



FOR IMMEDIATE RELEASE

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CPEX Pharmaceuticals Reports Second-Quarter 2009 Financial Results

Exeter, NH, August 5, 2009 – CPEX Pharmaceuticals, Inc. (NASDAQ: CPEX) (“CPEX” or “The Company”) today reported financial results for the second quarter ended June 30, 2009. For the quarter the Company reported revenues of \$4.5 million and a net loss of \$1.2 million.

CPEX began operating as an independent publicly traded company after its spin-off from Bentley Pharmaceuticals, Inc. (“Bentley”) on June 30, 2008 (the “Separation Date”). The financial results reported for the three and six months ended June 30, 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 those periods are not indicative of the results that might have occurred if CPEX had operated as an independent public company during those periods. The results of operations for the three and six months ended June 30, 2009 and balance sheets as of June 30, 2009 and December 31, 2008 represent stand-alone financial information of CPEX.

Second-Quarter Highlights

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

- Revenues increased 13% to \$4.5 million from \$3.9 million.
- Operating expenses were unchanged at \$5.7 million for both quarters.
- Net loss was \$1.2 million, or \$0.48 per share, compared to \$1.7 million, or \$0.74 per share.

The growth in revenues for the second quarter of 2009 was due to increased royalties on sales of Testim[®]. Operating expenses in 2008 included \$1.6 million of expenses related to the spin-off from Bentley. Excluding the spin-off related expenses, operating expenses in the second quarter of 2009 increased \$1.6 million, primarily due to clinical trial expenses associated with the Company’s ongoing Nasulin[™] clinical program and legal fees related to its patent infringement suit against Upsher-Smith Laboratories. No additional separation costs have been incurred by CPEX subsequent to the spin-off.

General and administrative expenses for the second quarter of 2009 increased \$819,000 compared to the same quarter of the prior year. Legal fees, which include costs related to the patent

infringement lawsuit and general legal expenses, increased \$645,000 compared to the same period last year. Research and development expenses for the second quarter of 2009 increased \$762,000 compared to the second quarter of 2008. This increase is due to higher clinical trial expenses of \$991,000, primarily related to the ongoing Phase 1 and 2 Nasulin clinical trials, partially offset by lower employee-related expenses of \$339,000. 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.

Year-to-Date Highlights

For the first six months of 2009 compared to the comparable period in 2008;

- Revenues increased 15% to \$8.5 million from \$7.4 million.
- Operating expenses increased 4% to \$10.3 million from \$9.8 million.
- Net loss decreased to \$1.7 million, or \$0.67 per share, from \$2.2 million, or \$0.97 per share.

The increase in revenues for the six months ended June 30, 2009 was due to increased royalties on sales of Testim[®]. General and administrative expenses increased \$1.5 million in the first six months of 2009 compared to the same period in 2008. Patent infringement and general legal costs increased \$986,000, professional service fees, including accounting and strategic planning expenses, increased \$324,000 and non-cash share-based compensation expense increased \$205,000 compared to the same period last year. Research and development expenses increased \$1.5 million during the first six months of 2009 compared to 2008. Clinical trial expenses increased \$1.8 million, primarily due to the ongoing Phase 1 and 2 Nasulin clinical trials. These increases were partially offset by lower employee-related expenses of \$523,000. Operating expenses in 2008 included \$2.5 million of expenses related to the spin-off from Bentley.

The basic and diluted weighted average common shares outstanding for the three and six months ended June 30, 2008 assumes that 2,274,000 shares were outstanding for those periods, which is the number of CPEX shares distributed to Bentley stockholders on the Separation Date. The same number of shares is being used for the loss per share computation for the three and six months ended June 30, 2008 because no CPEX equity awards were outstanding prior to the Separation Date.

As of June 30, 2009, CPEX had unrestricted cash of approximately \$14.8 million, working capital of \$17.0 million and no debt.

Business Update

Ongoing Phase 2 Clinical Trial: CPEX's intranasal insulin product candidate for the treatment of hyperglycemia in patients with Type 1 and Type 2 diabetes, Nasulin, is continuing extensive clinical trials evaluating the safety and efficacy profile of the product. Patient enrollment is ongoing in a 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 with additional sites planned to be initiated in the Ukraine. Prior 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.

Enrollment Completed in a Phase 1 Clinical Trial: During the second quarter of 2009 CPEX initiated and completed enrollment in a single-site Phase 1 study. This study was conducted in 24 healthy volunteers to determine the pharmacokinetic parameters of various formulation strengths of

Nasulin. Data analysis for this study is ongoing and it is our intent to submit these results for presentation at upcoming scientific meetings.

Management Comments

“We are pleased with the continued progress of our Nasulin clinical program during the first half of 2009 for our ongoing Phase 2a study” stated John A. Sedor, CPEX President and Chief Executive Officer. “We continue to believe that Nasulin will provide a more patient-friendly delivery method that more closely mimics the body’s physiological response. We look forward to providing additional data on our Nasulin program as data becomes available.”

About CPEX Pharmaceuticals

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 technology that facilitates 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 Consolidated and Combined Statements of Operations

(in thousands, except per share data)

	For the Three Months Ended		For the Six Months Ended	
	June 30,		June 30,	
	<u>2009</u>	<u>2008</u>	<u>2009</u>	<u>2008</u>
Royalties and other revenue	\$ 4,473	\$ 3,948	\$ 8,484	\$ 7,398
Operating expenses:				
General and administrative	2,163	1,344	3,934	2,449
Research and development	3,394	2,632	5,993	4,528
Separation costs	—	1,565	—	2,502
Depreciation and amortization	<u>164</u>	<u>171</u>	<u>330</u>	<u>343</u>
Total operating expenses	<u>5,721</u>	<u>5,712</u>	<u>10,257</u>	<u>9,822</u>
Loss from operations	<u>(1,248)</u>	<u>(1,764)</u>	<u>(1,773)</u>	<u>(2,424)</u>
Other income (expenses):				
Interest income	45	79	103	226
Interest expense	<u>(1)</u>	<u>(2)</u>	<u>(2)</u>	<u>(3)</u>
Net loss	<u>\$ (1,204)</u>	<u>\$ (1,687)</u>	<u>\$ (1,672)</u>	<u>\$ (2,201)</u>
Net loss per common share:				
Basic and diluted	<u>\$ (0.48)</u>	<u>\$ (0.74)</u>	<u>\$ (0.67)</u>	<u>\$ (0.97)</u>
Weighted average common shares outstanding:				
Basic and diluted	<u>2,495</u>	<u>2,274</u>	<u>2,489</u>	<u>2,274</u>

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

(in thousands, except per share data)

	<u>June 30,</u> <u>2009</u>	<u>December 31,</u> <u>2008</u>
Assets		
Current assets:		
Cash and cash equivalents	\$ 14,838	\$ 15,211
Receivables	4,535	4,445
Prepaid expenses and other	<u>1,098</u>	<u>583</u>
Total current assets	<u>20,471</u>	<u>20,239</u>
Non-current assets:		
Fixed assets, net	2,975	2,832
Intangible assets, net	2,381	2,394
Restricted cash	1,000	1,000
Other	<u>8</u>	<u>8</u>
Total non-current assets	<u>6,364</u>	<u>6,234</u>
Total assets	<u>\$ 26,835</u>	<u>\$ 26,473</u>
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	\$ 2,025	\$ 1,096
Accrued expenses	<u>1,368</u>	<u>1,534</u>
Total current liabilities	<u>3,393</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, 2,531 shares and 2,484, respectively	25	25
Additional paid-in capital	25,803	24,532
Accumulated deficit	<u>(2,386)</u>	<u>(714)</u>
Total stockholders' equity	<u>23,442</u>	<u>23,843</u>
Total liabilities and stockholders' equity	<u>\$ 26,835</u>	<u>\$ 26,473</u>

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