

Via Facsimile and U.S. Mail
Mail Stop 6010

June 27, 2006

Mr. Mark E. Mosteller, CPA
Vice President and Chief Financial Officer
GTx, Inc.
3 N. Dunlap Street, Van Vleet Building
Memphis, TN 38163

**Re: GTx, Inc.
Form 10-K for the Fiscal Year Ended December 31, 2005
File No. 000-50549**

Dear Mr. Mosteller:

We have limited our review of your filing to those issues we have addressed in our comment. In our comment, we ask you to provide us with information so we may better understand your disclosure.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comment or on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form 10-K for the Fiscal Year Ended December 31, 2005

Management's Discussion and Analysis of Financial Condition and Results of Operations

Critical Accounting Policies, page 48

1. We acknowledge your revenue recognition policy as noted herein and within your "Summary of Significant Accounting Policies" in the accompanying notes to your consolidated financial statements. We believe that your disclosure related to your rebate and sales returns accruals could be defined and improved. Please provide us with the information that follows in a disclosure-type format.
 - a) Tell us how you estimate sales returns and recognize revenue according to the provisions of SFAS No. 48, given your absence of historical experience, which would seem to preclude your ability to estimate future returns under paragraphs

6/8 of SFAS No. 48. Please also clarify, in a disclosure-type format, your accounting policy for rebates in relation to EITF No. 01-9, particularly paragraph 9.

- b) Expand your disclosure of the factors that you consider in estimating your sales returns accrual. Specifically, please address how you consider factors such as levels of FARESTON inventory in your distribution channels and FARESTON's estimated remaining product shelf life, particularly since you disclose that you accept product returns "near their expiration date."
- c) To the extent that the information you consider in b. is quantifiable, disclose both quantitative and qualitative factors and discuss the extent of availability and your use of information from external sources; for example, end-customer demand data compared to inventory levels. In discussing your estimate of product returns, consider disclosing the total amount of FARESTON in sales dollars that you believe could potentially be returned as of the most recent balance sheet date, disaggregated by expiration period, if any.
- d) If applicable, discuss any shipments made as a result of incentives and/or in excess of your wholesalers' inventory levels in the ordinary course of business, in particular as they pertain to your rebate accruals, which are inherently affected by the underlying product sales volumes and growth. Please also discuss your revenue recognition policy for such shipments.
- e) For the year ended December 31, 2005 and separately for the quarter ended March 31, 2006, provide a roll-forward of each accrual that includes the following:
 - beginning balance;
 - current estimate related to sales made in current period;
 - current estimate related to sales made in prior periods (this item will not be applicable for the year ended December 31, 2005);
 - actual returns or credits in current period related to sales made in current period;
 - actual returns or credits in current period related to sales made in prior periods (this item will not be applicable for the year ended December 31, 2005); and
 - ending balance.

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Please provide us the information requested within 10 business days of the date of this letter or tell us when you will provide a response prior to the expiration of the 10-day period. Please furnish a letter with your response that keys your response to our comment. Detailed letters greatly facilitate our review. You should file the letter on EDGAR under the form type label CORRESP. Please understand that we may have additional comments after reviewing your response to our comment.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that they have provided all information required under the Securities Exchange Act of 1934 and that they have provided all information investors require for an informed investment decision. 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 comments, please provide, in your letter, a statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments 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.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in our review of your filing or in response to our comment on your filing.

You may contact Amy Bruckner, Staff Accountant, at (202) 551-3657 or Lisa Vanjoske, Assistant Chief Accountant, at (202) 551-3614 if you have questions regarding comments on the financial statements and related matters. In this regard, please do not hesitate to contact me at (202) 551-3679.

Sincerely,

Jim B. Rosenberg
Senior Assistant Chief Accountant