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**GENVEC ANNOUNCES INTERIM SURVIVAL DATA IN PIVOTAL TRIAL OF
TNFERADE™ IN LOCALLY ADVANCED PANCREATIC CANCER**

Interim Analysis Supports Continuation of GenVec's PACT Study

Conference Call Scheduled for Today at 9:00AM

GAITHERSBURG, MD – November 19, 2008 – GenVec, Inc. (Nasdaq: GNVC) announced today top-line results of an interim analysis from its ongoing Phase III Pancreatic Cancer Clinical Trial with TNFerade™ (PACT) in patients with locally advanced pancreatic cancer. This interim analysis of overall survival, conducted after the 92nd death (one-third of total expected events), was designed to determine whether the study should continue and took place in the time frame originally estimated.

Interim data demonstrated an approximately 25% lower risk of death in the TNFerade plus standard of care (SOC) arm relative to the SOC alone (Hazard Ratio= 0.753; 95% Confidence Interval [0.494-1.15]). An independent Data Safety Monitoring Board reviewed the interim analysis data and recommended the trial continue as planned.

Kaplan-Meier analysis of data, based on this interim analysis, demonstrated that overall survival at 12 months was 39.9% in the TNFerade plus SOC arm versus 22.5% in the SOC arm. Overall survival at 18 months was 30.5% in the TNFerade plus SOC arm versus 11.3% in the SOC arm. At 24 months, overall survival was 10.6% in the TNFerade plus SOC arm versus 11.3% in the SOC arm. Median survival was 9.9 months in both arms of the trial.

“Successfully passing this milestone in the PACT trial represents an important step forward in the clinical development of TNFerade,” stated Mark Thornton, M.D., Ph.D., Senior Vice President of Product Development at GenVec. Thornton continued, “We believe these data are encouraging and justify moving forward with the trial. The continuation of the trial will allow the data to mature and provide for future analyses. We currently estimate we will reach the required number of events needed to conduct the next analysis of data in the PACT study in late 2009.”

The next interim analysis will be conducted after 184 deaths have occurred (two-thirds of total expected events) in the PACT trial. “At our current rate of enrollment we also anticipate having enrolled over 300 out of 330 total patients planned for the trial by the end of next year,” added Thornton.

About PACT

GenVec's PACT trial is a multi-center, randomized, active, and controlled study of 330 patients designed to evaluate the safety and efficacy of TNFerade plus standard of care versus standard of care alone in patients with locally advanced pancreatic cancer.

About Hazard Ratios

The hazard ratio is an estimate of the treatment effect in the treated versus the control group in a trial. The hazard ratio reported means that, at the time of the interim analysis, a TNFerade patient had 0.75 times the chance of dying compared to someone in the standard of care group. The reciprocal of this hazard ratio, 1.33, means that a standard of care patient had 1.33 times the chance of dying compared to someone in the TNFerade group.

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. GenVec is developing TNFerade for use in combination with radiation and/or chemotherapy for the treatment of various cancers.

About Pancreatic Cancer

Pancreatic cancer, a disease in which malignant (cancer) cells are found in the tissues of the pancreas, is the fourth leading cause of cancer-related death in the United States. An estimated 37,680 Americans will be diagnosed with pancreatic cancer during 2008, and an estimated 34,290 Americans are expected to die from this disease in 2008. Currently, there are limited treatment options available for those with 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. Additional clinical trials are in progress in rectal cancer, head and neck cancer, and melanoma. 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 influenza. These product candidates are under development and have not been approved for use. Additional information about GenVec is available at www.genvec.com and in the company's various filings with the Securities and Exchange Commission.

Conference Call Information

GenVec will host a conference call today at 9:00 a.m. Eastern time. To listen to the live conference call, please dial 866-825-3354 (U.S. or Canada) or 617-213-8063 (international) and use access code 22232895. An audio replay of the conference call will be available starting at 11:00 a.m. on November 19, 2008 through November 26, 2008. To listen to the audio replay, dial 888-286-8010 (U.S. or Canada) or 617-801-6888 (international) and use access code 30613746.

A live webcast of the conference call will be available on the Company's website and will be archived for 30 days. To access the webcast or the replay, go to www.genvec.com, click on "Investor Relations," and click on "Webcasts and Data."

Statements in this press release relating to future expectations concerning clinical trials or drug approvals, business conditions or strategies and other business matters, 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 that 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 GenVec's financial condition and ability to raise capital to fund clinical programs and future operations; certain of GenVec's product candidates being in the early stages of development; uncertainties with, and unexpected results and related analyses relating to clinical trials of GenVec's product candidates (including, for example, the length of time required to enroll suitable patient subjects and GenVec's ability to secure clinical trial sites); the timing, amount, and availability of revenues from GenVec's government-funded vaccine programs; the timing and content of future FDA regulatory actions related to GenVec or its product candidates; GenVec's ability to find collaborators on or commercialize its product candidates; the scope and validity of patent protection for GenVec's product candidates and its ability to commercialize products without infringing the patent rights of others. Further, certain statements in this press release address survival data based on an interim clinical trial analysis of TNFerade in locally advanced pancreatic cancer. There can be no assurance that the future analyses (interim and final) will confirm this initial interim data. Moreover, survival data is only one of many factors that the Food and Drug Administration may take into account when considering TNFerade for regulatory approval and regulatory approval cannot be assured.

Additional 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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