



FOR IMMEDIATE RELEASE

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CPEX Pharmaceuticals Reports First-Quarter 2009 Financial Results

Exeter, NH, May 6, 2009 – CPEX Pharmaceuticals, Inc. (NASDAQ: CPEX) today reported its financial results for the first quarter ended March 31, 2009. For the quarter the Company reported revenues of \$4.0 million and a net loss of \$468,000.

CPEX began operating as an independent publicly traded company after its spin-off from Bentley Pharmaceuticals, Inc. on June 30, 2008 (the “Separation Date”). The financial results reported for the three months ended March 31, 2008 (before the Separation Date) include costs associated with the spin-off transaction and other allocated expenses of Bentley, the amount of which may differ from the costs associated with operating as an independent public company. Therefore, the results for that period are not indicative of the results that might have occurred if CPEX had operated as an independent public company during that period. The results of operations for the three months ended March 31, 2009 and balance sheets as of March 31, 2009 and December 31, 2008 represent stand-alone financial information of CPEX and its subsidiaries.

First-Quarter Highlights

For the first quarter of 2009 compared to the first quarter of 2008:

- Revenues increased 16% to \$4.0 million from \$3.5 million.
- Operating expenses increased 10% to \$4.5 million from \$4.1 million.
- Net loss was \$468,000, or \$0.19 per share, compared to \$514,000 or, \$0.23 per share.

The growth in revenues for the first quarter of 2009 was due to increased royalties on sales of Testim[®]. The increase in operating expenses was primarily attributable to clinical trial expenses associated with the CPEX’s ongoing Phase 2 clinical trial and legal fees related to its patent infringement suit against Upsher-Smith Laboratories. Operating expenses in 2008 included \$937,000 of expenses related to the spin-off from Bentley. No separation costs were incurred by CPEX during the first quarter of 2009.

General and administrative expenses for the first quarter of 2009 increased \$666,000 compared to the same quarter of the prior year. The increase was primarily due to patent infringement legal costs, and increased share-based compensation expense and professional service fees. Research and

development expenses for the first quarter of 2009 increased \$703,000 compared to the first quarter of 2008 due to increased clinical trial expenses. Research and development expenses are expected to vary from period to period, primarily due to the number, size and recruitment levels of clinical trials in any given reporting period.

The basic and diluted weighted average common shares outstanding for the three months ended March 31, 2008 assumes that 2,274,000 shares were outstanding for the first three months of 2008, which is the number of CPEX shares distributed to Bentley stockholders on the Separation Date. This number of shares is being used for the loss per share computation for the three months ended March 31, 2008 because no CPEX equity awards were outstanding prior to the Separation Date.

As of March 31, 2009, CPEX had unrestricted cash of approximately \$14.7 million, working capital of \$17.5 million and no debt.

Business Update

Continued Progress with Serenity Pharmaceuticals Collaboration: On February 26, 2009 CPEX announced that its development and commercialization partner, Serenity Pharmaceuticals, completed a Phase 2a clinical study of its intranasal drug candidate for an undisclosed urology indication which is delivered using CPEX's patented drug delivery platform technology. During this study, 41 out of the 43 patients treated showed a positive response to treatment. Serenity has also completed an end-of-Phase-2 meeting with the FDA.

Ongoing Phase 2 Clinical Trial: CPEX's intranasal insulin product candidate, Nasulin, is continuing extensive clinical trials evaluating the safety and efficacy profile of the product in patients with Type 1 and Type 2 diabetes. Patient enrollment has commenced in the previously announced Phase 2a study designed to assess the efficacy and safety of Nasulin versus placebo over a 6-week treatment period. This study is being conducted at multiple centers in the U.S. Prior Phase 1 and 2 trials in patients with Type 1 or 2 diabetes, as well as in healthy volunteers, have indicated that Nasulin appears to have an ultra-rapid time/action profile which has the potential to more closely mimic the body's natural insulin response to meals.

Management Comments

"Through the first quarter we have been pleased with the continued advances made with respect to our pipeline programs, particularly Nasulin and our partnered urology candidate," stated John A. Sedor, CPEX president and chief executive officer. "As both programs continue to move into later stage clinical development, we are well-positioned to reap the potential value from these large market opportunities".

About CPEX Pharmaceuticals

CPEX Pharmaceuticals, Inc. (NASDAQ: CPEX) is an emerging specialty pharmaceutical company focused on the development, licensing and commercialization of pharmaceutical products utilizing CPEX's validated drug delivery platform technology. CPEX has U.S. and international patents and other proprietary rights to technologies that facilitate the absorption of drugs. CPEX has licensed applications of its proprietary CPE-215[®] drug delivery technology to Auxilium Pharmaceuticals, Inc., which launched Testim[®], a topical testosterone gel, in 2003. CPEX also is developing an intranasal insulin product candidate, Nasulin[™], which is in Phase 2 clinical trials. CPEX maintains its headquarters in Exeter, NH. For more information about CPEX, please visit www.cpexpharm.com.

Safe Harbor Statement under the U.S. Private Securities Litigation Reform Act of 1995:

This press release contains forward-looking statements, including, without limitation, statements regarding the potential activity profile of Nasulin and the prospects for CPEX's development programs, including Nasulin. These forward-looking statements are subject to a number of risks and uncertainties that could cause actual results to differ materially from future results expressed or implied by such statements. Factors that may cause such differences include, but are not limited to, risks associated with the following: clinical trials may not demonstrate the efficacy and safety of CPEX product candidates, regulatory approvals may be delayed or not obtained at all, competition from other products and from the ANDA application of Upsher-Smith, the unpredictability of patent protection, CPEX's dependence on obtaining agreements with other parties to conduct clinical trials and commercialize its product candidates that use its drug delivery technology, CPEX's products may not achieve market acceptance or favorable reimbursement rates from health insurers, intellectual property litigation, and other uncertainties detailed under "Risk Factors" in CPEX's Annual Report on Form 10-K filed with the Securities and Exchange Commission dated March 25, 2009. CPEX cautions investors not to place undue reliance on the forward-looking statements contained in this release. These statements speak only as of the date of this document, and CPEX undertakes no obligation to update or revise the statements, except as may be required by law.

CPEX Pharmaceuticals, Inc. and Subsidiaries
Unaudited Condensed Combined Statements of Operations

(in thousands, except per share data)

	For the Three Months Ended March 31,	
	2009	2008
Royalties and other revenue	\$ 4,011	\$ 3,450
Operating expenses:		
General and administrative	1,771	1,105
Research and development	2,599	1,896
Separation costs	—	937
Depreciation and amortization	166	172
Total operating expenses	4,536	4,110
Income/(loss) from operations	(525)	(660)
Other income (expenses):		
Interest income	58	147
Interest expense	(1)	(1)
Net income/(loss)	\$ (468)	\$ (514)
Net income/(loss) per common share:		
Basic and Diluted	\$ (0.19)	\$ (0.23)
Weighted average common shares outstanding:		
Basic and diluted	2,483	2,274

CPEX Pharmaceuticals, Inc. and Subsidiaries
Unaudited Condensed and Consolidated Balance Sheets

(in thousands, except per share data)

	<u>March 31,</u> <u>2009</u>	<u>December 31,</u> <u>2008</u>
Assets		
Current assets:		
Cash and cash equivalents	\$ 14,733	\$ 15,211
Receivables	4,079	4,445
Prepaid expenses and other	<u>689</u>	<u>583</u>
Total current assets	<u>19,501</u>	<u>20,239</u>
Non-current assets:		
Fixed assets, net	2,961	2,832
Intangible assets, net	2,402	2,394
Restricted cash	1,000	1,000
Other	<u>8</u>	<u>8</u>
Total non-current assets	<u>6,371</u>	<u>6,234</u>
Total assets	<u>\$ 25,872</u>	<u>\$ 26,473</u>
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	\$ 768	\$ 1,096
Accrued expenses	<u>1,231</u>	<u>1,534</u>
Total current liabilities	<u>1,999</u>	<u>2,630</u>
Commitments and contingencies		
Stockholders' equity:		
Series A Preferred stock, \$0.01 par value, authorized 1,000 shares, issued and outstanding, none	—	—
Common stock, \$0.01 par value, authorized 35,000 shares, issued and outstanding, 2,491 shares	25	25
Additional paid-in capital	25,030	24,532
Accumulated deficit	<u>(1,182)</u>	<u>(714)</u>
Total stockholders' equity	<u>23,873</u>	<u>23,843</u>
Total liabilities and stockholders' equity	<u>\$ 25,872</u>	<u>\$ 26,473</u>

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