COMPANY CONTACT: **Vion Pharmaceuticals, Inc.**
Alan Kessman, Chief Executive Officer
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VION REPORTS 2008 FIRST QUARTER RESULTS

NEW HAVEN, CT, May 5, 2008 – VION PHARMACEUTICALS, INC. (NASDAQ CAPITAL MARKET: VION) today announced financial results for the three-month period ended March 31, 2008.

The Company reported a net loss of $8.2 million, or $1.14 per share, for the three-month period ended March 31, 2008, compared with a net loss of $8.0 million, or $1.20 per share, for the same period in 2007. Weighted-average common shares outstanding for the three months ended March 31, 2008 and 2007 were 7.2 million and 6.6 million, respectively.

Operating expenses were reduced by $679,000 from $7.9 million in the 2007 quarter to $7.2 million in 2008. Interest expense increased by $766,000 over the prior year as the Company's Convertible Senior Notes, issued in February 2007, were outstanding for the entire quarter in 2008.

The Company reported ending the quarter with $55.2 million in cash and cash equivalents, sufficient to fund the Company's operations through the third quarter of 2009 based on the current operating plan. The Company also announced that it will pay the interest payment due August 15, 2008 on its Convertible Senior Notes in cash.

Alan Kessman, Chief Executive Officer, commented, "We continue to work on the New Drug Application (NDA) for Cloretazine® (VNP40101M). It remains our plan to file the NDA with the U.S. Food and Drug Administration in 2008."

On February 20, 2008, the Company implemented a one-for-ten reverse split of all outstanding shares of its common stock and a corresponding decrease in the number of shares of authorized common stock. Share and per share amounts contained herein are provided on a post-split basis.

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 II pivotal trial as a single agent in elderly patients with previously

untreated *de novo* poor-risk acute myelogenous leukemia. Clinical trials of Cloretazine® (VNP40101M) with temozolomide in brain tumors, and with stem cell transplantation in advanced hematologic malignancies, are 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. 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 potential inability to obtain regulatory approval for its products, particularly Cloretazine® (VNP40101M), delayed or unfavorable results of drug trials, the possibility that favorable results of earlier preclinical studies or clinical trials are not predictive of safety and efficacy results in later clinical trials, the need for additional research and testing, the potential inability to secure external sources of funding to continue operations, the inability to access capital and funding on favorable terms, continued operating losses and the inability to continue operations as a result, 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 attendant to the forward-looking statements included under Item 1A, "Risk Factors" in Vion's Form 10-K for the year ended December 31, 2007. In particular, there can be no assurance as to the results of any of the Vion's clinical trials, that any of these trials will continue to full accrual, or that any of these trials will not be discontinued, modified, delayed or ceased altogether. 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, 2008	2007
Technology license fee revenue	$14	$5
Operating expenses:		
Clinical trials	2,854	3,399
Other research and development	2,259	2,513
Total research and development	5,113	5,912
Marketing, general and administrative	2,087	1,967
Total operating expenses	7,200	7,879
Loss from operations	(7,186)	(7,874)
Interest income	502	667
Interest expense	(1,505)	(739)
Other expense, net	(6)	(3)
Loss before income taxes	(8,195)	(7,949)
Income tax provision	--	6
Net loss	($8,195)	($7,955)
Basic and diluted loss per share[1]	($1.14)	($1.20)
Weighted-average number of shares of common stock outstanding[1]	7,173	6,636

[1] Adjusted for all periods presented to reflect the Company's one-for-ten reverse stock split effected February 20, 2008.

CONDENSED CONSOLIDATED BALANCE SHEET DATA
(Unaudited)

(In thousands)	March 31, 2008	Dec. 31, 2007
Cash and cash equivalents	$55,238	$61,067
Total assets	57,170	63,195
Convertible senior notes	54,556	54,275
Total liabilities	60,673	61,988
Shareholders' equity	(3,503)	1,207

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