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## **Merck & Co., Inc. and Vertex Announce Broad Collaboration to Develop and Commercialize VX-680, a Novel Compound for the Treatment of Cancer**

**Whitehouse Station, NJ and Cambridge, MA, June 22, 2004** -- Merck & Co., Inc. (NYSE: MRK) and Vertex Pharmaceuticals Incorporated (Nasdaq: VRTX) announced today that they have entered into a global collaboration to develop and commercialize VX-680, Vertex's lead Aurora kinase inhibitor that is expected to enter clinical development this year for the treatment of cancer.

Under the terms of the agreement, Vertex will receive a \$20 million up-front payment and an additional \$14 million in research funding over the next two years. In addition, Vertex could receive as much as \$350 million in milestone payments, including \$130 million for the successful development of VX-680 in the first oncology indication and additional milestone payments for development of VX-680 and follow-on compounds in subsequent major oncology indications. Merck will be responsible for clinical development and commercialization of VX-680 worldwide and will pay Vertex royalties on product sales.

In addition, the companies will conduct a joint research program to characterize VX-680's activity across a broad range of cancer types as well as to identify follow-on drug candidates directed at Aurora kinases, using molecular profiling approaches and microarray technologies pioneered by Merck.

Merck will fund research conducted jointly by the two companies, and lead the clinical development of VX-680 and any subsequent compounds selected from the joint research program, with development input from Vertex. Vertex will have an opportunity to negotiate a co-promotion agreement with Merck prior to commercialization. In addition, Vertex could earn additional milestone payments for the development of Aurora kinase inhibitors outside the area of oncology.

An investigational new drug application (IND) for VX-680 has been filed by Vertex with the U.S. Food and Drug Administration (FDA) to support clinical development in the United States. Merck and Vertex expect Phase I clinical studies of VX-680 to begin by the end of 2004.

Aurora kinases are implicated in the onset and progression of many different human cancers, and novel Aurora kinase inhibitors such as VX-680 have the potential to play an important future role in the treatment and management of a wide range of tumor types. Preclinical results for VX-680 reported by Vertex scientists in early 2004 demonstrated for the first time that a compound targeting the Aurora mechanism could induce tumor regression in human models of solid tumor cancers.

"Merck has made a strategic commitment to address the challenges of developing novel and efficacious therapies for cancer," said Stephen H. Friend, M.D., Ph.D., Senior Vice President for Molecular Profiling and Basic Cancer Research at Merck Research Laboratories. "This collaboration unites Vertex's drug discovery leadership targeting Aurora kinases with Merck's proprietary molecular profiling technologies and clinical development infrastructure in oncology. Working together, we will seek to conduct an information-intensive, parallel clinical development program involving multiple major cancer indications."

"We are pleased to enter this collaboration with Merck, which shares our vision of Aurora kinase inhibitors as a class of drugs that may have the potential to transform the future of cancer treatment," said Joshua Boger, Ph.D., Chairman and CEO of Vertex. "In Merck, we have a partner that is a global leader in the development and commercialization of innovative medicines, and one with the breadth of capabilities and resources that we expect to be required to establish the clinical benefit of an Aurora kinase inhibitor across a spectrum of solid tumors and hematologic cancers."

"This agreement places a significant value on our innovations in the area of Aurora kinases and cancer, and highlights Vertex's progress in realizing our 2004 business development and collaborative revenue objectives," Boger added.

"We are delighted to partner with Vertex to advance the development of a promising new class of cancer drugs, and we look forward to a productive relationship," said Dr. Peter S. Kim, President of Merck Research Laboratories. "Oncology represents a key area of focus for Merck going forward, and this collaboration is consistent with Merck's strategy to develop external alliances that complement our substantial internal research efforts."

### **Aurora Kinases and Cancer**

Cancer cells typically contain mutations in a number of genes, which ultimately results in uncontrolled cell growth and tumor

metastasis. As enzymes specific for and essential to cell growth and division, Aurora kinases hold the potential to be important control points for slowing the growth and spread of tumors. Aurora kinases (also known as BTAK and STK15) are a family of serine-threonine kinases that are believed to play multiple roles in the development and progression of cancer, by acting as regulators of cell proliferation, by transforming normal cells into cancer cells, and by down regulating p53, one of the body's natural tumor suppressors. Aurora kinases are known to be overexpressed in many tumor types, including colon cancer, breast cancer, and leukemia. Amplification of Aurora genes is associated with progression of colorectal cancer and poor prognosis in certain types of breast cancer.

Cancer, the second leading cause of death in the United States, leads to the deaths of about 500,000 Americans each year. More than one million solid tumor cancers are diagnosed in the United States annually, including more than 200,000 new cases of breast cancer and 150,000 cases of colorectal cancer. The five-year relative survival rates for patients with metastatic breast cancer and patients with colorectal cancer are 21% and 8% respectively. There are more than 30,000 new cases of leukemia in the U.S. every year, and more than 20,000 deaths.

#### **Discovery of VX-680**

VX-680 was discovered by scientists at Vertex's Oxford, UK research site as part of a broad research effort targeting the kinase gene family. Vertex researchers published the three-dimensional atomic crystal structure of Aurora-A kinase in 2002, a key scientific advance that enabled the design and optimization of multiple classes of small molecule Aurora kinase inhibitors. VX-680 was advanced to preclinical development in 2002, following evaluation of the compound's activity in tumor cell lines and in animal models of tumor growth. In studies published in 2003 and 2004, Vertex reported that VX-680 induced tumor regression of 22% in a human pancreatic xenograft model; induced tumor regression of 56% in a human colon cancer xenograft model; and prolonged survival and induced sustained remission in an oncogene driven model of human acute myelocytic leukemia (AML).

#### **Conference Call and Webcast:**

Vertex Pharmaceuticals will host a conference call on June 22, 2004 at 11:00 a.m. ET to review advances in the development of Aurora kinase inhibitors and the Company's progress in achieving its business development goals for 2004. This call will be broadcast via the Internet at [www.vrtx.com](http://www.vrtx.com) in the investor center. Alternatively, to listen to the call on the telephone, dial (800) 374-0296 (U.S. and Canada) or (706) 634-2394 (International).

The call will be available for replay via telephone commencing June 22, 2004 at 2:00 p.m. ET. The replay phone number for the U.S. and Canada is (800) 642-1687. The international replay number is (706) 645-9291 and the conference ID number is 8306808. Following the live webcast, an archived version will be available on Vertex's website until 5:00 p.m. ET on July 6, 2004.

#### **About Merck**

Merck & Co., Inc. is a global research-driven pharmaceutical products company. Merck discovers, develops, manufactures and markets a broad range of innovative products to improve human and animal health, directly and through its joint ventures.

#### **About Vertex**

Vertex Pharmaceuticals Incorporated is a global biotechnology company committed to the discovery and development of breakthrough small molecule drugs for serious diseases. The Company's strategy is to commercialize its products both independently and in collaboration with major pharmaceutical partners. Vertex's product pipeline is principally focused on viral diseases, inflammation, autoimmune diseases and cancer. Vertex co-promotes the new HIV protease inhibitor, Lexiva(TM), with GlaxoSmithKline.

#### **Merck Safe Harbor Statement**

This press release contains "forward-looking statements" as that term is defined in the Private Securities Litigation Reform Act of 1995. These statements involve risks and uncertainties, which may cause results to differ materially from those set forth in the statements. The forward-looking statements include statements regarding product development and product potential. No forward-looking statement can be guaranteed, and actual results may differ materially from those projected. Merck undertakes no obligation to publicly update any forward-looking statement, whether as a result of new information, future events, or otherwise. Forward-looking statements in this press release should be evaluated together with the many uncertainties that affect Merck's business, particularly those mentioned in the cautionary statements in Item 1 of Merck's Form 10-K for the year ended Dec. 31, 2003, and in its periodic reports on Form 10-Q and Form 8-K (if any) which Merck incorporates by reference.

#### **Vertex Safe Harbor Statement**

This press release may contain forward-looking statements, including statements that (i) VX-680 and other Aurora kinase inhibitors have the potential to play an important future role in the treatment and management of a wide range of tumor types; (ii) Vertex will receive \$14 million in research funding and could receive an additional \$350 million in milestone payments from Merck; and (iii) that Merck and Vertex will advance the development of Aurora kinases as a new approach to the treatment of cancer. While management makes its best efforts to be accurate in making forward-looking statements, such statements are subject to risks and uncertainties that could cause Vertex's actual results to vary materially. Those risks and uncertainties include the risk that preclinical results targeting Aurora kinases may not be predictive of human clinical results, that

development of VX-680 may not be pursued due to clinical, technical or financial issues, that Merck may not develop VX-680 or any other Aurora kinase inhibitor discovered by Vertex, and that Vertex may fail to realize revenue through its collaboration with Merck because of lack of research and clinical progress, and other risks listed under Risk Factors in Vertex's Form 10-K filed with the Securities and Exchange Commission on March 15, 2004.

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