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FOR IMMEDIATE RELEASE:

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GENVEC REPORTS SECOND QUARTER 2007 FINANCIAL RESULTS

GAITHERSBURG, MD – August 7, 2007 – GenVec, Inc. (Nasdaq:GNVC) today announced its financial results for the second quarter ended June 30, 2007. GenVec’s net loss was \$4.2 million or (\$0.06) per share, compared to a net loss of \$4.1 million or (\$0.06) per share in the same prior year period.

For the six months ended June 30, 2007, GenVec’s net loss was \$10.2 million or (\$0.14) per share, compared to a net loss of \$8.2 million or (\$0.13) per share for the six months ended June 30, 2006. Included in the net loss for the first six months of 2007 was stock-based compensation of \$1,121,000 as compared to \$583,000 for the same prior year period. GenVec ended the second quarter of 2007 with \$29.4 million in cash and investments.

Revenue

Revenues for the three-month and six-month periods ended June 30, 2007 were \$3.7 million and \$6.6 million respectively, representing a decrease of 28 percent and 40 percent when compared to revenues of \$5.2 million and \$11.1 million in the comparable prior year periods. The decrease in revenues for the three and six-month periods ended June 30, 2007 is primarily a result of lower reimbursable costs under our contract with the National Institutes of Health (“NIH”)

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associated with the manufacturing and testing of clinical grade HIV vaccine supplies for planned administration to over 8,000 subjects in a Phase IIb proof-of-concept efficacy trial (“PAVE-100”) to be conducted by the National Institute of Allergy and Infectious Diseases (“NIAID”) of the NIH, and expected to commence in the second half of 2007. The decrease is also due, in part, to the expiration of funding of the Company’s collaboration with FUSO Pharmaceutical Industries, effective December 31, 2006. These decreases were partially offset by revenue earned under our new three-year contract with the U.S. Department of Homeland Security (“DHS”), for the development of vaccine and anti-viral candidates to prevent and contain foot-and-mouth disease (“FMD”) outbreaks in the United States.

The increase in the net loss for the three-month and six-month periods ended June 30, 2007 was primarily due to decreased revenues associated with the completion and delivery of clinical grade HIV vaccine supplies for the PAVE-100 trial.

In June 2007, the Company initiated a draw down of \$3.6 million from the Kingsbridge Capital Ltd. Committed Equity Financing Facility (“CEFF”) to support expanded clinical development of TNFerade™, advancement of the Company’s proprietary vaccine development program, and general corporate development. This initial draw down was executed in two separate transactions. In the first transaction, the Company sold 769,773 common shares based on a four-day pricing period for gross proceeds of \$1.8 million. GenVec’s reported cash position at the close of the second quarter ended June 30 includes the \$1.8 million in gross proceeds from this first transaction. In the second transaction, the Company sold 832,441 common shares for gross proceeds of \$1.8 million. The four-day pricing period for this transaction ended on June 29, 2007, however, settlement did not occur until July 2, 2007. The gross proceeds from this second transaction are not reflected in the Company’s current cash position, and will be reported in the third quarter ending on September 30, 2007.

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Expenses

Operating expenses were \$8.5 million and \$17.6 million for the three-month and six-month periods ended June 30, 2007, respectively, a decrease of 14 percent and 12 percent as compared to \$9.9 million and \$20.1 million in the comparable prior year periods.

Research and development expenses for the three-month period ended June 30, 2007 decreased 13 percent to \$6.2 million as compared to \$7.1 million for the comparable prior year period, while research and development expenses for the six-month period ended June 30, 2007 decreased 14 percent to \$12.9 million compared to \$15.0 million for the comparable prior year period. In each of the three and six-month periods ending June 30, 2007 expenses have decreased primarily due to lower pass-through costs under our NIH funded HIV vaccine development contract, partially offset by higher clinical costs related to our TNFerade clinical trial and an increase in stock-based compensation expense.

“GenVec’s second quarter financial performance reflects funding and expenses for our vaccine programs; continued acceleration of the PACT pivotal trial; clinical advancement of TNFerade in additional indications; and ramp-up of our manufacturing capabilities as we prepare for future commercialization of TNFerade. Our vaccine programs continue to make excellent progress, and we are seeing increased interest in our adenovector technology for both novel therapeutic and vaccine applications. We accomplished a great deal while carefully managing our resources, costs and expenses, and are looking forward to a productive second half of the year,” commented Douglas J. Swirsky, GenVec’s Chief Financial Officer.

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Second Quarter 2007 Highlights

TNFERade for Cancer:

- As of July 31, 104 patients have been enrolled in the Company's pivotal PACT trial, at 29 participating sites across the U.S.
- In June, we presented data on secondary endpoints from an analysis of results based on the first 51 patients enrolled in the PACT trial at the annual meeting of the American Society of Clinical Oncology ("ASCO"). Median survival was 19.3 months for patients in the TNFERade + SOC arm versus 11.1 months for patients receiving standard of care alone.
- Encouraging early results from a pilot study of TNFERade in patients with primary and recurrent locally advanced rectal cancer were published in the ASCO on-line proceedings. An abstract has been submitted for additional data from this study to be presented at the annual meeting of the American Society for Therapeutic Radiology and Oncology ("ASTRO") in the fall.
- In April, data from two studies was presented at the annual meeting of the American Association of Cancer Research ("AACR"). University of Chicago scientists demonstrated that tumor necrosis factor-alpha (TNF α), delivered by adenovector in combination with radiation therapy, showed key effects on stromal tissues and blood vessels, suggesting that TNFERade has broad potential in many tumor types. GenVec scientists showed the ability of a "second generation" adenovector to selectively and safely deliver the gene for (TNF α) to ovarian cancer tumors, suggesting the new generation adenovectors are a promising treatment for cancers affecting organs located in the peritoneal cavity.

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Advances in Adenovector Technology

- At the Association for Research in Vision and Ophthalmology (“ARVO”) annual meeting in May, GenVec presented pre-clinical research demonstrating the ability of the new Ad35 adenovector to induce and sustain protein production in the eye beyond four months. These results indicate that modifications to the adenovector can lead to potentially important advantages in the delivery of proteins. Ad35 holds promise as a delivery system for ocular therapeutics to treat diseases such as wet age-related macular degeneration (“AMD”), where less frequent administration would benefit patients, physicians and providers.
- In May, GenVec was issued two new patents. U.S. Patent No. 7,214,368 covers the method of using TNFerade in combination with radiation, to treat any solid tumors or soft tissue sarcoma; U.S. Patent No. 7,195,896 broadens coverage of the production methods used to manufacture our adenovectors, including TNFerade, on our 293-ORF6 cell line.

Funded Vaccine Programs:

- In June, a Phase I Clinical trial of a novel HIV vaccine known as Ad35HIV-EnvA, developed on GenVec’s new Ad35 vector platform, was initiated at the Vaccine Research Center (VRC) of the National Institute of Allergy and Infectious Diseases. GenVec constructed the Ad35 vector in collaboration with the VRC, and produced and tested the vector on its proprietary 293-ORF6 cell line.
- At the American Society of Gene Therapy (“ASGT”), held on May 30-June 3 in Seattle, GenVec scientists presented results from our FMD vaccine collaboration with the U.S. Department of Homeland Security (“DHS”) and the Agricultural Research Services (“ARS”) of the United States Department of Agriculture (“USDA”) showing that initial testing with a vaccine against a single type of FMD successfully inoculated cattle, and animals challenged with the virus did not develop symptoms.

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- In May we amended and expanded our existing Collaborative Research, Development and Supply agreement with the PATH Malaria Vaccine Initiative (“MVI”). GenVec will receive up to \$750,000 in additional funding through the end of 2007 to continue advancing a new multivalent malaria vaccine towards clinical evaluation.

Conference Call Information

GenVec will host its quarterly conference call at 4:30 p.m. Eastern time (1:30 p.m. Pacific time) today. To listen to the live conference call, please dial 888.680.0878 (U.S. or Canada) or 617.213.4855 (international) and use access code 31299753. An audio replay of the conference call will be available starting at 6:30 p.m. on August 7, 2007 through August 14, 2007. To listen to the audio replay, dial 888.286.8010 (U.S. or Canada) or 617.801.6888 (international) and use access code 76302471.

A live webcast of the conference call will be available in listen only mode on GenVec’s website at www.genvec.com and archived for 30 days. To access the webcast or the replay, go to the “Investor Relations” page and click on the link to *Webcasts and Data*.

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.

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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.

(Tables to Follow)

GenVec, Inc.
Condensed Statements of Operations
(in thousands, except per share data)
(Unaudited)

	Three Months Ended		Six Months Ended	
	June 30,		June 30,	
	2007	2006	2007	2006
Revenue from strategic alliances and research contracts	\$ 3,709	\$ 5,159	\$ 6,612	\$ 11,082
Operating expenses:				
Research and development	6,230	7,132	12,868	15,039
General and administrative	2,296	2,739	4,780	5,106
Total operating expenses	<u>8,526</u>	<u>9,871</u>	<u>17,648</u>	<u>20,145</u>
Loss from operations	(4,817)	(4,712)	(11,036)	(9,063)
Interest income	638	660	908	987
Interest expense	(40)	(50)	(92)	(88)
Total other income, net	<u>598</u>	<u>610</u>	<u>816</u>	<u>899</u>
Net loss	<u>\$ (4,219)</u>	<u>\$ (4,102)</u>	<u>\$ (10,220)</u>	<u>\$ (8,164)</u>
Basic net loss per share	<u>\$ (0.06)</u>	<u>\$ (0.06)</u>	<u>\$ (0.14)</u>	<u>\$ (0.13)</u>
Shares used in computing basic net loss per share	<u>73,626</u>	<u>63,719</u>	<u>73,544</u>	<u>63,712</u>

GenVec, Inc.
Selected Balance Sheet Information
(in thousands)
(Unaudited)

	June 30,	December 31,
	2007	2006
Cash and Investments	\$ 29,369	\$ 34,373
Working Capital	24,114	30,065
Total Assets	36,330	40,168
Stockholders' Equity	22,380	30,791

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