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Vion Pharmaceuticals Announces Initiation of Clinical Trial of Cloretazine® (VNP40101M) in Combination with Cytarabine

NEW HAVEN, CT, May 8, 2008 – VION PHARMACEUTICALS, INC. (NASDAQ CAPITAL MARKET: VION) today announced the start of an investigator-sponsored Phase I/II clinical trial of its lead anticancer agent Cloretazine® (VNP40101M) in combination with cytarabine in elderly patients with previously untreated acute myelogenous leukemia (AML) and high-risk myelodysplastic syndromes (MDS). The trial is being conducted under the direction of Ellen K. Ritchie, M.D. at The Weill-Cornell Medical College in New York City. Co-investigators for the study are Eric Feldman, M.D. and Gail Roboz, M.D.

The objectives of the trial are: (i) to define the maximum tolerated dose (MTD) of Cloretazine® (VNP40101M) when given in combination with cytarabine to AML and high-risk MDS patients over the age of 60, and (ii) to evaluate this combination further for safety and efficacy in a larger cohort of patients. Cloretazine® (VNP40101M) will be given as a 30 – 60 minute infusion on day 1 approximately 3-4 hours after the start of the cytarabine infusion. Cytarabine will be administered as a continuous infusion of 100 mg/m^2/day for 7 days. In the Phase I portion of the study, dose escalation will be done in cohorts of at least 3 patients and the maximum tolerated dose (MTD) identified in the Phase I segment will be used in the Phase II segment of the study.

Ann Cahill, Vice President, Clinical Development, commented, “It is important for us to continue to study Cloretazine® (VNP40101M) in combination with different doses and schedules of cytarabine, the most widely used drug in the treatment of AML. In addition, we want to evaluate Cloretazine® (VNP40101M) in a broader group of elderly patients than are currently being studied in our pivotal trial of Cloretazine® (VNP40101M) as a single agent.” Ms. Cahill concluded, “Cloretazine® (VNP40101M)

has shown activity in AML and MDS, warranting further study in the treatment of these devastating conditions as both a single agent and in combination with other therapies."

Dr. Ritchie commented, "We are enthusiastic to begin exploring this regimen for AML and MDS patients that are over the age of 60. As standard therapies for these individuals have shown to be inadequate, there exists a need for our continued attention to research and development of new treatment options. Preliminary clinical trials using Cloretazine® (VNP40101M) in combination with cytarabine have demonstrated favorable activity and compelling evidence for further study. The knowledge gained from this research study will bring us closer to our goal of finding the best possible treatment for our patients that will extend the length as well as improve the quality of their lives."

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 inability to manufacture product, 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.

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