COMPANY CONTACT: **Vion Pharmaceuticals, Inc.**
Alan Kessman, Chief Executive Officer
Howard B. Johnson, President & CFO
(203) 498-4210 phone

Vion Initiates Pivotal Phase II Trial of Single Agent Cloretazine® in Elderly Patients with *De Novo* Poor-Risk Acute Myelogenous Leukemia

NEW HAVEN, CT, May 24, 2006 - VION PHARMACEUTICALS, INC. (NASDAQ CAPITAL MARKET: VION) today announced the initiation of a pivotal Phase II trial of Cloretazine® (VNP40101M) as a single agent in previously untreated elderly patients with *de novo* poor-risk acute myelogenous leukemia (AML). The Phase II trial is expected to be conducted in over 20 North American and European sites. Accrual of 85 patients is expected to take approximately one year.

Ann Cahill, Vice President, Clinical Development, said, "We are very pleased to have this pivotal trial of Cloretazine® (VNP40101M) underway. The treatment of elderly patients with poor-risk AML is an unmet medical need in clinical oncology. Based on our previous Phase II trial, in which Cloretazine® (VNP40101M) achieved a complete remission rate of 50% in elderly patients with *de novo* AML, we believe that Cloretazine® (VNP40101M) can play an important role in the treatment of older patients with acute leukemia."

Clinical data on the treatment of elderly patients with *de novo* AML from Vion's previously completed Phase II trial of Cloretazine® (VNP40101M) was selected as one of the posters to be discussed at the upcoming 42nd Annual Meeting of the American Society of Clinical Oncology at the Georgia World Congress Center in Atlanta, Georgia. The poster discussion session will take place in Building C, Level 3, Room C303 on June 4th from 5:00 PM to 6:00 PM Eastern Time.

Cloretazine® (VNP40101M) is a novel alkylating agent which is also being evaluated in a pivotal Phase III trial in combination with cytarabine (Ara-C) for the treatment of patients of any age with relapsed AML. This 420 patient Phase III trial is being conducted in 65 North American and European sites, and is expected to reach its interim evaluation point (210 patients evaluated for response) in the second half of 2006. Ms. Cahill added, "We are proud to have a comprehensive clinical program for Cloretazine® (VNP40101M) in AML, with two pivotal trials now ongoing. We look forward to rapid accrual to these trials, and data analysis for the registration of Cloretazine® (VNP40101M) in these indications where few treatment options exist."

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. Additional trials of Cloretazine® (VNP40101M) as a single agent in adult and pediatric brain tumors, small cell lung cancer and chronic lymphocytic leukemia, and in combination with temozolomide in hematologic malignancies, are also underway. Triapine®, a potent inhibitor of a key step in DNA synthesis, is being evaluated in trials sponsored by the National Cancer Institute. In preclinical studies, Vion is also evaluating VNP40541, a hypoxia-selective compound, and hydrazone compounds. 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. 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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