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Aileen Ryan Joins Vion Pharmaceuticals' Senior Management Team

NEW HAVEN, CT, July 17, 2006 - VION PHARMACEUTICALS, INC. (NASDAQ CAPITAL MARKET: VION) today announced that Aileen Ryan had joined the Company's senior management team as Vice President, Regulatory Affairs. She will be in charge of global regulatory strategy for the Company's anticancer products and direct the group responsible for interaction between Vion and the U.S. Food and Drug Administration (FDA) and other regulatory agencies worldwide.

Ms. Ryan was formerly the head of Global Regulatory Strategy, Oncology for Bayer Pharmaceuticals Corporation. She held this position since 2004. At Bayer, she was responsible for the global regulatory strategy for a portfolio of oncology compounds, including Nexavar® (sorafenib) Tablets, Bayer's multi-kinase inhibitor for the treatment of advanced renal cell carcinoma, which was approved by the FDA in December 2005. Prior to Bayer, she was Vice President, Regulatory Affairs for Coley Pharmaceutical Group from 1999 to 2003.

Alan Kessman, Chief Executive Officer said, "We are extremely pleased to have Aileen Ryan joining Vion to lead our effort to achieve regulatory approval for our anticancer agent Cloretazine® (VNP40101M) worldwide. She has over twenty-five years of experience in the management of regulatory affairs and strategy in the pharmaceutical industry. Her recent experience with the approval of Nexavar® in the United States will be invaluable to us."

Ms. Ryan commented, "I am excited to be joining the management team at Vion. For a company of its size, it has an excellent pipeline of anticancer agents in development, including the late-stage clinical product Cloretazine® (VNP40101M). I look forward to working to advance all of Vion's products, with the goal of improving the care of cancer patients worldwide."

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. Additional trials of Cloretazine® (VNP40101M) as a single agent in pediatric brain tumors, small cell lung cancer, and in combination with temozolomide in hematologic malignancies, are 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 ability to secure external sources of funding to continue its operations, the inability to access capital and funding on favorable terms, continued operating losses and the inability to continue operations as a result, its dependence on regulatory approval for its products, delayed or unfavorable results of drug trials, the possibility that favorable results of earlier clinical trials are not predictive of safety and efficacy results in later clinical trials, the need for additional research and testing, 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 discussed in Vion's Annual Report on Form 10-K for the year ended December 31, 2005. 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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