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Vion Pharmaceuticals Presents Clinical Data from a Phase II Trial of Cloretazine® (VNP40101M) in Elderly AML Patients with Unfavorable Cytogenetics at EHA Meeting

NEW HAVEN, CT, June 11, 2007 - VION PHARMACEUTICALS, INC. (NASDAQ CAPITAL MARKET: VION) announced that it presented clinical data in a poster session at the 12th Congress of the European Hematology Association (EHA) Meeting in Vienna, Austria on its lead anticancer agent Cloretazine® (VNP40101M) as a single agent in a multi-center international Phase II clinical trial in a subset of elderly patients with acute myelogenous leukemia (AML) or high-risk myelodysplastic syndrome (MDS) and unfavorable cytogenetics.

The Phase II trial was conducted from March 2004 to May 2006. The study treated 129 patients of 60 years of age or older with previously untreated AML or high-risk MDS. Previously data were presented on 104 patients (Giles et al, *Journal of Clinical Oncology,* January 1, 2007). Treatment consisted of Cloretazine® (VNP40101M) in a 600 mg/m^2 dose administered in a 30-60 minute infusion on day 1 (second induction allowed) and provided the option for an additional 400 mg/m^2 as consolidation for responders (complete remission (CR) or complete remission with incomplete platelet count (CRp). The primary endpoint was overall response (CR and CRp). Overall survival and relapse-free survival were also analyzed.

Data were presented at the EHA Meeting in a subset of 59 patients with unfavorable cytogenetics. Of these patients, 28 (47%) had secondary AML, 21 (36%) had *de novo* AML, and 10 (17%) had high-risk MDS. Overall, the response rate in patients with unfavorable cytogenetics was 25%. Response by diagnosis was: *de novo* AML (48%); MDS (30%) and secondary AML (7%). Twelve (20%) patients died within 30 days of receiving induction treatment. The majority of early death was in patients with secondary AML and was due to disease progression.

Dr. Norbert Vey, head of the Leukemia Program, Department of Hematology, at the Institut Paoli-Calmettes in Marseille, France, commented, “Patients with unfavorable cytogenetics have traditionally not responded well to induction chemotherapy, so the activity of Cloretazine® (VNP40101M) in this setting is particularly encouraging.”

Ann Cahill, Vion's Vice President, Clinical Development, said, "Elderly AML patients with unfavorable cytogenetics have few available treatment options." Ms. Cahill added, "Our ongoing pivotal Phase II trial is designed to confirm the activity of Cloretazine® (VNP40101M) in poor-risk patients, including those with unfavorable cytogenetics."

A pivotal Phase II clinical trial in elderly patients with *de novo* poor-risk AML is underway currently in over 20 sites in North America and Europe. Completion of accrual to this trial is expected in June or July 2007.

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. 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, 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 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 Annual Report on Form 10-K for the year ended December 31, 2006. 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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