8, 2014 at 11:45 a.m. PT
Abstract Number: 438

Pediatric Dose Determinations for the Phase 1 Study of the DOT1L Inhibitor, EPZ-5676, in MLL-r Acute Leukemia: Leveraging Early Clinical Data in Adults through Physiologically-Based Pharmacokinetic Modeling

Presenter: Nigel Waters, Ph.D., Director, Drug Metabolism and Pharmacokinetics, Epizyme
Session title: Molecular Pharmacology and Drug Resistance in Myeloid Diseases
Presentation time: Monday, December 8, 2014, 6:00 to 8:00 p.m. PT
Abstract Number: 3619

About EPZ-5676
Epizyme is developing EPZ-5676, a small molecule inhibitor of DOT1L created with Epizyme's proprietary product platform, for the treatment of patients with acute leukemia in which the MLL gene is rearranged due to a chromosomal translocation (MLL-r) or a partial tandem duplication (MLL-PTD). Due to these rearrangements, DOT1L is misregulated, resulting in the increased expression of genes causing leukemia.

Epizyme believes that EPZ-5676 was the first HMT inhibitor to enter human clinical development. Epizyme is currently conducting a two-stage Phase 1 study in adult MLL-r and MLL-PTD patients and in May 2014, initiated a Phase 1b study of EPZ-5676 in pediatric patients with rearrangements of the MLL gene. The adult dose escalation stage has completed enrollment, and the adult MLL-r and MLL-PTD expansion stage is now enrolling patients. Additional information about these ongoing Phase 1 studies can be found here: http://clinicaltrials.gov/show/NCT01684150

EPZ-5676 has been granted orphan drug designation for the treatment of acute lymphoblastic leukemia (ALL) and acute myeloid leukemia (AML) by the Food and Drug Administration in the U.S. and by the European Commission in Europe.

Epizyme retains all U.S. rights to EPZ-5676 and has granted Celgene an exclusive license to EPZ-5676 outside of the U.S. Additional information about Epizyme's partnerships is available here: www.epizyme.com/about-us/partnerships/

About Epizyme, Inc.
Epizyme, Inc. is a clinical stage biopharmaceutical company creating personalized therapeutics for patients with genetically defined cancers. Epizyme has built a proprietary product platform that the company uses to create small molecule inhibitors of a 96-member class of enzymes known as histone methyltransferases, or HMTs. HMTs 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 HMTs, 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 a personalized approach to cancer treatment.

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 or expansion of ongoing clinical studies, availability and timing of data from ongoing clinical studies, whether interim results from a clinical trial will be predictive of the final results of the trial or results of early clinical studies will be indicative of the results of future trials; expectations for regulatory approvals, development progress of the Company’s companion diagnostics, 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 the Company’s Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission in August 2014. 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.

Media/Investors:
Manisha Pai
Epizyme, Inc.
617.229.7560
mpai@epizyme.com