COMPANY CONTACT: **Vion Pharmaceuticals, Inc.**
Alan Kessman, Chief Executive Officer
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VION REPORTS 2006 FIRST QUARTER RESULTS

NEW HAVEN, CT, May 8, 2006 – VION PHARMACEUTICALS, INC. (NASDAQ CAPITAL MARKET: VION) today announced results for the three-month period ended March 31, 2006.

The Company reported a net loss of $6.0 million, or $0.09 per share, for the three-month period ended March 31, 2006, compared to a net loss of $4.6 million, or $0.07 per share, for the same period in 2005. Weighted-average common shares outstanding for the three months ended March 31, 2006 and 2005 were 66.2 million and 62.6 million, respectively.

Total operating expenses were $6.5 million and $4.9 million for the three months ended March 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 development costs in support of a potential registration filing, as well as (ii) preclinical development costs related to the Company's preclinical anticancer agent, VNP40541, and (iii) stock-based compensation expense. In addition, general and administrative were higher than the previous period, primarily due to increased professional fees and stock-based compensation expense.

Alan Kessman, Chief Executive Officer, noted, "In the first quarter, we continued to advance on all aspects of our late-stage clinical development of Cloretazine® (VNP40101M). In addition to meeting with the U.S. Food and Drug Administration and announcing that we will conduct a pivotal Phase II trial in elderly *de novo* poor-risk acute myelogenous leukemia, we made progress on validating the manufacturing process for Cloretazine® (VNP40101M) and began conducting additional preclinical studies necessary for registration."

The Company reported ending the quarter with $46.6 million in cash and cash equivalents.

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 a Phase III trial in combination with cytarabine in relapsed acute myelogenous leukemia. A Phase II pivotal trial of Cloretazine® (VNP40101M) as a single agent in elderly patients with previously untreated *de novo* poor-risk acute myelogenous leukemia is planned to commence in the second quarter of 2006. Additional trials of Cloretazine® (VNP40101M) as a single agent in adult and pediatric brain tumors, small cell lung cancer and chronic lymphocytic leukemia, and in combination with temozolomide in hematologic

malignancies, are also underway. Triapine®, a potent inhibitor of a key step in DNA synthesis, is being evaluated in 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. 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 March 31, 2006	2005
Revenues from technology license fees	$ 9	$ 5
Operating expenses:		
Clinical trials	3,135	3,049
Other research and development	1,945	1,145
Total research and development	5,080	4,194
General and administrative	1,100	691
Marketing	309	--
Total operating expenses	6,489	4,885
Loss from operations	(6,480)	(4,880)
Interest income	532	341
Other income (expense), net	(10)	(2)
Loss before income taxes	(5,958)	(4,541)
Income tax provision	13	11
Net loss	$ (5,971)	$ (4,552)
Basic and diluted loss per share	$ (0.09)	$ (0.07)
Weighted-average number of shares of common stock outstanding	66,186	62,647

CONDENSED CONSOLIDATED BALANCE SHEET DATA
(Unaudited)

(In thousands)	March 31, 2006	Dec. 31, 2005
Cash and cash equivalents	$ 46,583	$ 52,762
Total assets	47,804	53,719
Total liabilities	4,611	5,080
Shareholders' equity	43,193	48,639

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