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Vion Pharmaceuticals Announces Presentation of Data of Cloretazine® (VNP40101M) in Elderly Patients with High-Risk Myelodysplastic Syndromes at the EHA Annual Meeting

NEW HAVEN, CT, June 13, 2008 – VION PHARMACEUTICALS, INC. (NASDAQ CAPITAL MARKET: VION) today announced that data from a previously conducted Phase II trial of its lead anticancer agent Cloretazine® (VNP40101M) in elderly patients with acute myelogenous leukemia (AML) and high-risk myelodysplastic syndromes (MDS) had been presented at the 13th Congress of the European Hematology Association (EHA) at the Bella Center in Copenhagen, Denmark. At the Congress, data were presented in a subset of 26 patients with high-risk MDS by French-American-British (FAB) Group criteria.

The median age of the patients in the subset was 71 years (range of 59-82 years). Twelve patients were diagnosed with refractory anemia with excess blasts (RAEB) and 9 patients were diagnosed with RAEB-t. Five patients were diagnosed with either chronic myelomonocytic leukemias (CMML) (3) or as unknown (2). Fifteen patients had intermediate cytogenetics and 11 had unfavorable cytogenetics. Sixteen of the patients were classified as Intermediate-2 risk by the International Prognostic Scoring System (IPSS) system (1.5-2.0), and 10 were classified as high risk (≥ 2.5).

Eight of the 26 patients had received prior treatment for their disease. Prior agents used included arsenic trioxide, thalidomide, Ara-C, imatinib mesylate, interferon, amifostine, melphalan, hydroxyurea and 5-azacitiadine.

The overall complete response rate was 38% (7 CR and 3 CRp). Three of 10 responders received prior treatment; 8 of the 10 responders received consolidation. The median (range) of overall survival for the entire patient group was 3.4 months (0.6-28.6) and the median (range) of overall survival for responders was 3.9 months (2.5-28.6).

The most common grade 3-5 adverse events, regardless of relation to treatment, were febrile neutropenia in 8 patients, and neutropenia and thrombocytopenia in 7 patients

respectively. One patient died within 30 days of first induction treatment due to pneumonia.

Dr. Ghulam Mufti, Department Head and Professor of Hematological Medicine at the University of London King's College Hospital, and an investigator on the trial, said, "The activity demonstrated in this study is encouraging, particularly the complete responses observed in those patients that had received prior treatment for MDS." He concluded, "Despite recent advances in the treatment of MDS, most patients will relapse, and it is important that we continue to develop new therapies to treat these patients."

Alan Kessman, Chief Executive Officer, said, "These data demonstrate Cloretazine® (VNP40101M)'s potential utility in patients with high-risk MDS. We believe that this signal should be pursued with further clinical investigation to optimize the dose and schedule of Cloretazine® (VNP40101M) in this disease."

The Phase II trial started in March 2004 and was conducted in 14 sites in North America and Europe. Enrollment of the study was completed in May 2006.

The study was designed for patients over the age of 60 with previously untreated AML and high-risk MDS (patients were not to have received prior cytotoxic chemotherapy, excluding hydroxyurea, low-dose araC, decitabine, or 5-azacytidine). Study objectives were: (i) overall complete response rate measured as either complete remission (CR) or CRp, a complete response with incomplete platelet recovery; (ii) the toxicity; and (iii) pharmacokinetics of Cloretazine® (VNP40101M) in this patient population.

Patients received induction therapy of 600 mg/m^2 of Cloretazine® (VNP40101M) in a thirty to sixty minute infusion. Second induction was permitted in patients with bone marrow improvement but residual disease. Patients who responded could receive consolidation therapy of 400 mg/m^2 of Cloretazine® (VNP40101M).

About Vion

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 cytarabine in elderly patients with acute myelogenous leukemia, 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, clinical trials or interim clinical trial data are not predictive of safety and efficacy results in later or final 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, the possible delisting of the Company's common stock from the NASDAQ Capital Market 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 and Form 10-Q for the quarter ended March 31, 2008. 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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