



65 West Watkins Mill Road
Gaithersburg, MD 20878
tel: 240-632-0740
fax: 240-632-0735
www.genvec.com

FOR IMMEDIATE RELEASE

CONTACT:

Douglas J. Swirsky
Chief Financial Officer
(240) 632-5510
dswirsky@genvec.com

**ENCOURAGING PRELIMINARY DATA FROM TNFERADE™
PHASE II RECTAL CANCER STUDY PRESENTED AT ASTRO MEETING**

GAITHERSBURG, MD – October 31, 2007 – GenVec, Inc. (Nasdaq: GNVC) announced today encouraging early results of a Phase II study with TNFerade™ in patients with locally advanced rectal cancer. The findings were presented yesterday in a poster session at the 49th Annual Meeting of the American Society for Therapeutic Radiology and Oncology in Los Angeles by Dr. Bronwyn Stall, Radiation Oncology Branch, National Cancer Institute, which is conducting the trial.

The study is assessing the feasibility of adding TNFerade to pre-operative chemoradiation, the current standard of care for locally advanced rectal cancer, to decrease local recurrence, improve pathological response, and increase the probability of sphincter preservation as a surgical outcome.

The Phase II study enrolled seven patients with locally advanced rectal cancer. TNFerade was administered weekly to patients via intratumoral injections during the first five weeks of radiotherapy. All patients also received oral capecitabine twice daily during radiotherapy. Surgical removal of the tumor was done 6-9 weeks following therapy. The treatment was both feasible and appeared to be well tolerated. Prior to treatment, four of the seven patients were classified as highly likely to need sphincter removing surgery with colostomy. Subsequent to TNFerade plus chemoradiation, all seven patients who underwent surgical resection had successful sphincter sparing procedures. Five of the seven patients achieved pathological complete response. Based on these preliminary data, the NCI study is continuing to enroll more patients.

“We are pleased to see these encouraging early results with TNFerade in rectal cancer. The data suggest that the study should continue, and we look forward to seeing additional data from this proof-of-concept trial,” stated Mark Thornton, M.D., M.P.H., Ph.D., GenVec’s Senior Vice President of Product Development.

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. 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.

###