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PROMISING DATA PRESENTED ON GENVEC MALARIA VACCINE PROGRAM

GAITHERSBURG, MD— June 12, 2008—GenVec, Inc. (Nasdaq: GNVC) announced that encouraging clinical and preclinical data from GenVec's malaria vaccine program were presented at the Keystone Symposium—Malaria Immunology, Pathogenesis, and Vaccine Perspectives taking place June 8–13, 2008 in Alpbach, Austria. Multiple presentations were made by scientists from GenVec, Inc. and the U.S. Naval Medical Research Center (NMRC).

Data from the second cohort of volunteers in a Phase I/IIa clinical trial sponsored by the NMRC and the U.S. Military Malaria Vaccine Program showed a malaria vaccine candidate induced strong T-cell responses against the target antigens in all volunteers. The vaccine, developed under a cooperative research and development agreement (CRADA) between GenVec and NMRC and produced using GenVec's proprietary 293-ORF6 cell line and associated manufacturing process, is designed to provide protection against both liver and blood stages of the malaria parasite.

According to CAPT Thomas Richie, Director, Malaria Program, Navy Component, NMRC is now planning to evaluate the protective effects of the vaccine following experimental challenge with *P. falciparum* parasites in the second half of the study. This clinical trial is being conducted under sponsorship from the United States Army Medical Materiel Development Activity (USAMMDA) and with financial support from the U.S. Agency for International Development,

the Congressionally Directed Peer Review Medical Program, and the Military Infectious Diseases Research Program.

Dr. Rick King, GenVec’s Senior Vice President of Research, stated, “The safety and immunogenicity of this malaria vaccine are encouraging and we are looking forward to moving the trial into the challenge phase. The ability to safely challenge human volunteers provides a unique opportunity to assess efficacy of candidate vaccines prior to field trials.”

NMRC scientists also presented preclinical data, collected under a separate GenVec collaboration with the PATH Malaria Vaccine Initiative and the NMRC, on a vaccine that delivers five malaria antigens and broadens the immune responses against both liver and blood stages of malaria.

Additionally, Joseph L. Bruder, Ph.D., GenVec’s Director of Vector and Vaccine Programs, presented preclinical results on a novel adenovector that induces robust T-cell and antibody responses to a malaria antigen in mice with pre-existing Ad5 neutralizing antibodies in the poster presentation “Modification of Ad5 Hexon Hypervariable Regions Circumvents Pre-existing Ad5 Neutralizing Antibodies.”

About Malaria

Malaria is one of the world’s leading lethal infectious diseases. Malaria is a life-threatening disease transmitted to humans through the bite of an infected mosquito. Malaria parasites initially invade liver cells and, after multiplying, release tens of thousands of new parasites, which invade red blood cells, multiply again, and then destroy these cells. High fever, headache, and vomiting appear approximately nine to fourteen days after the infectious bite. If untreated, the infection can progress rapidly and become life threatening—destroying red blood cells, causing severe anemia, and blocking capillaries that carry blood to the brain, resulting in coma and/or death. Malaria causes more than 300 million acute illnesses and more than one million deaths annually, mostly among children under the age of five. Malaria is a major health risk for travelers and the military.

About GenVec

GenVec, Inc. is a biopharmaceutical company developing novel therapeutic drugs and vaccines. GenVec's lead product candidate, TNFerade™, is currently in a pivotal clinical study (PACT) in locally advanced pancreatic cancer and is being evaluated in additional clinical trials in other tumor types. 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.

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