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Vion Pharmaceuticals to Implement a One-for-Ten Reverse Stock Split

NEW HAVEN, CT, February 20, 2008 - VION PHARMACEUTICALS, INC. (NASDAQ CAPITAL MARKET: VION) today announced that the Company would implement a one-for-ten reverse split of its common stock, effective at 5:00 p.m. Eastern Time on Wednesday, February 20, 2008.

On a pre-split basis, Vion Pharmaceuticals has 81,017,569 shares outstanding as of February 19, 2008. As a result of the reverse stock split, every 10 shares of Vion Common Stock will be combined into one share of Vion Pharmaceuticals' Common Stock, reducing the total number of outstanding shares to approximately 8.1 million shares.

Shares held electronically through a brokerage will be automatically adjusted for the reverse split. Shareholders of record will receive a letter of transmittal from the Company's stock transfer agent, American Stock Transfer & Trust Company, with instructions about how to exchange their shares. Vion will pay cash in lieu of issuing fractional shares.

When the reverse split becomes effective, Vion Pharmaceuticals' 7.75% Convertible Senior Notes due 2012 (the "Notes") will have a conversion rate of 52.0833 shares of common stock per $1,000 Note. Holders of Vion Pharmaceuticals' warrants will receive a notice detailing post-split warrant shares and exercise prices.

Beginning on February 21, 2008, a "D" will be added to the Vion trading symbol for 20 trading days to designate that shares are trading on a post-split basis. After such time, the symbol will revert to "VION".

Alan Kessman, Chief Executive Officer, said, "This adjustment to our capital structure is important to implement in order to attempt to restore compliance with NASDAQ listing requirements, which we believe is in the best interest of our shareholders." He added, "We will now continue to move forward towards our goal of filing a New Drug Application for Cloretazine® (VNP40101M) in 2008."

This action follows shareholder approval, at a Special Meeting of Stockholders held on February 13, 2008, of the grant of discretionary authority to the Board to implement a reverse stock split and decrease the total numbers of shares and the number of shares of common

stock the Company is authorized to issue. The Board determined the exact ratio of the reverse split at a meeting of the Board on February 19, 2008.

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 pivotal Phase II trial as a single agent in elderly patients with *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 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, 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 September 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.

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