COMPANY CONTACT: **Vion Pharmaceuticals, Inc.**
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VION REPORTS 2006 FOURTH QUARTER AND YEAR-END FINANCIAL RESULTS

NEW HAVEN, CT, March 2, 2007 – VION PHARMACEUTICALS, INC. (NASDAQ CAPITAL MARKET: VION) today announced results for the fourth quarter and the year ended December 31, 2006.

The net loss was $6.1 million, or $0.09 per share, for the fourth quarter of 2006, compared with a net loss of $4.7 million, or $0.07 per share, for the same period in 2005. Weighted-average common shares outstanding for the three months ended December 31, 2006 and 2005 were 66.3 million and 66 million, respectively.

The Company reported a net loss of $25.3 million, or $0.38 per share, for the year ended December 31, 2006, compared with a net loss of $18.0 million, or $0.28 per share, for 2005. Weighted-average common shares outstanding for the years ended December 31, 2006 and December 31, 2005 were 66.2 million and 65.2 million, respectively.

Total operating expenses were $6.5 million and $5.2 million for the three months ended December 31, 2006 and 2005, respectively, and $27.3 million and $19.8 million for the years ended December 31, 2006 and 2005, respectively. The increase in operating expenses was primarily due to higher total research and development expenses resulting from: (i) late-stage clinical development of Cloretazine® (VNP40101M), including higher spending for clinical trials and development costs in support of a potential registration filing; (ii) preclinical development costs related to the Company's anticancer agent, VNP40541; and (iii) stock-based compensation expense. In addition, general and administrative expenses were higher than the previous year, primarily due to stock-based compensation expense. Overall, stock-based compensation expense recorded in 2006 as a result of the adoption of SFAS 123R was $587,000 for the quarter and $1.9 million for the year.

During the quarter, the Company reached the midpoint for patient accrual (210 patients) to its Phase III trial of Cloretazine® (VNP40101M) in combination with Ara-C in patients with relapsed acute myelogenous leukemia (AML). The planned interim evaluation of safety and efficacy for this trial by its data safety monitoring board, based on 210 patients, is presently anticipated to occur in the second quarter of 2007. The Company also continued to accrue patients to its pivotal Phase II trial of Cloretazine® (VNP40101M) in elderly patients with previously untreated *de novo* poor-risk AML. In January 2007, the Company announced that it would proceed to the second stage of patient accrual to this trial.

The Company reported ending the year with $30.9 million in cash and cash equivalents. In February 2007, the Company received net proceeds of approximately $55.4 million in connection with a private placement of convertible notes and warrants.

Alan Kessman, Chief Executive Officer, commented, “Now that we have completed our recent financing, we have sufficient capital to fund our efforts through mid-2009, and can focus on continuing to accrue patients to the two pivotal trials of Cloretazine® (VNP40101M) in AML.” Mr. Kessman added, "The money we have raised will also be put to use to prepare for potential registration filings in the U.S. and Europe, expand the clinical development of Cloretazine® (VNP40101M), and to fund initial pre-launch marketing activities."

The Company will hold a conference call at 8:30 a.m. Eastern Time on March 5, 2007 to discuss the quarterly and year-end financial results.

Vion Pharmaceuticals, Inc. is committed to extending the lives and improving the quality of life of cancer patients worldwide by developing and commercializing innovative cancer therapeutics. Vion has two agents in clinical trials. Cloretazine® (VNP40101M), a unique alkylating agent, is being evaluated in: (i) a Phase III trial in combination with cytarabine in relapsed acute myelogenous leukemia and (ii) a Phase II pivotal trial as a single agent in elderly patients with previously untreated *de novo* poor-risk acute myelogenous leukemia. A Phase II trial of Cloretazine® (VNP40101M) as a single agent in small cell lung cancer is also being conducted. Triapine®, a potent inhibitor of a key step in DNA synthesis, is being evaluated in clinical trials sponsored by the National Cancer Institute. In preclinical studies, Vion is also evaluating VNP40541, a hypoxia-selective compound and hydrazone compounds. The Company also is seeking development partners for TAPET®, its modified *Salmonella* vector used to deliver anticancer agents directly to tumors. For additional information on Vion and its product development programs, visit the Company’s Internet web site at www.vionpharm.com.

This news release contains forward-looking statements. Such statements are subject to certain risk factors which may cause Vion's plans to differ or results to vary from those expected, including Vion’s ability to secure external sources of funding to continue its operations, the inability to access capital and funding on favorable terms, continued operating losses and the inability to continue operations as a result, its dependence on regulatory approval for its products, delayed or unfavorable results of drug trials, the possibility that favorable results of earlier clinical trials are not predictive of safety and efficacy results in later clinical trials, the need for additional research and testing, and a variety of other risks set forth from time to time in Vion's filings with the Securities and Exchange Commission, including but not limited to the risks discussed in Vion's Annual Report on Form 10-K for the year ended December 31, 2005. In particular, there can be no assurance as to the results of any of the Company’s clinical trials, that any of these trials will continue to full accrual, or that any of these trials will not be discontinued, modified or ceased. Except in special circumstances in which a duty to update arises under law when prior disclosure becomes materially misleading in light of subsequent events, Vion does not intend to update any of these forward-looking statements to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events.

--Financial Statements Follow--

VION PHARMACEUTICALS, INC.
(A Development Stage Company)

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited)

(In thousands, except per share data)	Three Months Ended December 31, 2006	2005	Year Ended December 31, 2006	2005
Revenues:				
Technology license fees	$6	$5	$22	$22
Research and laboratory support fees	--	--	--	1
Contract research grants	--	--	--	--
Total revenues	6	5	22	23
Operating expenses:				
Clinical trials	3,087	2,581	13,070	9,996
Other research and development	1,900	1,803	8,414	6,609
Total research and development	4,987	4,384	21,484	16,605
General and administrative	1,190	809	4,262	3,239
Marketing	337	--	1,525	--
Total operating expenses	6,514	5,193	27,271	19,844
Loss from operations	(6,508)	(5,188)	(27,249)	(19,821)
Interest income	434	539	1,994	1,828
Interest expense	--	(4)	--	(4)
Other income (expense), net	(19)	6	(50)	(4)
Loss before income taxes	(6,093)	(4,647)	(25,305)	(18,001)
Income tax provision (benefit)	8	8	42	40
Net loss	($6,101)	($4,655)	($25,347)	($18,041)
Basic and diluted loss per share	($0.09)	($0.07)	($0.38)	($0.28)
Weighted-average number of shares of common stock outstanding	66,284	66,036	66,196	65,161

CONDENSED CONSOLIDATED BALANCE SHEET DATA
(Unaudited)

(In thousands)	Dec. 31, 2006	Dec. 31, 2005
Cash and cash equivalents	$30,914	$52,762
Total assets	31,856	53,719
Total liabilities	6,402	5,080
Shareholders' equity	25,454	48,639

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