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Vion Pharmaceuticals Presents Additional Survival Data on Onrigin™ (Laromustine) Injection at ASH Annual Meeting

NEW HAVEN, CT, December 8, 2008 - VION PHARMACEUTICALS, INC. (OTC Bulletin Board: VION) today announced that additional survival data on its anticancer agent Onrigin™ (laromustine) injection was presented by the Company in a poster at the 50th American Society of Hematology Annual Meeting.

The poster presented survival data for a combined group of 140 *de novo* poor-risk acute myelogenous leukemia (AML) patients age 60 or older who achieved either a complete response (CR) or a complete response with incomplete platelet recovery (CRp) to Onrigin™.

The Kaplan-Meier estimate of median overall survival for patients who responded to Onrigin™ was 8.4 months. Median overall survival for all patients was 3.3 months. Six, twelve and twenty-four month survival rate estimates were as follows:

	Responders (N=52)	All Patients (N=140)
6 months	57%	34%
12 months	39%	21%
24 months	20%	10%

Ann Cahill, Vice President, Clinical Development, commented, “In the treatment of AML, achievement of a complete response is the critical first step in the continuum of care.” She added, “We believe that Onrigin™, if approved, will represent an important new treatment option for these poor-risk AML patients.”

The overall response rate (CR plus CRp) in the combined group was 37%, with 40 patients (29%) achieving a CR and 12 patients (9%) achieving a CRp. The induction death rate (death within thirty days from all causes) was 14%. The most common Serious Adverse Events (SAEs) for the combined patient group were in the following system organ classes: infections and infestations (34%); blood and lymphatic disorders (24%) and respiratory, thoracic and mediastinal disorders (22%).

The analysis included patients from two clinical trials conducted by the Company in elderly AML patients in the past four years: (i) 85 *de novo* poor-risk patients were from a pivotal Phase II study, CLI-043, and (ii) a subset of 55 *de novo* poor-risk patients who reasonably met the eligibility criteria for CLI-043 were retrospectively identified from an additional Phase II study, CLI-033. In both studies, all patients received 600 mg/m² of Onrigin™ in a single induction infusion of 30-60 minutes. Sixteen percent of the patients from both studies received a second induction dose of 600 mg/m² of Onrigin™. Twenty-four percent of the combined patients received consolidation treatment upon achieving a response. Patients in CLI-043 received consolidation with 400 mg/m² of cytarabine per day for five days and patients in CLI-033 received consolidation with 400 mg/m² of Onrigin™.

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. Onrigin™ (laromustine) injection, formerly known as 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 Onrigin™ with cytarabine in elderly patients with acute myelogenous leukemia, with standard remission-induction therapy in patients with AML and myelodysplastic syndromes (MDS), 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 file a New Drug Application or obtain regulatory approval for its products, particularly Onrigin™ (laromustine) injection (formerly Cloretazine® (VNP40101M)), delays in the regulatory approval process or delays 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, 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 September 30, 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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