

COMPANY CONTACT:

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VION REPORTS 2005 FIRST QUARTER FINANCIAL RESULTS

NEW HAVEN, CT, May 3, 2005 – VION PHARMACEUTICALS, INC. (NASDAQ SMALLCAP: VION) today announced results for the three-month period ended March 31, 2005.

The Company reported a net loss of \$4.6 million, or \$0.07 per share, for the three-month period ended March 31, 2005, compared with a net loss of \$3.3 million, or \$0.07 per share, for the same period in 2004. Weighted-average common shares outstanding for the three months ended March 31, 2005 and 2004 were 62.6 million and 47.3 million, respectively. Total operating expenses were \$4.9 million and \$3.4 million for the three months ended March 31, 2005 and 2004, respectively. The increase in operating expenses was primarily due to higher clinical trial expenses, mainly as a result of costs associated with the initiation of the Company's Phase III pivotal trial of CLORETAZINE[™] (VNP40101M) in relapsed acute myeloid leukemia (AML) in March 2005.

The Company reported ending the quarter with \$68.0 million in cash and cash equivalents, including net proceeds of \$30 million from the issuance of 10 million shares of its Common Stock in a registered direct offering to institutional investors completed in January 2005.

Vion Pharmaceuticals, Inc. is developing novel agents for the treatment of cancer. Vion has two agents in clinical trials: CLORETAZINE[™] (VNP40101M), a unique sulfonylhydrazine alkylating agent is being evaluated in four clinical trials, including a Phase III trial in combination with Ara-C in relapsed acute myeloid leukemia, and Triapine[®], a potent inhibitor of a key step in DNA synthesis, is being evaluated in combination with gemcitabine in a Phase II trial in pancreatic cancer and additional Phase I and II trials sponsored by the National Cancer Institute. In preclinical studies, Vion is evaluating KS119 and KS119W, hypoxia-selective compounds from the sulfonylhydrazine class, and heterocyclic hydrazones. The Company is also 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 <u>www.vionpharm.com</u>.

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, 2004. 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)

	Three Months Ended March 31,	
(In thousands, except per share data)	2005	2004
Revenues:		
Technology license fees	\$5	\$9
Research and laboratory support services		24
Contract research grants		63
Total revenues	5	96
Operating expenses:		
Clinical trials	3,049	1,805
Research and development	1,145	957
Total research and development	4,194	2,762
General and administrative	691	617
Total operating expenses	4,885	3,379
Interest income	341	91
Other expense	(2)	(32)
Loss before income tax provision	(4,541)	(3,224)
Income tax provision	11	34
Net loss	(\$4,552)	(\$3,258)
Basic and diluted loss per share	(\$0.07)	(\$0.07)
Weighted-average number of shares of common stock outstanding	62,647	47,309

CONDENSED CONSOLIDATED BALANCE SHEET DATA (Unaudited)

(In thousands)	-, March 31, 2005	Dec. 31, 2004
Cash and cash equivalents	\$68,000	\$41,729
Total assets	68,761	42,644
Total liabilities	6,995	6,429
Shareholders' equity	61,766	36,215