

## Epizyme, Inc. (EPZM)

Pre-Clinical Data on EPZ-5676 Published in Blood; Just the Beginning of An Active Publication Schedule for Epizyme

### MARKET DATA

Price	\$26.94
52-Week Range:	\$18.60 - \$30.86
Shares Out. (M):	28.4
Market Cap (\$M):	\$765.1
Average Daily Vol. (000):	78.0
Cash (M):	\$160
Cash/Share:	\$5.80
Enterprise Value (M):	\$725
Float (M):	28.0
LT Debt (M):	\$0

Cash (M): Reflects cash, equivalents, and short-term investments  
Source: Thomson Reuters and JMP Securities LLC

**MARKET OUTPERFORM** | Price: \$26.94 | Target Price: \$40.00

### INVESTMENT HIGHLIGHTS

**Data on the pre-clinical characterization of Epizyme's first clinical candidate, EPZ-5676, was published in the journal Blood last night; maintain Market Outperform rating and 12-month \$40 price target.** The paper, published by Epizyme scientists, expands upon data presented at ASH in December 2012 in which the selectivity, potency, and efficacy of EPZ-5676 was first delineated. We see this paper as just the start of an active publication schedule from Epizyme, as the company more fully characterizes the roles of HMTs (histone methyltransferases), and the activity of its drug candidates against these targets. While most of the data for this article was already in the public domain, the article does provide additional xenograft data which are supportive of the company's decision to pursue administration via constant infusion of EPZ-5676 over a 21 day period. Recall, EPZ-5676 is being evaluated in a Phase I dose-escalation study in patients with hematologic malignancies, including patients with mixed-lineage leukemia. Specifically, we view the profound efficacy seen at 70mg/kg/day constant infusion for 21 days versus variations with lower doses, less frequent doses, and other modifications (Fig 1 and Fig 2) as demonstrating that (1) that EPZ-5676 plasma exposure above a certain threshold level is likely to be required for efficacy and (2) DOT1L activity likely needs to be inhibited for a period of at least 14 days. We expect to see the first set of clinical data (beyond the details released in the S-1) from the Phase I at ASH in December this year. We derive our price target through the synthesis of our NPV sum-of-the-parts and standardized CAGR methodologies.

FY DEC		2012A	2013E	2014E
Revenue (\$M)	1Q	\$5.7	\$8.9A	\$29.9
	2Q	--	\$19.8	\$4.9
	3Q	--	\$7.8	\$4.9
	4Q	--	\$7.5	\$38.7
	<b>FY</b>	<b>\$45.2</b>	<b>\$44.1</b>	<b>\$78.5</b>
EPS	1Q	(\$3.38)	(\$4.24)A	\$0.30
	2Q	--	(\$0.08)	(\$0.41)
	3Q	--	(\$0.44)	(\$0.41)
	4Q	--	(\$0.50)	\$0.58
	<b>FY</b>	<b>(\$0.72)</b>	<b>(\$2.03)</b>	<b>\$0.25</b>

Source: Company reports and JMP Securities LLC

### STOCK PRICE PERFORMANCE

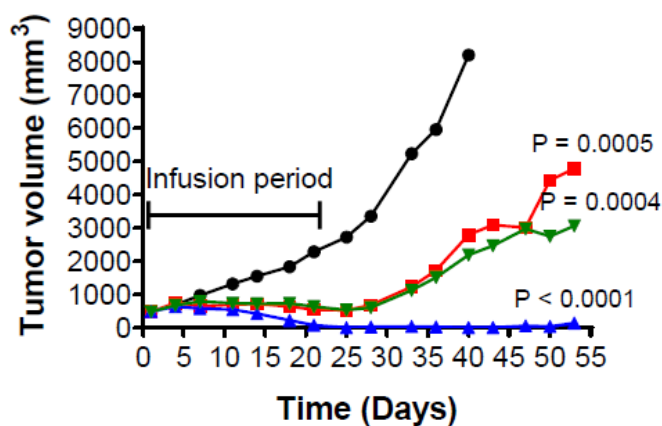


**Epizyme represents the rare-opportunity to invest in a best-of-breed, pure play, epigenetics-focused biotech company with clinical stage assets and a robust drug discovery platform.** We believe the company's clinical assets, EPZ-5676, targeting DOT1L (for mixed lineage leukemia) and EPZ-6438, targeting EZH2 (currently being evaluated for non-Hodgkins lymphoma), represent particularly compelling biology given that they are directed against clonally initiating mutations. This biologic focus, in combination with the selection of a genetically defined patient population, as providing capability for each asset to rapidly accelerate through the clinic and into registration-directed trials within 18 months. Combining these assets with a robust drug discovery product platform capable of consistently delivering multiple new therapeutic candidates targeting HMTs, and partnerships with GSK (Not Covered), Eisai, and Celgene (CELG, MO, \$148), we believe shares of EPZM will accrete significant additional value over the next six to twelve months as the potential for the company's into greater focus.

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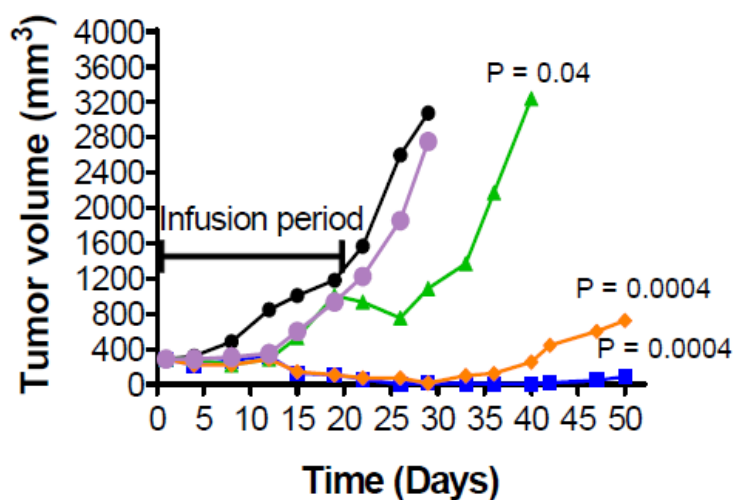
FOR DISCLOSURE AND FOOTNOTE INFORMATION, REFER TO JMP FACTS AND DISCLOSURES SECTION.

**FIGURE 1. Tumor Regressions in MV4-11 Rat Xenografts**

Black = Vehicle alone, Red = 35mg/kg/day constant infusion,

Green = 67mg/kg/day infusion for 8 hours per day, Blue = 70mg/kg/day constant infusion

Source: Daigle et al., Blood (2013), Published online June 25, 2013

**FIGURE 2. Tumor Regressions in MV4-11 Rat Xenografts**

Black = Vehicle alone, Blue = 70mg/kg/day constant infusion for 21 days, Orange = 70mg/kg/day for 14 days,

Green = 70mg/kg/day for 7 days constant infusion, followed by 14 days at 33.5mg/kg/day; Purple = 33.5mg/kg/day constant infusion for 8 hours daily

Source: Daigle et al., Blood (2013), Published online June 25, 2013

**FIGURE 3. Upcoming Milestones**

Timing	Drug	Milestones
2H13	EPZ-5676	Initiate expansion cohort of Phase I study with DOTIL
Dec 2013	EPZ-5676	Read-out of interim results from the Phase I at ASH
1Q14	EPZ-5676	Initiate enrollment of MLL-r patients at ex-US sites for Phase I study
2H14	EPZ-5676	Initiate Phase II global pivotal trials
2014	EPZ-6438	Read-out of interim results from Phase I study
2014	-	Identify next IND candidate

Source: Epizyme press releases, presentations, and SEC filings

## Company Description

Epizyme (EPZM) is a biopharmaceutical company, based in Cambridge, Massachusetts, focused on the discovery, development, and commercialization of personalized therapeutics for epigenetically-defined cancers. The company's technology is focused on the development of small molecule drugs specifically targeted against the individual members of the 96-member histone methyltransferase (HMT) class of enzymes. To date, the company has entered into strategic collaborations with Celgene, Eisai, and GSK regarding specific products, as well as the underlying technology platform.

## Investment Risks

**Clinical.** Drug development is an inherently risky business. As clinical trials always carry a risk of failure, Epizyme's assets (EPZ-5676, EPZ-6438, or future products), may fail to demonstrate clinically meaningful levels of efficacy in ongoing or future trials. Further, it is unclear whether resistance pathways may develop to the epigenetic mechanisms being targeted.

**Regulatory.** The ability of Epizyme or its partners to market its drugs is dependent upon those drugs obtaining approval from the U.S. FDA and foreign regulatory authorities. Failure to achieve approval or delays in the timeline to approval could lead to substantial decrease in the company's share price.

**Competitive.** Epigenetics is an increasingly competitive field and Epizyme will face competition both from companies focused in the space, as well as players targeting related mechanisms. As such, there is no assurance that Epizyme's product will be competitive or differentiated from other drugs.

**Commercialization.** Epizyme has stated its plans to retain U.S. commercial rights to its products and develop a commercial infrastructure to market those products. The company has limited commercial experience and infrastructure in place. As such, the company will face significant expenses developing or acquiring these resources.

**Reimbursement.** There is no guarantee that Epizyme, or its partners, will garner adequate reimbursement for its products. Failure to obtain adequate levels of reimbursement could negatively impact the company's share price.

**Partners.** Epizyme has formed development and commercial partnerships with Celgene, Eisai, and GSK. Epizyme is highly dependent upon these partnerships to provide non-dilutive sources of capital. Celgene and Eisai are critical to the development and commercialization of Epizyme's clinical stage assets. Changes to or terminations of these partnerships could affect Epizyme's shares negatively.

**Financial.** Post-IPO, we estimate that the company will end 2Q13 with approximately \$160MM in cash and cash equivalents. While the company has guided that even excluding any milestones payments from Celgene, Eisai, or GSK (which we expect) it has adequate resources to fund the company into 2015, we wholly expect the company to revisit the capital markets to further fund clinical development of its assets, develop a commercial infrastructure in the U.S., and to identify other assets using its platform technology and expertise. We currently forecast that the company will conduct secondary offerings in 2014 and 2015 before reaching profitability in 2017. While we view this as common for similar stage biotechnology companies, the risk of dilution may create an overhang at times.

## JMP FACTS AND DISCLOSURES

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### JMP Securities Disclosure Definitions:

JMP Securities currently makes a market in the securities of Epizyme, Inc. and Celgene Corporation

JMP Securities was manager or co-manager of a public offering for Epizyme, Inc. in the past 12 months.

### JMP Securities Investment Opinion Definitions:

Market Outperform (MO): JMP Securities expects the stock price to outperform relevant market indices over the next 12 months.

Market Perform (MP): JMP Securities expects the stock price to perform in line with relevant market indices over the next 12 months.

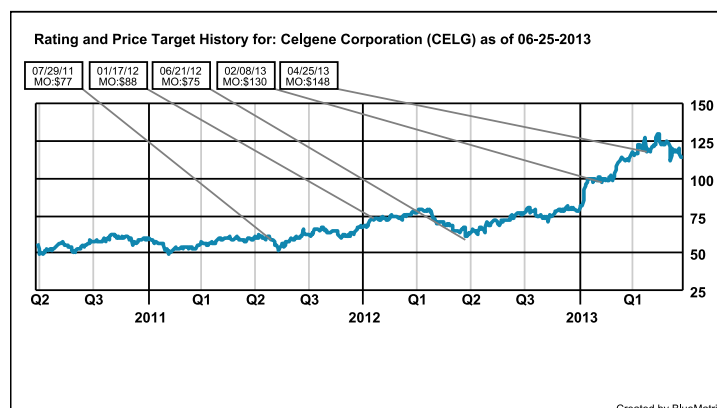
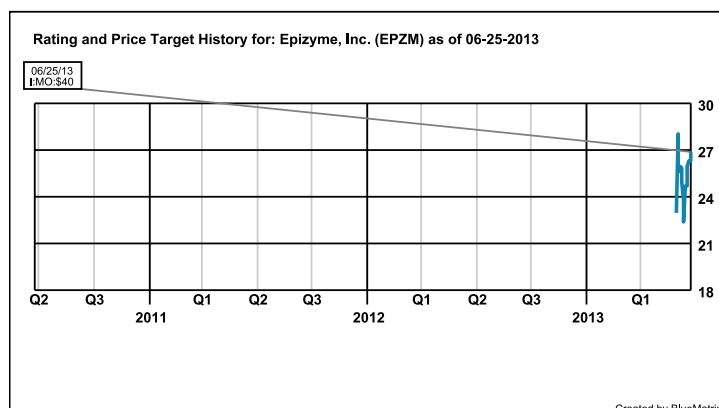
Market Underperform (MU): JMP Securities expects the stock price to underperform relevant market indices over the next 12 months.

### JMP Securities Research Ratings and Investment Banking Services: (as of June 25, 2013)

JMP Rating	Regulatory Equivalent	# Co's Under Coverage	% of Total	Regulatory Equivalent	# Co's Under Coverage	% of Total	# Co's Receiving IB Services in Past 12 Months	% of Co's With This Rating
MARKET OUTPERFORM	Buy	233	60.84%	Buy	233	60.84%	75	32.19%
MARKET PERFORM	Hold	144	37.60%	Hold	144	37.60%	20	13.89%
MARKET UNDERPERFORM	Sell	6	1.57%	Sell	6	1.57%	0	0%
TOTAL:		383	100%		383	100%	95	24.80%

### Stock Price Chart of Rating and Target Price Changes:

Note: First annotation denotes initiation of coverage or 3 years, whichever is shorter. If no target price is listed, then the target price is N/A. In accordance with NASD Rule 2711, the chart(s) below reflect(s) price range and any changes to the rating or price target as of the end of the most recent calendar quarter. The action reflected in this note is not annotated in the stock price chart. Source: JMP Securities.



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