



COMPANY CONTACT:

Vion Pharmaceuticals, Inc.

Alan Kessman, Chief Executive Officer

Howard B. Johnson, President & CFO

(203) 498-4210

VION PHARMACEUTICALS ANNOUNCES ONCOLOGIC DRUGS ADVISORY COMMITTEE MEETING FOR ONRIGIN™

NEW HAVEN, CT, August 10, 2009 – VION PHARMACEUTICALS, INC. (OTC BULLETIN BOARD: VION) today announced the date and location of the Oncologic Drugs Advisory Committee (ODAC) Meeting at which its lead oncology therapeutic Onrigin™ (laromustine) Injection will be presented.

The ODAC reviews and evaluates data concerning the safety and effectiveness of marketed and investigational human drug products for use in the treatment of cancer and makes appropriate recommendations to the U.S. Food and Drug Administration (FDA).

The meeting will be held on September 1, 2009 at the Hilton Washington DC/Silver Spring, 8727 Colesville Road, Silver Spring, MD. Background materials for the meeting are expected to be made available by the FDA on its website no later than two business days before the meeting.

Alan Kessman, Chief Executive Officer, commented, "We look forward to our meeting with the Oncologic Drugs Advisory Committee in September. It is one more step towards achievement of our main objective which is approval for Onrigin™ in its first indication in the United States in 2009."

The Company announced previously that it had received a standard review classification from the FDA for its New Drug Application (NDA) for Onrigin™ and a user fee goal date of December 12, 2009 for a decision by the FDA with respect to approval.

The NDA presents data for Onrigin™ as a single agent for remission induction treatment for patients sixty years of age or older with *de novo* poor-risk acute myeloid leukemia (AML). The NDA is based on the results of an international multi-center pivotal Phase II trial of 85 patients sixty years of age or older with *de novo* poor-risk AML, supplemented by data from 55 patients in a previous Phase II trial in elderly AML. Eighty-six percent of these 140 patients had two or more risk factors that predicted for a poor prognosis.

About Vion Pharmaceuticals

Vion Pharmaceuticals, Inc. is committed to extending the lives and improving the quality of life of cancer patients worldwide by developing and commercializing innovative oncology therapeutics. Vion

has two agents in clinical trials, Onrigin™ (laromustine) Injection and Triapine®. The FDA is reviewing a New Drug Application for Onrigin™ for remission induction treatment for patients sixty years of age or older with *de novo* poor-risk AML. 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 Onrigin™ (laromustine) Injection (formerly Cloretazine® (VNP40101M)), delays in the regulatory approval process, particularly for Onrigin™ (laromustine) Injection, including possible delays in the FDA's review process beyond our expectation for approval in December 2009, 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 confirmed by 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, 2008, Vion's Form 10-Q for the quarter ended March 31, 2009, and Vion's Post-Effective Amendments on Form S-1 Registration Statement filed on March 23, 2009. 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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