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Vion Pharmaceuticals Announces Initiation of a Phase I/II Trial of Cloretazine♦ (VNP40101M) in Combination with Temodar♦ in Adult Brain Tumors

NEW HAVEN, CT, September 17, 2007 – VION PHARMACEUTICALS, INC. (NASDAQ CAPITAL MARKET: VION) today announced that an investigator-sponsored trial of its lead anti-cancer agent Cloretazine♦ (VNP40101M) in combination with Temodar♦ (temozolomide) in relapsed or progressive adult malignant gliomas had been initiated at the Robert H. Lurie Cancer Center under the direction of Dr. Jeffrey J. Raizer, Principal Investigator.

The objective of the trial is to establish the maximum tolerated dose (MTD) and safety profile of Cloretazine♦ (VNP40101M) in combination with temozolomide and then to study this dose in an expanded number of patients. Cohorts of 3-6 patients receive escalating doses of Cloretazine♦ (VNP40101M) until the MTD is determined (Phase I). In Phase II, response rates, progression-free survival and overall survival will be evaluated in addition to the safety profile. Patients receive oral temozolomide on days 1-7 and intravenous Cloretazine♦ (VNP40101M) over 15-30 minutes 2 hours after the last dose of temozolomide on day 7. Treatment repeats every 7 weeks in the absence of disease progression or unacceptable toxicity.

Correlative studies conducted as part of the trial will measure: (i) the level of O^6 alkylguanine DNA alkyltransferase (AGT) expression in peripheral blood monocytes before treatment with temozolomide and just prior to the administration of Cloretazine♦ (VNP40101M); (ii) the status of O^6-methylguanine-methyltransferase (MGMT) methylation as well as other methylation patterns in plasma from patients treated with this regimen relative to outcome; and (iii) Cloretazine♦ (VNP40101M) in the cerebral spinal fluid and serum/plasma in Phase II.

Dr. Raizer commented, “One of the mechanisms of resistance in malignant gliomas is AGT. We are hoping that we can deplete the level of AGT with Temodar♦ and that the combination of agents will improve anti-tumor responses and outcomes. To date there

is no standard therapy for malignant gliomas that recur; if we can increase progression-free and overall survival with this combination, we will be able to help patients."

Ann Cahill, Vice President, Clinical Development, said, "Despite decades of research, there has been little progress in the treatment of malignant gliomas which recur after primary therapy. We are pleased to support Dr. Raizer's study of Cloretazine® (VNP40101M) in this patient population."

Cloretazine® (VNP40101M) has previously been evaluated as a single agent in a Phase II clinical trial in patients with recurrent glioblastoma multiforme (Badruddoja MA et al, 2007 Neuro-Oncology; 9: 70-74). In addition, a Phase I trial of Cloretazine® (VNP40101M) as a single agent in pediatric brain tumors was recently completed. Data from this trial were presented at the American Society of Clinical Oncology Annual Meeting in June 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. Clinical trials of Cloretazine® (VNP40101M) in small cell lung cancer and adult brain tumors 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. In preclinical studies, Vion is also evaluating VNP40541, a hypoxia-selective compound, and hydrazone compounds. The Company 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 and the Company's Form 10-Q for the quarter ended June 30, 2007. 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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