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Vion Pharmaceuticals Enters into an Agreement to Sell Convertible Senior Notes and Warrants

NEW HAVEN, CT, February 14, 2007 – VION PHARMACEUTICALS, INC. (NASDAQ CAPITAL MARKET: VION) today announced an agreement to sell up to $60 million principal amount of its Convertible Senior Notes due 2012 and Warrants to purchase up to 7,800,000 shares of Vion common stock in a private placement.

The notes will bear interest at a rate of 7.75% *per annum* and be convertible into shares of Vion's common stock at an initial conversion rate of 520.833 shares of common stock per $1,000 principal amount of notes, subject to adjustment (equivalent to an initial conversion price of $1.92 per share, representing a conversion premium of 20% to the last reported sale price of $1.60 per share on February 13, 2007). Subject to certain conditions, the notes may be automatically converted into shares of Vion's common stock if the closing price thereof equals or exceeds 150% of the conversion price then in effect for at least 20 days of any 30-consecutive trading day period. Otherwise, Vion cannot redeem the notes until February 15, 2010. Upon the occurrence of certain designated events prior to the maturity of the notes, subject to certain specified exceptions, investors will have a right to have Vion redeem the notes for cash.

For each $1,000 principal amount of the notes, investors will receive three-year warrants to purchase 130 shares of Vion common stock at an initial exercise price of $2.00 per share, subject to adjustment (representing a premium of 25% to the last reported sale price of $1.60 per share on February 13, 2007). Subject to certain conditions, Vion may redeem the warrants if the closing price of Vion's common stock equals or exceeds 150% of the exercise price then in effect for at least 20 days of any 30-consecutive trading day period.

The offering is expected to close on February 20, 2007. Vion expects to use the proceeds of the offering for general corporate purposes.

This press release is not an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of the securities in any jurisdiction in which any such offer, solicitation, or sale would be unlawful prior to the registration or qualification under the securities laws of any such jurisdiction. The notes are offered to qualified institutional buyers

under Rule 144A, to persons outside the United States under Regulation S and to institutional investors that are Accredited Investors under Rule 501.

The notes and warrants to be offered and the common stock issuable upon conversion of the notes and exercise of the warrants have not been registered under the Securities Act of 1933, as amended, or any state securities laws, and may not be offered or sold in the United States absent registration or an applicable exemption from registration requirements.

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: (i) a Phase III trial in combination with cytarabine in relapsed acute myelogenous leukemia and (ii) a Phase II pivotal trial as a single agent in elderly patients with previously untreated *de novo* poor-risk acute myelogenous leukemia. An additional trial of Cloretazine® (VNP40101M) as a single agent in small cell lung cancer is also underway. Triapine®, a potent inhibitor of a key step in DNA synthesis, is being evaluated in clinical trials sponsored by the National Cancer Institute. In preclinical studies, Vion is also evaluating VNP40541, a hypoxia-selective compound. 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. 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 or ceased. 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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