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Vion Presents Data on Cloretazine® (VNP40101M) at the 100th Annual Meeting of the American Association of Cancer Research (AACR)

NEW HAVEN, CT, April 13, 2007 - VION PHARMACEUTICALS, INC. (NASDAQ CAPITAL MARKET: VION) announced today that data on its lead anticancer agent Cloretazine® (VNP40101M) will be presented in posters at the 100th Annual Meeting of the American Association of Cancer Research in Los Angeles, California. All three posters will be available on Vion's website, www.vionpharm.com on the day of presentation.

All posters will be presented in the Los Angeles Convention Center Exhibit Hall at the times and locations listed below:

Poster #16 (section 31), entitled "Effects of Cloretazine® on multidrug resistant cell lines" will be presented on Sunday, April 15 from 1 to 5 p.m. These studies were designed to determine whether Cloretazine® has the potential to circumvent one of the most common mechanisms of resistance to cancer chemotherapy agents.

Poster # 5 (section 5) entitled "Low levels of pre-treatment O^6 –alkylguanine transferase (AGT) in patients with AML correlate with response to Cloretazine® (VNP40101M) induction therapy" will be presented on Monday, April 16 from 1 to 5 p.m. Since overexpression of AGT has been associated with drug resistance preclinically, these data were collected as part of a Phase II clinical trial of Cloretazine® to assess whether pretreatment AGT levels could be correlated with response.

Poster #14 (section 27) entitled "Sequence dependent cytotoxocity of Cloretazine® in combination with anthracyclines" will be presented on Tuesday, April 17 from 1 to 5 p.m. These preliminary in vitro studies were designed to assess the effects of various sequences of administration of Cloretazine® and anthracyclines on cell survival and provide direction as to which combinations to further evaluate in preclinical models.

In addition to Vion's Cloretazine® (VNP40101M) posters, two posters will be presented on Vion's second anticancer product, Triapine® at the meeting. Triapine® is in clinical trials sponsored by the National Cancer Institute

Poster #7 (section 6) entitled “Pharmacokinetic and pharmacogenetic evaluation of Triapine®” will be presented on Sunday, April 15 from 1 to 5 p.m.

Poster #26 (section 7) entitled “Triapine® binds with iron and causes S-phase arrest and activation of the apoptotic pathway in advanced cancer patients” will be presented on Monday, April 16 from 8 a.m. to 12 p.m.

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 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 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 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.

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. 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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