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FDA GRANTS ORPHAN DRUG DESIGNATION FOR TNFERADE™

GAITHERSBURG, MD – November 4, 2009 – GenVec, Inc. (NASDAQ: GNVC) announced today that the U.S. Food and Drug Administration (FDA) has granted orphan drug designation to TNFerade™ for the treatment of pancreatic cancer.

The FDA grants orphan drug designation to drugs that may provide a significant therapeutic advantage over existing treatments and target conditions affecting 200,000 or fewer U.S. patients per year. Orphan drug designation provides potential financial and regulatory incentives including study design assistance, waiver of FDA user fees, tax credits, and up to seven years of market exclusivity upon marketing approval.

“Orphan drug designation is a critical step for the development of TNFerade and will strengthen the TNFerade program at GenVec by offering potential clinical development and commercialization benefits,” stated Dr. Paul Fischer, GenVec’s President and CEO.

About TNFerade™

TNFerade, which has not yet been approved for use, is an adenovector, or DNA carrier, which contains the gene for tumor necrosis factor-alpha (TNF α), an immune system protein with potent and well-documented anti-cancer effects, for direct injection into tumors. After administration, TNFerade stimulates the production of TNF α in the tumor. TNFerade has been granted Fast Track product designation by the U.S. Food and Drug Administration (FDA) for its proposed use in the treatment of locally advanced pancreatic cancer.

About GenVec

GenVec, Inc. is a biopharmaceutical company developing novel therapeutic drugs and vaccines. GenVec's lead product, TNFerade™, is currently in a pivotal clinical study (PACT) in locally advanced pancreatic cancer. TNFerade has also been and is currently being evaluated for its potential use in the treatment of several other cancers, including esophageal cancer, rectal cancer, and head and neck cancer. GenVec also uses its proprietary adenovector technology to develop vaccines for infectious diseases including HIV, malaria, foot-and-mouth disease, respiratory syncytial virus (RSV), and HSV-2. Additional information about GenVec is available at www.genvec.com and in the company's various filings with the Securities and Exchange Commission.

Statements herein relating to future financial or business performance, conditions or strategies and other financial and business matters, including expectations regarding future revenues and operating expenses, are forward-looking statements within the meaning of the Private Securities Litigation Reform Act. GenVec cautions that these forward-looking statements are subject to numerous assumptions, risks and uncertainties, which change over time. Factors that may cause actual results to differ materially from the results discussed in the forward-looking statements or historical experience include risks and uncertainties, including the failure by GenVec to secure and maintain relationships with collaborators; risks relating to the early stage of GenVec's product candidates under development; uncertainties relating to clinical trials; risks relating to the commercialization, if any, of GenVec's proposed product candidates; dependence on the efforts of third parties; dependence on intellectual property; and risks that we may lack the financial resources and access to capital to fund our operations. Further information on the factors and risks that could affect GenVec's business, financial conditions and results of operations, are contained in GenVec's filings with the U.S. Securities and Exchange Commission (SEC), which are available at www.sec.gov. These forward-looking statements speak only as of the date of this press release, and GenVec assumes no duty to update forward-looking statements.

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