



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

February 15, 2011

Paul H. Fischer, Ph.D.
President and Chief Executive Officer
GenVec, Inc.
65 West Watkins Mill Road
Gaithersburg, MD 20878

**Re: GenVec, Inc.
Preliminary Proxy Statement
Filed February 11, 2011
File No. 000-24469**

Dear Dr. Fischer:

We have limited our review of your filing to the issue we have addressed in our comment below. Please respond to this letter by amending your filing and providing the requested information. Where you do not believe our comment applies to your facts and circumstances, please tell us why in your response. After reviewing the information you provide in response to this comment, we may have additional comments.

General

1. Please revise your proxy statement to disclose the number of record holders before and after completion of the 1 for 10 reverse stock split and cash-out of fractional shareholders. If the number of record holders will fall below 300 please provide us your analysis as to the applicability of Rule 13e-3 of the Securities Exchange Act of 1934 to the reverse stock split transaction. Please note that we may have further comments after reviewing your revised disclosure and any additional information you provide us supplementally.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Exchange Act of 1934 and all applicable Exchange Act rules require. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In connection with responding to our comment, please provide, in writing, a statement from the company acknowledging that

- the company is responsible for the adequacy and accuracy of the disclosure in the filings;

Paul H. Fischer, Ph.D.

GenVec, Inc.

February 15, 2011

Page 2

- staff comments or changes to disclosure in response to staff comments in the filings reviewed by the staff do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

You may contact Laura Crotty at (202) 551-3563 or me at 202-551-3715 with any questions.

Sincerely,

Jeffrey Riedler
Assistant Director