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VION REPORTS 2007 THIRD QUARTER AND NINE-MONTH RESULTS

Company Updates Status of Cloretazine® (VNP40101M) Clinical Trials in AML

NEW HAVEN, CT, November 7, 2007 – VION PHARMACEUTICALS, INC. (NASDAQ CAPITAL MARKET: VION) today announced results for the three-month and nine-month periods ended September 30, 2007.

The Company reported a net loss of $9.0 million, or $0.13 per share, for the three-month period ended September 30, 2007, compared to a net loss of $6.3 million, or $0.10 per share, for the same period in 2006. Weighted-average common shares outstanding for the three months ended September 30, 2007 and 2006 were 67.7 million and 66.2 million, respectively.

For the nine-month period ended September 30, 2007, the net loss was $25.8 million, or $0.39 per share, compared to a net loss of $19.2 million, or $0.29 per share, for the same period in 2006. Weighted-average common shares outstanding for the nine months ended September 30, 2007 and 2006 were 66.8 million and 66.2 million, respectively.

Total operating expenses were $8.6 million and $6.8 million for the three months ended September 30, 2007 and 2006, respectively, and $25.1 million and $20.8 million for the nine months ended September 30, 2007 and 2006, respectively.

In the quarter, the increase in operating expenses was due to higher total research and development expenses resulting from: (i) late-stage clinical development of Cloretazine® (VNP40101M), including additional personnel, drug production costs and other costs in support of a potential registration filing and (ii) stock-based compensation expense. In addition, marketing, general and administrative expenses were higher than the prior year quarter, primarily due to increased medical advisory board meetings and stock-based compensation expense.

In the nine-month period, the increase in operating expenses was due to higher total research and development expenses resulting from: (i) late-stage clinical development of Cloretazine® (VNP40101M), including additional personnel, drug production costs and other costs in support of a potential registration filing; (ii) stock-based compensation expense; and (iii) a gift to support research projects at a Yale University laboratory, partially offset by lower spending on preclinical drug production. In addition, marketing, general and administrative expenses were higher than

the prior year period, primarily due to increased stock-based compensation expense, medical advisory board meetings and patent fees.

The Company reported $1.2 million and $3.4 million of stock-based compensation expense in the three-month and nine-month periods ended September 30, 2007, respectively, as compared to $413,000 and $1.4 million for the comparable 2006 periods.

The Company reported $3.7 million in interest expense for the nine months ended September 30, 2007 related to its private placement in February 2007 of convertible debt and warrants. There was no interest expense in 2006. Interest income increased from $1.6 million for the nine-month period ended September 30, 2006 to $2.6 million for the comparable 2007 period based on higher invested balances and higher interest rates in 2007.

The Company reported ending the quarter with $68.0 million in cash and cash equivalents. Based on its current operating plan, the Company reported that it had funds to operate the Company into the third quarter of 2009 excluding any expenses for commercialization of Cloretazine® (VNP40101M) in the United States. If the Company does commercialize Cloretazine® (VNP40101M) in the United States on its own, it would have to raise additional capital.

In August, the Company announced that it had completed the initial target accrual of 85 patients for its pivotal Phase II trial of Cloretazine® (VNP40101M) as a single agent in elderly *de novo* poor-risk acute myelogenous leukemia (AML). Recent FDA/ICH guidance recommends that an electrocardiograph evaluation (QT/QTc) study be included in the clinical development of all new drugs. Therefore, the trial continues to accrue patients at a few sites in the United States in a cardiac sub-study.

Alan Kessman, Chief Executive Officer, commented, ”We will be presenting preliminary information from our pivotal Phase II trial of Cloretazine® (VNP40101M) as a single agent in elderly *de novo* poor-risk AML at the American Society of Hematology Meeting in December.” He concluded, “Our objective remains to file a New Drug Application (NDA) for Cloretazine® (VNP40101M) with the FDA in 2008 based on this trial. We are already working on preparing the appropriate documentation for the NDA.”

With regard to the pivotal Phase III trial in relapsed AML of Cloretazine® (VNP40101M) in combination with cytarabine which is on clinical hold, the Company announced that discussions with the data safety monitoring board (DSMB) related to the findings of a medical and safety review of the trial had been completed. The next step of the process is to discuss the conclusions with the regulatory authorities. There can be no assurance that these discussions will result in a continuation of the Phase III trial or what the timing of any such continuation might be.

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) as a single agent in small cell lung cancer, with temozolomide in brain tumors, and with stem cell transplant 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, 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, 2006 and the Company's Form 10-Q for the quarter ended June 30, 2007. 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, 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 September 30, 2007	2006	Nine Months Ended September 30, 2007	2006
Technology license fee revenue	$6	$6	$16	$16
Operating expenses:				
Clinical trials	3,490	3,285	10,781	9,983
Other research and development	2,786	2,336	7,898	6,514
Total research and development	6,276	5,621	18,679	16,497
Marketing, general and administrative	2,279	1,216	6,387	4,260
Total operating expenses	8,555	6,837	25,066	20,757
Loss from operations	(8,549)	(6,831)	(25,050)	(20,741)
Interest income	938	502	2,603	1,560
Interest expense	(1,423)	--	(3,652)	--
Other expense, net	--	(3)	(4)	(31)
Loss before income taxes	(9,034)	(6,332)	(26,103)	(19,212)
Income tax provision (benefit)	3	10	(269)	34
Net loss	$(9,037)	$(6,342)	$(25,834)	$(19,246)
Basic and diluted loss per share	$(0.13)	$(0.10)	$ (0.39)	$ (0.29)
Weighted-average number of shares of common stock outstanding	67,743	66,231	66,828	66,167

CONDENSED CONSOLIDATED BALANCE SHEET DATA
(Unaudited)

(In thousands)	Sep. 30, 2007	Dec. 31, 2006
Cash and cash equivalents	$ 68,011	$ 30,914
Total assets	70,091	31,856
Convertible senior notes	54,017	--
Total liabilities	61,831	6,402
Shareholders' equity	8,260	25,454

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