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Vion Presents Data on Cloretazine® (VNP40101M) at the 48th Annual American Society of Hematology (ASH) Meeting

NEW HAVEN, CT, December 11, 2006 - VION PHARMACEUTICALS, INC. (NASDAQ CAPITAL MARKET: VION) announced today that clinical data on its lead anticancer agent Cloretazine® (VNP40101M) were presented in two posters at the 48th Annual Meeting of the American Society of Hematology (ASH) in Orlando, Florida. A third poster sponsored by Vion Pharmaceuticals on treatment patterns in elderly patients with acute myelogenous leukemia (AML) was also presented at the meeting. All three posters will be available on Vion's website, www.vionpharm.com, today.

In Poster #148-II, entitled "A Double-Blind Placebo-Controlled Randomized Phase III Study of High Dose Continuous Infusion Cytosine Arabinoside (araC) with or without Cloretazine® in Patients with First Relapse of Acute Myeloid Leukemia (AML)", demographic data on the initial group of patients entered into this double-blind, placebo-controlled randomized trial were presented.

The trial is stratified by two significant prognostic factors: (i) age (greater or less than 60 years of age) and (ii) length of the patients' first remission (greater or less than 12 months). The first 210 patients accrued were divided essentially equally between those that were less than (110 patients) and more than (100 patients) 60 years of age. 98% of patients had received a cytarabine-based regimen as prior induction treatment, with cytarabine and an anthracycline (91%) as the most common treatment. Two-thirds of the patients accrued had a first remission of less than twelve months. Detailed information on cytogenetic profile and median duration of first remission by strata were also presented in the poster.

The majority of treatment-related adverse events, with data available in 142 patients, were identified as gastrointestinal, or related to hematological systems, general disorders (including pain, fever, fatigue), skin or infections. Grade 3-4 toxicities were primarily hematological or infection. The early death rate (death within thirty days of start of treatment), available in 192 patients, was 9%.

Ann Cahill, Vice President, Clinical Development said, "We believe that our Phase III trial of Cloretazine® (VNP40101M) in relapsed AML (CLI-037), in which we expect to accrue 420

patients, is the largest trial ever conducted by a company in this indication. The trial is now underway in over 65 sites in North America and Europe." She added, "We reached the midpoint of patient accrual recently, and now have over 210 patients on the trial. The interim analysis for this trial is expected to occur in the second quarter of 2007."

In Poster #149-II, entitled "A Phase I Study of Cloretazine® and Temozolomide in Patients with Hematologic Malignancies", clinical data from this Phase I dose escalation combination study were presented. The rationale for the trial was based on the observation that elevated levels of the enzyme O^6 alkylguanine DNA alkyltransferase (AGT) represent a major mechanism of resistance for Cloretazine® (VNP40101M). Treatment with temozolomide has been shown to deplete AGT levels in tumors. In this study, the dose of temozolomide was escalated in combination with a fixed dose of Cloretazine® (VNP40101M) until greater than 90% AGT inhibition was achieved; with this dose of temozolomide, the dose of Cloretazine® (VNP40101M) was then escalated until the maximum tolerated dose was reached.

Thirty-five patients were treated on the trial. The doses chosen for further evaluation were 1500 mg of temozolomide (300 mg bid for 5 doses) and 300 mg/m^2 of Cloretazine® (VNP40101M). The most common adverse event seen at all doses was myelosuppression. Complete remission or complete remission with incomplete platelet recovery (CR or CRp) was reported in four patients with AML or MDS-AML, each of whom had been treated with at least two and as many as four prior regimens.

Ann Cahill noted, "We are pleased that Cloretazine® (VNP40101M) can be combined with temozolomide for the treatment of advanced hematologic malignancies, with a manageable toxicity profile. The activity seen on this trial in heavily pre-treated patients is also encouraging."

In addition to the two Cloretazine® (VNP40101M) posters, Vion Pharmaceuticals also sponsored an additional poster on treatment patters in elderly patients with AML presented by Boston Health Economics of Waltham, Massachusetts.

In Poster #151-II, entitled "Projected Mortality Rates Among Patients with Acute Myeloid Leukemia Receiving Alternative Treatment Strategies", a retrospective analysis was performed to estimate survival rates among AML patients greater than 65 years of age in the linked Surveillance, Epidemiology, and End Results (SEER)-Medicare database according to inpatient chemotherapy treatment, co-morbidities, and other predictive factors.

Patients older than 65 with a new diagnosis of AML reported to the SEER registry between 1999 and 2002 and eligible for fee-for-service Medicare coverage for at least one year prior to AML diagnosis as well as in the month of the initial diagnosis, were included in the analysis. Each chemotherapy patient was matched to a non-chemotherapy-treated patient by: (a) age; (b) sex; (c) geographic region; (d) hospital type (teaching or non-teaching); (e) Charlson co-morbidity score and (f) myelodysplastic syndrome (MDS) diagnosis in the twelve months prior to AML diagnosis.

A total of 3,317 elderly patients with AML were analyzed in the study. Of these patients, the data showed that 36% received chemotherapy for their AML and 64% did not receive chemotherapy. Patients who were treated with chemotherapy were younger and had lower Charlson comorbidity scores compared to untreated patients. The most prevalent co-morbidities were chronic obstructive pulmonary disease, congestive heart failure, diabetes,

and cerebrovascular disease. Cardiac co-morbidities and cerebrovascular disease were more common in the untreated group.

In the matched analysis of 888 patients, the median survival for the patients who did receive chemotherapy treatment was 4.4 months longer than the median survival for the patients who did not receive treatment untreated (6.1 vs. 1.7 months). At 12 months, more than twice as many chemotherapy-treated patients had survived compared to untreated patients (30.3% versus 13.1 % respectively). At 24 months, three times as many treated patients had survived compared to untreated patients (15.5% versus 5.3%, respectively).

Meghan Fitzgerald, Chief Business Officer, commented, "This analysis of the SEER-Medicare database suggests that, although elderly patients with AML can benefit from treatment with chemotherapy, many do not receive treatment."

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 Phase II 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 trials sponsored by the National Cancer Institute. In preclinical studies, Vion is 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.

Boston Health Economics, Inc. is an independent research and consulting firm specializing in assessing the economic value of new medical technologies,

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