

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

SCHEDULE 14A
INFORMATION REQUIRED IN PROXY STATEMENT

Proxy Statement Pursuant to Section 14(a) of the Securities
Exchange Act of 1934 (Amendment No.)

Filed by the Registrant
Filed by a Party other than the Registrant

Check the appropriate box:

- Preliminary Proxy Statement
- Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))**
- Definitive Proxy Statement
- Definitive Additional Materials
- Soliciting Material Pursuant to Section 240.14a-12

GTx, Inc.

(Name of Registrant as Specified in its Charter)

(Name of Person(s) Filing Proxy Statement, if Other Than the Registrant)

Payment of Filing Fee (Check the appropriate box):

- No fee required.
- Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.

1) Title of each class of securities to which transaction applies:

2) Aggregate number of securities to which transaction applies:

3) Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (set forth the amount on which the filing fee is calculated and state how it was determined):

4) Proposed maximum aggregate value of transaction:

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- Fee paid previously with preliminary materials.
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1) Amount Previously Paid:

2) Form, Schedule or Registration Statement No.:

3) Filing Party:

4) Date Filed:



175 Toyota Plaza
7th Floor
Memphis, Tennessee 38103
(901) 523-9700
March 17, 2010

Dear Stockholder:

I would like to extend a personal invitation for you to join us at our Annual Meeting of Stockholders on Thursday, April 29, 2010, at 4:00 p.m. Central Daylight Time at the Toyota Center, 175 Toyota Plaza, Memphis, Tennessee 38103.

At this year's meeting, you will be asked to approve the election of the three nominees for director named in the accompanying proxy statement, and to ratify the appointment of Ernst & Young LLP as GTx's independent registered public accounting firm for 2010.

I urge you to vote, as the Board of Directors has recommended, for each of our director nominees and to ratify the appointment of Ernst & Young LLP as GTx's independent registered public accounting firm for 2010.

Attached you will find a notice of meeting (which includes a notice of Internet availability of our proxy materials) and proxy statement that contains further information about these items as well as specific details of the meeting.

Your vote is important. Whether or not you expect to attend the meeting, I encourage you to vote. Please sign and return your proxy card, or use the telephone or Internet voting prior to the meeting. This will assure that your shares will be represented and voted at the meeting, even if you cannot attend.

Sincerely,

A handwritten signature in black ink, appearing to read 'Mitchell S. Steiner'.

Mitchell S. Steiner
*Chief Executive Officer and
Vice-Chairman of the Board of Directors*



175 Toyota Plaza
7th Floor
Memphis, Tennessee 38103
(901) 523-9700

NOTICE OF ANNUAL MEETING OF STOCKHOLDERS

You are invited to attend the 2010 GTx, Inc. Annual Meeting of Stockholders:

- WHEN** 4:00 p.m. (Central Daylight Time) on Thursday, April 29, 2010.
- WHERE** The Toyota Center, 175 Toyota Plaza, Memphis, Tennessee 38103.
- ITEMS OF BUSINESS**
- To elect the three Class III directors named in the accompanying proxy statement to serve until the 2013 Annual Meeting of Stockholders and until their successors have been duly elected and qualified (Proposal No. 1);
 - To ratify the appointment of Ernst & Young LLP as GTx's independent registered public accounting firm for the fiscal year ending December 31, 2010 (Proposal No. 2); and
 - To conduct such other business as may properly come before the meeting or any adjournment or postponement thereof.
- RECORD DATE** You are entitled to vote if you are a stockholder of record at the close of business on March 1, 2010.
- VOTING BY PROXY** The Board of Directors is soliciting your proxy to assure that a quorum is present and that your shares are represented and voted at the meeting. Please see the attached proxy statement and enclosed proxy card for information on submitting your proxy over the Internet, by telephone, or by mailing back the traditional proxy card (no extra postage is needed for the enclosed envelope if mailed in the U.S.). If you later decide to vote at the meeting, information on revoking your proxy prior to the meeting is also provided. You may receive more than one set of proxy materials and proxy cards. Please promptly complete, sign and return each proxy card you receive in order to ensure that all of your shares are represented and voted. Please note that if your shares are held of record by a broker, bank or other nominee and you wish to vote at the meeting, you must obtain a proxy issued in your name from that record holder.
- ATTENDANCE AT MEETING** If you plan to attend, please be sure to mark the box provided on the proxy card or indicate your attendance when prompted during your Internet or telephone submission.
- RECOMMENDATIONS** The Board of Directors recommends that you vote **"FOR"** each of our nominees for director and **"FOR"** Proposal No. 2.

Important Notice Regarding the Availability of Proxy Materials for the Annual Meeting of Stockholders to be Held on April 29, 2010 at The Toyota Center, 175 Toyota Plaza, Memphis, Tennessee 38103

The proxy statement and annual report to stockholders are available at www.proxydocs.com/GTXI

Your vote is important. Whether or not you expect to attend the meeting, please submit your proxy promptly in order to assure that a quorum is present. Thank you for your attention to this important matter.

By Order of the Board of Directors,

Henry P. Doggrell
Vice President, General Counsel and Secretary

Memphis, Tennessee
March 17, 2010

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GTx, Inc.

175 Toyota Plaza
7th Floor
Memphis, Tennessee 38103
(901) 523-9700

PROXY STATEMENT FOR THE 2010 ANNUAL MEETING OF STOCKHOLDERS

The enclosed proxy is solicited by the Board of Directors of GTx, Inc. for use at the 2010 Annual Meeting of Stockholders. **Your vote is very important.** For this reason, the Board of Directors is requesting that you allow your shares to be represented at the 2010 Annual Meeting of Stockholders by the proxies named on the enclosed proxy card. In connection with the solicitation of proxies by the Board of Directors, we are mailing this proxy statement, the enclosed proxy card, and our 2009 Annual Report to all stockholders entitled to vote at the Annual Meeting beginning on or about March 26, 2010.

In this proxy statement, terms such as “we,” “us” and “our” refer to GTx, Inc., which may also be referred to from time to time as “GTx.”

INFORMATION ABOUT THE MEETING

When is the Annual Meeting?

The Annual Meeting will be held at 4:00 p.m., Central Daylight Time, on Thursday, April 29, 2010.

Where will the Annual Meeting be held?

The Annual Meeting will be held at the Toyota Center, 175 Toyota Plaza, Memphis, Tennessee 38103.

What items will be voted on at the Annual Meeting?

There are two matters scheduled for a vote:

1. To elect the three Class III directors named herein to serve until the 2013 Annual Meeting of Stockholders and until their successors have been duly elected and qualified; and
2. To ratify the appointment of Ernst & Young LLP as GTx’s independent registered public accounting firm for the fiscal year ending December 31, 2010.

As of the date of this proxy statement, we are not aware of any other matters that will be presented for consideration at the Annual Meeting.

What are the Board of Directors’ recommendations?

Our Board of Directors recommends that you vote:

- “**FOR**” the election of each of the three nominees named herein to serve on the Board of Directors; and
- “**FOR**” the ratification of the appointment of Ernst & Young LLP as GTx’s independent registered public accounting firm for the fiscal year ending December 31, 2010.

Will GTX's directors be in attendance at the Annual Meeting?

GTX encourages, but does not require, its directors to attend annual meetings of stockholders. However, GTX currently anticipates that all of its directors will attend the Annual Meeting. All but one of GTX's directors attended the 2009 Annual Meeting of Stockholders.

INFORMATION ABOUT VOTING

Who is entitled to vote at the Annual Meeting?

Only stockholders of record at the close of business on the record date, March 1, 2010, are entitled to receive notice of the Annual Meeting and to vote the shares for which they are stockholders of record on that date at the Annual Meeting, or any postponement or adjournment of the Annual Meeting. As of the close of business on March 1, 2010, GTX had 36,420,901 shares of common stock outstanding.

Stockholders of Record: Shares Registered in Your Name. If on March 1, 2010, your shares were registered directly in your name with GTX's transfer agent, Computershare Investor Services, then you are a stockholder of record. As a stockholder of record, you may vote in person at the Annual Meeting or vote by proxy. Whether or not you plan to attend the Annual Meeting, we urge you to fill out and return the enclosed proxy card, or vote by proxy over the telephone or on the Internet as instructed below, to ensure your vote is counted.

Beneficial Owner: Shares Registered in the Name of a Broker or Bank. If on March 1, 2010, your shares were held in an account at a brokerage firm, bank, dealer or other similar organization, then you are the beneficial owner of shares held in "street name" and these proxy materials are being forwarded to you by that organization. The organization holding your account is considered to be the stockholder of record for purposes of voting at the Annual Meeting. As a beneficial owner, you have the right to direct your broker or other agent on how to vote the shares in your account. You are also invited to attend the Annual Meeting. However, since you are not the stockholder of record, you may not vote your shares in person at the Annual Meeting unless you request and obtain a valid proxy from your broker or other agent.

How do I vote?

You may either vote "FOR" each nominee to the Board of Directors or you may withhold your vote for any nominee. For Proposal No. 2, you may vote "FOR" or "AGAINST" or abstain from voting. The procedures for voting are fairly simple:

Stockholder of Record: Shares Registered in Your Name. If you are a stockholder of record, you may vote in person at the Annual Meeting, vote by proxy using the enclosed proxy card, vote by proxy over the telephone, or vote by proxy on the Internet. Whether or not you plan to attend the Annual Meeting, we urge you to vote by proxy to ensure your vote is counted. You may still attend the Annual Meeting and vote in person if you have already voted by proxy.

- To vote in person, come to the Annual Meeting and we will give you a ballot when you arrive.
- To vote using the enclosed proxy card, simply complete, sign and date the enclosed proxy card and return it promptly in the postage paid envelope provided. If you return your signed proxy card to us before the Annual Meeting, we will vote your shares as you direct.
- To vote over the telephone, dial toll-free 1-800-652-VOTE (8683) within the United States, Canada and Puerto Rico using a touch-tone phone and follow the instructions provided by the recorded message. Your vote must be received by 1:00 a.m. Central Daylight Time on April 28, 2010 to be counted.
- To vote on the Internet, go to www.investorvote.com/GTXI to complete an electronic proxy card and follow the steps outlined on the secured website. Your vote must be received by 1:00 a.m. Central Daylight Time on April 28, 2010 to be counted.

Beneficial Owner: Shares Registered in the Name of a Broker or Bank. If you are a beneficial owner of shares registered in the name of your broker, bank or other nominee, you should have received a proxy card and voting instructions with these proxy materials from that organization rather than from GTX. Simply complete and mail the proxy card to ensure that your vote is counted. Alternatively, you may vote by telephone or over the Internet as instructed by your

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broker or bank. To vote in person at the Annual Meeting, you must obtain a valid proxy from your broker, bank or other nominee. Follow the instructions from your broker or bank included with these proxy materials, or contact your broker or bank to request a proxy form.

We provide Internet proxy voting to allow you to vote your shares on-line, with procedures designed to ensure the authenticity and correctness of your proxy vote instructions. However, please be aware that you must bear any costs associated with your Internet access, such as usage charges from Internet access providers and telephone companies.

How many votes do I have?

On each matter to be voted upon, you have one vote for each share of common stock you own as of March 1, 2010.

What if I return a proxy card but do not make specific choices?

If you return a signed and dated proxy card without marking any voting selections, your shares will be voted "FOR" the election of each of our three nominees for director, and "FOR" the ratification of the appointment of Ernst & Young LLP as GTX's independent registered public accounting firm for the fiscal year ending December 31, 2010.

If any other matter is properly presented at the Annual Meeting, your proxy (one of the individuals named on your proxy card) will vote your shares as recommended by the Board of Directors or, if no recommendation is given, will vote your shares using his or her best judgment.

Can I change my vote after submitting my proxy card?

Yes. You can revoke your proxy at any time before the final vote at the Annual Meeting. If you are the record holder of your shares, you may revoke your proxy in any one of three ways:

- You may submit another properly completed proxy bearing a later date;
- You may send a written notice that you are revoking your proxy to GTX, Inc. at 175 Toyota Plaza, 7th Floor, Memphis, Tennessee 38103, Attention: Henry P. Doggrell, Corporate Secretary; or
- You may attend the Annual Meeting and notify the election officials at the Annual Meeting that you wish to revoke your proxy and vote in person. Simply attending the Annual Meeting will not, by itself, revoke your proxy.

If your shares are held by your broker or bank as a nominee or agent, you should follow the instructions provided by your broker or bank.

How are votes counted?

Votes will be counted by the inspector of election appointed for the Annual Meeting, who will separately count "FOR," "WITHHOLD" and broker non-votes with respect to the election of directors, and, with respect to Proposal No. 2, "FOR" and "AGAINST" votes, abstentions and broker non-votes. A broker non-vote occurs when a nominee, such as a broker or bank, holding shares for a beneficial owner does not vote on a particular proposal because the nominee does not have discretionary voting power with respect to that proposal and has not received instructions with respect to that proposal from the beneficial owner. In the event that a broker, bank, custodian, nominee or other record holder of our common stock indicates on a proxy that it does not have discretionary authority to vote certain shares on a particular proposal, then those shares will be treated as broker non-votes with respect to that proposal. Accordingly, if you own shares through a nominee, such as a broker or bank, please be sure to instruct your nominee how to vote to ensure that your vote is counted on both of the proposals.

If you are a beneficial owner of shares registered in the name of your broker, bank or other nominee, you should be aware of a change in voting rules, effective January 1, 2010, that will affect whether your shares will be voted in the election of directors. Under New York Stock Exchange, or NYSE, Rule 452 relating to the discretionary voting of proxies

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by brokers, banks or other nominees that are NYSE members, such brokers or banks will no longer be permitted to vote shares with respect to the election of directors without instructions from the beneficial owner. However, such brokers and banks will still be able to vote such shares with respect Proposal No. 2, even if they do not receive instructions from the beneficial owner. Therefore, if you are a beneficial owner of shares registered in the name of your broker or bank, please be advised that, if you do not timely provide instructions to your broker or bank, your shares will not be voted in connection with the election of directors. As noted above, please be sure to instruct your nominee how to vote to ensure that your vote is counted on **both** of the proposals.

Abstentions and broker non-votes will be treated as shares present for the purpose of determining the presence of a quorum for the transaction of business at the Annual Meeting. Abstentions will be counted towards the tabulation of shares present in person or represented by proxy and will have the same effect as "AGAINST" votes on Proposal No. 2. Broker non-votes are not counted as votes "FOR" or "AGAINST" Proposal No. 2, and will have no effect on the outcome of the election of the directors.

How many votes are needed to approve each proposal?

- For the election of the Class III directors, the three nominees receiving the most "FOR" votes (among votes properly cast in person or by proxy) will be elected.
- To be approved, Proposal No. 2, the ratification of the appointment of Ernst & Young LLP as GTX's independent registered public accounting firm for the fiscal year ending December 31, 2010, must receive a "FOR" vote from at least a majority of the shares present in person or represented by proxy at the Annual Meeting and entitled to vote on Proposal No. 2.

How many shares must be present to constitute a quorum for the Annual Meeting?

A quorum of stockholders is necessary to hold a valid meeting. A quorum will be present if at least a majority of the outstanding shares entitled to vote are represented by stockholders present at the Annual Meeting or by proxy. On March 1, 2010, the record date, there were 36,420,901 shares outstanding and entitled to vote. Thus, at least 18,210,451 shares must be represented by stockholders present at the Annual Meeting or by proxy to have a quorum.

Your shares will be counted towards the quorum only if you submit a valid proxy (or one is submitted on your behalf by your broker, bank or other nominee) or if you vote in person at the Annual Meeting. Abstentions and broker non-votes will be treated as shares present for the purpose of determining the presence of a quorum. If there is no quorum, either the Chairman of the meeting or a majority of the votes present in person or represented by proxy at the Annual Meeting may adjourn the Annual Meeting to another date.

How can I find out the results of the voting at the Annual Meeting?

Preliminary voting results will be announced at the Annual Meeting. Final results are expected to be published in a current report on Form 8-K filed by GTX with the Securities and Exchange Commission on or before the fourth business day following the Annual Meeting. If final voting results are not available to us in time to file a Form 8-K within four business days following the Annual Meeting, we intend to file a Form 8 K to publish preliminary results and, within four business days after the final results are known to us, file an additional Form 8-K to publish the final results.

ADDITIONAL MEETING-RELATED INFORMATION

How and when may I submit a stockholder proposal for GTX's 2011 Annual Meeting?

Our annual meeting of stockholders generally is held in April or May of each year. We will consider for inclusion in our proxy materials for the 2011 Annual Meeting of Stockholders, stockholder proposals that are received at our executive offices no later than November 26, 2010 and that comply with all applicable requirements of Rule 14a-8 promulgated under the Securities Exchange Act of 1934, as amended. However, if our 2011 Annual Meeting of Stockholders is not held between March 30, 2011 and May 29, 2011, then the deadline will be a reasonable time prior to the time we begin to print and send our proxy materials. Proposals must be sent to our Corporate Secretary at GTX, Inc., 175 Toyota Plaza, 7th Floor, Memphis, Tennessee 38103.

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Pursuant to GTx's bylaws, stockholders wishing to submit proposals or director nominations that are not to be included in our proxy materials must have given timely notice thereof in writing to our Corporate Secretary. To be timely for the 2011 Annual Meeting of Stockholders, you must notify our Corporate Secretary, in writing, not later than the close of business on November 26, 2010, nor earlier than the close of business on October 27, 2010. We also advise you to review GTx's bylaws, which contain additional requirements about advance notice of stockholder proposals and director nominations, including the different notice submission date requirements in the event that we do not hold our 2011 Annual Meeting of Stockholders between March 30, 2011 and May 29, 2011. A stockholder's notice to our Corporate Secretary must set forth the information required by GTx's bylaws with respect to each matter the stockholder proposes to bring before the annual meeting. The Chairman of the 2011 Annual Meeting of Stockholders may determine, if the facts warrant, that a matter has not been properly brought before the meeting and, therefore, may not be considered at the meeting. In addition, the proxy solicited by the Board of Directors for the 2011 Annual Meeting of Stockholders will confer discretionary voting authority with respect to (i) any proposal presented by a stockholder at that meeting for which GTx has not been provided with timely notice and (ii) any proposal made in accordance with GTx's bylaws, if the proxy statement for the 2011 Annual Meeting of Stockholders briefly describes the matter and how management proxy holders intend to vote on it, if the stockholder does not comply with the requirements of Rule 14a-4(c)(2) promulgated under the Securities Exchange Act of 1934.

How can I obtain a copy of GTx's Form 10-K?

We will mail to you without charge, upon written request, a copy of our Form 10-K filed with the Securities and Exchange Commission for the fiscal year ended December 31, 2009, as well as a copy of any exhibit specifically requested. Requests should be sent to: Corporate Secretary, GTx, Inc., 175 Toyota Plaza, 7th Floor, Memphis, Tennessee 38103. A copy of our Annual Report on Form 10-K has also been filed with the SEC and may be accessed from the SEC's homepage (www.sec.gov).

In addition, a copy of our 2009 Annual Report to Stockholders is being mailed along with this proxy statement and is also available at www.proxydocs.com/GTXI. Our 2009 Annual Report to Stockholders is not incorporated into this proxy statement and shall not be considered proxy solicitation material.

What proxy materials are available on the Internet?

This proxy statement and our 2009 Annual Report to Stockholders are available at www.proxydocs.com/GTXI.

Who is paying for this proxy solicitation?

We will pay for the entire cost of soliciting proxies. We are paying The Altman Group, Inc. their customary fee of \$1,025 plus out-of-pocket expenses to solicit proxies. In addition to these mailed proxy materials, our directors and employees may also solicit proxies in person, by telephone or by other means of communication. Directors and employees will not be paid any additional compensation for soliciting proxies. We may also reimburse brokerage firms, banks and other agents for the cost of forwarding proxy materials to beneficial owners.

How many copies should I receive if I share an address with another stockholder?

The SEC has adopted rules that permit companies and intermediaries, such as brokers, to satisfy the delivery requirements for proxy statements and annual reports with respect to two or more stockholders sharing the same address by delivering a single proxy statement and annual report addressed to those stockholders. This process, which is commonly referred to as "householding," potentially provides extra convenience for stockholders and cost savings for companies.

This year, a number of brokers with account holders who are GTx stockholders will be householding our proxy materials by delivering a single proxy statement and annual report to multiple stockholders sharing an address unless contrary instructions have been received from the affected stockholders. Once you have received notice from your broker that it will be householding materials to your address, householding will continue until you are notified otherwise or until you revoke your consent. If, at any time, you no longer wish to participate in householding and would prefer to receive a separate proxy statement and annual report in the future you may notify your broker or GTx. You can notify us by sending a written request to GTx, Inc., c/o Henry P. Doggrell, Corporate Secretary, 175 Toyota Plaza, 7th Floor, Memphis, Tennessee 38103, or by calling (901) 523-9700. Stockholders who currently receive multiple copies of the proxy statement and annual report at their address and would like to request "householding" of their communications should contact their

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broker. In addition, GTx will promptly deliver, upon written or oral request to the address or telephone number above, a separate copy of the annual report and proxy statement to a stockholder at a shared address to which a single copy of the documents was delivered.

Who should I contact if I have any questions?

If you have any questions about the Annual Meeting, our proxy materials or your ownership of our common stock, please contact McDavid Stilwell, Director, Corporate Communications and Financial Analysis, 175 Toyota Plaza, 7th Floor, Memphis, Tennessee 38103, Telephone 901-523-9700 ext. 214 or by Fax: 901-844-8075.

**PROPOSAL NO. 1
ELECTION OF DIRECTORS**

GTx's Board of Directors is divided into three classes. GTx's charter documents provide that each class must consist, as nearly as possible, of one-third of the total number of directors, and each class has a three-year term. Vacancies on the Board of Directors may be filled only by the affirmative vote of a majority of the directors then in office, even though less than a quorum of the Board. A director elected by the Board to fill a vacancy in a class shall serve for the remainder of the full term of that class and until the director's successor is elected and qualified. This includes vacancies created by an increase in the authorized number of directors.

The Board of Directors presently has nine members. There are currently three directors in Class III, the class whose term of office expires at the Annual Meeting. Michael G. Carter, J. R. Hyde, III and Mitchell S. Steiner, each of whom is a current Class III director, was recommended for re-election to our Board of Directors by our Nominating and Corporate Governance Committee and was nominated for re-election by the Board of Directors. If elected at the Annual Meeting, each of Dr. Carter, Mr. Hyde and Dr. Steiner will serve until the 2013 Annual Meeting of Stockholders and until their successors are elected and qualified, or until their earlier death, resignation or removal.

Prior to the resignation of Rosemary Mazanet from the Board of Directors in February 2010, there were four directors in Class III, three directors in Class I, the class whose term of office expires at the 2011 Annual Meeting of Stockholders, and three directors in Class II, the class whose term of office expires at the 2012 Annual Meeting of Stockholders. As a result of the resignation of Dr. Mazanet (who was a Class I director) from the Board in February 2010, there were only two directors in Class I. As noted above, GTx's charter documents require, as nearly as possible, an equal apportionment among the three classes of GTx's classified Board of Directors. Solely in order to correct the imbalance among the three classes of directors, Timothy R. G. Sear resigned from the Board as a Class III director and, upon the recommendation of the Nominating and Corporate Governance Committee, was immediately reappointed by the Board as a Class I director, to serve for the remainder of the term of the Class I directors and until his successor is elected and qualified. Accordingly, Mr. Sear will not be standing for election at the Annual Meeting. The reallocation of Mr. Sear from one class of directors to another class of directors had no effect on any aspect of his compensatory arrangements with GTx, and he continues to serve as a member of both the Compensation Committee and the Audit Committee.

Directors are elected by a plurality of the votes present in person or represented by proxy and entitled to vote at the Annual Meeting. Shares represented by executed proxies will be voted, if authority to do so is not withheld, for the election of each of Dr. Carter, Mr. Hyde and Dr. Steiner. In the event that any nominee should be unavailable for election as a result of an unexpected occurrence, shares that would have been voted for that nominee will instead will be voted for the election of such substitute nominee as the Nominating and Corporate Governance Committee may propose. Dr. Carter, Mr. Hyde and Dr. Steiner have each agreed to serve if elected.

The following includes a brief biography of each nominee standing for election to the Board of Directors at the Annual Meeting, with each biography including information regarding the experiences, qualifications, attributes or skills that caused the Nominating and Corporate Governance Committee and the Board to determine that the applicable nominee should serve as a member of our Board of Directors.

Class III Director Nominees for Election for a Three-Year Term Expiring at the 2013 Annual Meeting

Michael G. Carter, M.D., Ch.B., F.R.C.P.

Dr. Carter, age 72, was appointed as a director in May 2006 and currently serves on the Compensation Committee. Dr. Carter has been a non-executive director of Micromet, Inc. (NASDAQ: MITI) and Santarus, Inc. (NASDAQ: SNTS) since 2004, and a non-executive director of Fulcrum Pharma, PLC (AIM: FUL) since 2005. Dr. Carter was a member of the Advisory Board of Paul Capital Royalty Fund from 2005 to 2008, and has been a venture partner with SV Life Sciences Advisers, LLP since 1998 and a member of the strategic advisory board of Cowen Healthcare Royalty Partners since September 2009. Dr. Carter was the non-executive chairman of Metris Therapeutics, Ltd., a biotechnology firm specializing in women's healthcare from 1999 to 2008. Dr. Carter served on the Pharmaceutical Board of Zeneca Pharmaceuticals, a predecessor company of AstraZeneca, and held various positions with Zeneca from 1984 to 1998, including International Medical Director and International Marketing Director. From 1985 to 1995, Dr. Carter served as a member of the U.K. Government's Medicines Commission. Dr. Carter is an Elected Fellow of the Royal Pharmaceutical Society, Faculty of

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Pharmaceutical Medicine, and of the Royal College of Physicians of Edinburgh. Dr. Carter holds a bachelor's degree in pharmacy from London University (U.K.) and a medical degree from Sheffield University Medical School (U.K.). Dr. Carter brings to the GTx Board specific expertise in the development and commercialization of pharmaceutical products by both large pharmaceutical companies and small specialty biotech companies. His advice regarding product launch preparations has been especially valuable to both the Board and management.

J. R. Hyde, III

Mr. Hyde, age 67, has served as the Chairman of our Board of Directors since November 2000 and currently serves as Chairman of the Compensation Committee. Since 1989, Mr. Hyde has been the sole stockholder and President of Pittco Holdings, Inc., a private institutional investment company. Since 1996, when Mr. Hyde made a substantial contribution to support Dr. Steiner's research, Mr. Hyde has been instrumental in forming and financing GTx and is our largest stockholder. Mr. Hyde was the Chairman of the Board of Directors of AutoZone, Inc. (NYSE: AZO) from 1986 to 1997 and the Chief Executive Officer of AutoZone from 1986 to 1996. From March 2005 to June 2007, Mr. Hyde served as the non-executive chairman of the Board of Directors of AutoZone, Inc. He was also Chairman and Chief Executive Officer of Malone & Hyde, Inc., AutoZone's former parent company, from 1972 until 1988. Mr. Hyde currently is a director of AutoZone, Inc. and FedEx Corporation (NYSE: FDX). As our largest stockholder and with a long history of serving as both Chairman and Chief Executive Officer of a large publicly-traded company and a member of the board of directors of other public companies, Mr. Hyde has continued to serve as a principal architect of our public company governance structure, and is the primary advisor to senior management on all matters of strategic importance. The Board believes that Mr. Hyde's leadership role and public company experience continues to qualify him as the best candidate to Chair GTx's Board of Directors.

Mitchell S. Steiner, M.D., F.A.C.S.

Dr. Steiner, age 49, a co-founder of GTx, has served as our Chief Executive Officer and Vice-Chairman of our Board of Directors since our inception in September 1997. From 1995 to 2003, Dr. Steiner held numerous academic appointments, including Chairman and Professor of Urology, Director of Urologic Oncology and Research and the Chair of Excellence in Urologic Oncology at the University of Tennessee. Since 2003, Dr. Steiner has continued to serve on the faculty at the University of Tennessee. Dr. Steiner holds a B.A. in Molecular Biology from Vanderbilt University and an M.D. from the University of Tennessee, and performed his surgery and urologic training at The Johns Hopkins Hospital. Dr. Steiner serves as both Chief Executive Officer and chief scientific officer to GTx, and oversees all of GTx's product development efforts and its strategies. The Board has determined that it is in the best interest of GTx to have both Dr. Steiner, GTx's Chief Executive Officer, and Mr. Hanover, GTx's Chief Operating Officer, as members of the Board since these two individuals are best able to impart to the Board the scientific and financial acumen essential for a complete understanding by the Board of GTx's operations, strategies and developmental plans. Dr. Steiner's knowledge of all aspects of our business and its history, combined with his drive for innovation and excellence, position him well to serve as our Chief Executive Officer and Vice-Chairman of the Board.

The Board of Directors recommends a vote in favor of each of our nominees for Class III Director.

ADDITIONAL INFORMATION ABOUT THE BOARD OF DIRECTORS AND CERTAIN CORPORATE GOVERNANCE MATTERS

Continuing Directors

In addition to the three Class III director nominees, GTx has six other directors who will continue in office after the Annual Meeting with terms expiring in 2011 and 2012. The following includes a brief biography of each director composing the remainder of the Board with terms expiring as shown, with each biography including information regarding the experiences, qualifications, attributes or skills that caused the Nominating and Corporate Governance Committee and the Board to determine that the applicable director should serve as a member of our Board of Directors.

Class I Directors Continuing in Office Until the 2011 Annual Meeting

Robert W. Karr, M.D.

Dr. Karr, age 61, has served as a director since June 2005 and currently serves on the Audit Committee and the Nominating and Corporate Governance Committee. Dr. Karr served as President of Idera Pharmaceuticals, Inc. (NASDAQ: IDRA) from December 2005 until December 2007. He has served on Idera's Board of Directors since 2005 and continues to work as a consultant for that company. Since February 2010, Dr. Karr has served as a member of StartUp Midwest Management, LLC, a management and consulting company, and since January 2008, Dr. Karr has also served as a consultant for Karr Pharma Consulting, LLC. Dr. Karr currently serves as a member of the board of directors of and as a part-time executive for a private company in the healthcare field. From 2000 to 2004, Dr. Karr was a senior executive for Global Research & Development for Pfizer, Inc. (NYSE: PFE), where he served as Senior Vice President, Strategic Management from 2002 to 2004. Prior to its merger with Pfizer, Dr. Karr served as Vice President, Research & Development Strategy for Warner-Lambert Company. Dr. Karr received his B.S. (with honors) from Southwestern University in 1971 and his M.D. from the University of Texas Medical Branch in 1975. Dr. Karr completed his internship and residency in internal medicine at Washington University School of Medicine and served as a faculty member at both the University of Iowa College of Medicine and Washington University School of Medicine. Dr. Karr was recruited to the GTx Board of Directors to provide additional expertise to the Board with respect to the research and development of pharmaceutical products. His role on the Board continues to be, in part, to help the non-scientific members of the Board better understand GTx's research efforts and goals. Dr. Karr's experience in strategic management has also served GTx well in his role as a member of the Board's Nominating and Corporate Governance Committee.

Kenneth S. Robinson, M.D., M.Div.

Dr. Robinson, age 55, has served as a director since May 2008 and currently serves as a member of the Audit Committee and the Nominating and Corporate Governance Committee. From 2003 through 2007, Dr. Robinson served in the cabinet of Tennessee Governor Phil Bredesen as Commissioner of Health. From 1982 through 1991, Dr. Robinson taught and practiced internal medicine at Vanderbilt University School of Medicine, and from 1991 through 2003, he was an Assistant Dean at the University of Tennessee College of Medicine. Since 1991, he has served as Pastor and Chief Executive of St. Andrew AME Church. Dr. Robinson holds a B.A., cum laude, from Harvard University, a M.D. from Harvard Medical School, and a Master of Divinity from Vanderbilt Divinity School. As a Harvard trained physician who has experience in overseeing the complexities of federal and state agencies' provision of healthcare to elderly and indigent patients, Dr. Robinson brings to the GTx Board expertise in governmental reimbursement related issues and the role of government in the development and delivery of healthcare services. Dr. Robinson, an African American, adds an element of racial balance to the Board and also provides a voice for GTx with state and local officials.

Timothy R. G. Sear

Mr. Sear, age 72, was originally appointed as a director in October 2004 and currently serves on the Audit Committee and the Compensation Committee. Mr. Sear serves as Chairman Emeritus of Alcon, Inc. (NYSE: ACL), having retired from the offices of President and Chief Executive Officer on September 30, 2004. Prior to serving as President and Chief Executive Officer of Alcon, Mr. Sear served as Executive Vice President for Alcon's U.S. Operations from 1996 through 1997 and also as Executive Vice President for Alcon's International Division from 1988 to 1996. Mr. Sear is a graduate of Manchester University in the U.K. and Copenhagen University, Denmark and received an MBA in International Business from Indiana University. He is also a graduate of Harvard Business School's Advanced Management Program. Mr. Sear is a director of Sigma-Aldrich, Inc. (NASDAQ: SIAL), and Mr. Sear currently serves as Chairman of the Board of Directors of Prometheus Laboratories Inc. Having retired as President and Chief Executive Officer of Alcon, one of the leading global companies in combating eye diseases and developing related eye care products, Mr. Sear brings to GTx expertise in overseeing research and development efforts and developing commercial products for the global markets. Mr. Sear also has extensive commercial and financial experience, both academically and professionally, which continues to prove useful to members of the Board and senior management.

Class II Directors Continuing in Office Until the 2012 Annual Meeting

J. Kenneth Glass

Mr. Glass, age 63, has served as a director since March 2004, and currently serves as the Chairman of the Audit Committee and also currently serves on the Compensation Committee. Mr. Glass retired as Chairman of the Board, President and Chief Executive Officer of First Horizon National Corporation, or First Horizon, as of January 29, 2007. Mr. Glass was named President and Chief Executive Officer of First Horizon in July 2002, and he also became First Horizon's Chairman of the Board in January 2004. From 2003 through 2007, Mr. Glass served as a director of FedEx Corporation (NYSE: FDX). From July 2001 through July 2002, Mr. Glass was President and Chief Operating Officer of First Horizon. From 1993 to 2001, Mr. Glass was Business Unit President of First Tennessee Bank. Mr. Glass received his B.A. in Accounting from Harding University and graduated from Harvard Business School's Advanced Management Program. As Chairman and Chief Executive Officer of one of the largest banks in Tennessee, Mr. Glass was recruited to the GTx Board to provide financial and business leadership expertise to the Board. With his background in accounting and as a Chief Executive Officer, Mr. Glass serves in the role of a financial expert for our Audit Committee, and his years of experience leading a publicly-owned bank holding company has provided him with the organizational skills, risk management expertise and leadership he currently brings to the Board and the Audit Committee.

Marc S. Hanover

Mr. Hanover, age 47, a co-founder of GTx, has served as our President and Chief Operating Officer and a director since our inception in September 1997. Prior to joining GTx, Mr. Hanover was a founder of Equity Partners International, Inc., a private equity firm in Memphis, Tennessee, and participated as a founder and investor in three healthcare companies. From 1985 to 1997, Mr. Hanover was a Senior Vice President and a member of the Executive Management Committee of National Bank of Commerce in Memphis, Tennessee. Mr. Hanover holds a B.S. in Biology from the University of Memphis and an MBA in Finance from the University of Memphis. Mr. Hanover's background in finance, banking and investments provides senior management and the Board with needed expertise in corporate policy, governance, and risk management. Also, the Board has determined that it is in the best interest of GTx to have both Dr. Steiner, GTx's Chief Executive Officer and Mr. Hanover, GTx's Chief Operating Officer as members of the Board since these two individuals are best able to impart to the Board the scientific and financial acumen essential for a complete understanding by the Board of GTx's operations, strategies and developmental plans.

John H. Pontius

Mr. Pontius, age 54, has served as a director since April 1998 and currently serves as Chairman of the Nominating and Corporate Governance Committee. Mr. Pontius has been the President of Pittco Management, LLC, an investment and business management firm, since 1991. From 1986 to 1991, Mr. Pontius served as the Chief Financial Officer of the City of Memphis, Tennessee. Mr. Pontius holds a B.S. in Accounting from the University of Tennessee. Mr. Pontius served as a member of the Board of Trustees of the University of Tennessee from 2002 to 2004. Through his long tenure managing finances for the City of Memphis and thereafter as the chief investment advisor for Mr. Hyde, GTx's largest stockholder and Chairman of the Board, Mr. Pontius brings to the Board investment discipline, accounting expertise and risk management oversight experience. Mr. Pontius also has extensive federal, state and local governmental experience that has made him a valuable advisor to both management and the Board.

Director Independence

As required under the NASDAQ listing standards, a majority of the members of a listed company's Board of Directors must qualify as "independent," as affirmatively determined by the Board of Directors. Consistent with the requirements of the SEC and NASDAQ, our Board of Directors reviews all relevant transactions or relationships between each director, and GTx, its senior management and its independent registered public accounting firm. During this review, the Board considers whether there are any transactions or relationships between directors or any member of their immediate family (or any entity of which a director or an immediate family member is an executive officer, general partner or significant equity holder) and members of GTx's senior management or their affiliates. The Board consults with GTx's corporate counsel to ensure that the Board's determinations are consistent with all relevant securities and other laws and regulations regarding the definition of "independent," including those set forth in pertinent NASDAQ listing standards, as in effect from time to time.

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As a result of this review, the Board affirmatively determined that the following seven of our nine directors are independent members of the Board of Directors within the meaning of the applicable NASDAQ listing standards: Mr. Hyde (Chairman) (Nominee), Dr. Carter (Nominee), Mr. Glass, Dr. Karr, Mr. Pontius, Dr. Robinson and Mr. Sear. The Board also previously determined that Rosemary Mazanet, who resigned from the Board of Directors in February 2010, was an independent member of the Board of Directors within the meaning of the applicable NASDAQ listing standards. As a result of Mr. Hyde's significant stock ownership in GTx and Mr. Pontius' affiliation with Mr. Hyde, neither Mr. Hyde nor Mr. Pontius are considered "independent" under applicable NASDAQ and SEC standards pertaining to membership of the Audit Committee (neither Mr. Hyde nor Mr. Pontius are members of the Audit Committee). Mr. Pontius is the President of Pittco Management, LLC, a limited liability company of which Mr. Hyde is the chief manager. Notwithstanding Mr. Hyde's significant ownership stake in our company and Mr. Pontius' affiliation with Mr. Hyde, the Board has affirmatively determined that such relationships would not interfere with either Mr. Hyde's or Mr. Pontius' exercise of independent judgment in carrying out the responsibilities of a director. Dr. Steiner (Nominee), our Chief Executive Officer, and Mr. Hanover, our President and Chief Operating Officer, are not "independent" within the meaning of the NASDAQ listing standards. In determining that Dr. Robinson and Mr. Hyde are independent within the meaning of the applicable NASDAQ listing standards, the Nominating and Corporate Governance Committee and the Board considered Dr. Robinson's service as a director of a charitable organization of which Mr. Hyde is chair, as well as Dr. Robinson's position as Chief Executive Officer of a charitable organization that is a grantee of the J.R. Hyde Jr. Foundation and the J.R. Hyde III Family Foundation, and determined that such relationships would not interfere with either Dr. Robinson's or Mr. Hyde's exercise of independent judgment in carrying out the responsibilities of a director.

The Compensation Committee and the Nominating and Corporate Governance Committee of the Board are comprised entirely of directors who are independent within the meaning of the NASDAQ listing standards, and the members of the Audit Committee are independent under applicable NASDAQ listing standards and SEC rules. In addition, the Board of Directors has determined that Mr. Glass, the Chairman of the Audit Committee, qualifies as an "audit committee financial expert" within the meaning of the SEC rules.

Board Leadership Structure and Risk Oversight

Since we became a public company in February 2004, we have operated with a non-executive Chairman of the Board who leads the Board, and a Chief Executive Officer with responsibility for running GTx who is also a member of the Board and serves as the Vice-Chairman of the Board. The Chairman of our Board, Mr. Hyde, is responsible for:

- providing leadership to the Board and facilitating communication among directors;
- setting the Board meeting agendas in consultation with the Chief Executive Officer and Chief Operating Officer;
- presiding at Board meetings, executive sessions and stockholder meetings; and
- facilitating the flow of information between management and the directors on a regular basis.

We believe that our Chief Executive Officer and our Chairman have an excellent working relationship that has allowed Dr. Steiner to focus on the challenges that GTx faces in the current business environment. While our Guidelines on Governance Issues (a copy of which can be found on our corporate website at www.gtinc.com under "About GTx" at "Governance") does not require that we separate the duties of Chairman of the Board from those of the Chief Executive Officer, we have found combining Mr. Hyde's strategic focus with the day-to-day operational skills provided by our Chief Executive Officer ensures a mature, thoughtful and complete review of matters of importance to GTx. Also, having the opportunity for the independent directors to meet in executive session, which they do following the conclusion of each regularly scheduled Board meeting, gives our Board ample opportunity to openly question and discuss matters pertaining to senior management, including the appropriateness of their direction and actions.

Our Board has seven independent members within the meaning of the applicable NASDAQ listing standards and two non-independent members, Dr. Steiner, our Chief Executive Officer, and Mr. Hanover, our Chief Operating Officer. A number of our independent Board members have served as members of senior management of other public companies and are serving or have served as directors of other public companies. We have three Board committees comprised solely of independent directors within the meaning of the applicable NASDAQ listing standards, each with a different independent director serving as the Chair of the committee. We believe that the number of independent, experienced directors that make

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up our Board, along with the independent oversight of the Board by our non-executive Chairman, benefits GTx and our stockholders.

Our Audit Committee is primarily responsible for overseeing GTx's risk management process on behalf of the full Board. The Audit Committee receives reports from management periodically regarding GTx's assessment of risks. In addition, the Audit Committee reports regularly to the full Board, which also considers GTx's risk profile. The Audit Committee and the full Board focus on the most significant risks facing GTx and GTx's general risk management strategy, and also ensure that risks undertaken by GTx are consistent with the Board's appetite for risk. While the Audit Committee is primarily responsible for overseeing, GTx's risk management, company management is responsible for day-to-day risk management processes. We believe this division of responsibilities is the most effective approach for addressing the risks facing our company and that our Board leadership structure supports this approach.

Pursuant to our bylaws and our Guidelines on Governance Issues, our Board determines the best Board leadership structure for our company from time to time. As part of our annual Board self-evaluation process, the Board evaluates our leadership structure in an effort to ensure that it provides the optimal structure for our company and for our stockholders.

Board and Committee Meetings; Attendance

GTx encourages, but does not require its directors to attend annual meetings of stockholders. All of our directors, with the exception of Mr. Sear, attended the 2009 Annual Meeting of Stockholders. For 2009, each director attended at least 75% of the aggregate of (a) all meetings of the Board and (b) any committees on which he or she served, except for Mr. Sear, who attended 72% of the aggregate of such meetings. In 2009, the Board of Directors held eight meetings, and the number of meetings held by the Board committees is set forth in the table below. In addition, our non-management directors hold executive sessions after the conclusion of each regularly scheduled Board meeting. Mr. Hyde presides as Chairman over each executive session of the Board.

Board Committees

The charters for the Audit Committee, the Compensation Committee and the Nominating and Corporate Governance Committee are available on GTx's website (www.gtxinc.com) under "About GTx" at "Governance." The current membership of and information about each of our Board committees are shown below.

Committee/Current Members

Audit Committee

Current Members

Mr. Glass (Chairman)

Dr. Karr

Dr. Robinson

Mr. Sear

Number of Meetings held in 2009: Five

Committee Functions

- Oversees financial and operational matters involving accounting, corporate finance, internal and independent auditing, internal control over financial reporting, compliance, and business ethics.
- Oversees other financial audit and compliance functions as assigned by the Board.
- Primarily responsible for overseeing GTx's risk management process.
- Has the sole authority to select, evaluate, replace and oversee GTx's independent registered public accounting firm.
- Has the sole authority to approve non-audit and audit services to be performed by the independent registered public accounting firm.
- Monitors the independence and performance of the independent registered public accounting firm.
- Provides an avenue of communications among the independent registered public accounting firm, management and the Board of Directors.
- Reviews, approves and provides oversight of "related party transactions."
- Has the specific responsibilities and authority necessary to comply with the NASDAQ listing standards applicable to audit committees.

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Committee/Current Members

Compensation Committee

Current Members:

Mr. Hyde (Chairman)
Dr. Carter
Mr. Glass
Mr. Sear

Number of Meetings held in 2009: Five

Nominating and Corporate Governance Committee

Current Members:

Mr. Pontius (Chairman)
Dr. Karr
Dr. Robinson

Number of Meetings held in 2009: Four

Committee Functions

- Reviews the performance of GTx officers and establishes overall executive compensation policies and programs.
- Reviews and approves compensation elements such as base salary, bonus awards, stock option grants and other forms of long-term incentives for GTx officers (no member of the committee may be a member of management or eligible for compensation other than as a director).
- Reviews Board compensation and stock ownership matters.
- Reviews and discusses with management the information contained in the Compensation Discussion and Analysis section of our annual proxy statements.
- Evaluates governance standards for GTx to ensure that appropriate governance policies and procedures have been established and are being followed.
- Develops criteria to determine the qualifications and appropriate tenure of directors.
- Reviews such qualifications and makes recommendations to the Board regarding the nomination of current directors for re-election to the Board as well as new nominees to fill vacancies on the Board.
- Considers stockholder recommendations for Board nominees, as described below.
- Recommends to the Board the chairmanship and membership of each Board committee.
- Considers applicable social and ethical issues and other matters of significance in areas related to corporate public affairs.
- Reviews succession plans for GTx officers.

Nominating and Corporate Governance Committee Matters

The Nominating and Corporate Governance Committee expects, as minimum qualifications, that nominees to the Board (including incumbent directors) will enhance the Board's management, finance, commercial and/or scientific expertise, will not have a conflict of interest and will have a high ethical standard and, with respect to new members of the Board, a willingness to serve at least an initial three year term for the committee to recommend them to the Board of Directors. A director nominee's knowledge and/or experience in areas such as, but not limited to, the medical, pharmaceutical, biotechnology, biopharmaceutical or life sciences industry, equity and debt capital markets and financial accounting are likely to be considered both in relation to the individual's qualification to serve on our Board of Directors and the needs of the Board as a whole. While we don't have a formal policy on Board diversity, the Nominating and Corporate Governance committee takes into account a broad range of diversity considerations when assessing director candidates, including individual backgrounds and skill sets, professional experiences and other factors that contribute to our Board having an appropriate range of expertise, talents, experiences and viewpoints, and considers those diversity considerations, in view of the needs of the Board as a whole, when making decisions on director nominations. Other characteristics, including but not limited to, the director nominee's material relationships with GTx, time availability, service on other boards of directors and their committees, or any other characteristics which may prove relevant at any given time as determined by the Nominating and Corporate Governance Committee are reviewed for purposes of determining a director nominee's qualification.

Candidates for director nominees are evaluated by the Nominating and Corporate Governance Committee in the context of the current composition of the Board, the operating requirements of GTx and the long-term interests of GTx's stockholders. In the case of new director candidates, the Nominating and Corporate Governance Committee also determines whether the nominee must be independent for NASDAQ purposes, which determination is based upon applicable NASDAQ listing standards, applicable SEC rules and regulations and the advice of counsel, if necessary. The Nominating and Corporate Governance Committee then uses its network of contacts to compile a list of potential candidates, but may also engage, if it deems appropriate, a professional search firm. The Nominating and Corporate Governance Committee

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conducts any appropriate and necessary inquiries into the backgrounds and qualifications of possible candidates after considering the function and needs of the Board. In the case of incumbent directors whose terms of office are set to expire, the Nominating and Corporate Governance Committee reviews such directors' overall service to GTx during their term, including the number of meetings attended, level of participation, quality of performance, and any other relationships and transactions that might impair such directors' independence. The Nominating and Corporate Governance Committee meets to discuss and consider such candidates' qualifications and then selects a nominee for recommendation to the Board by majority vote. The Nominating and Corporate Governance Committee does not intend to alter the manner in which it evaluates candidates, including the minimum criteria set forth above, based on whether the candidate was recommended by a stockholder or not. To date, the Nominating and Corporate Governance Committee has not paid a fee to any third party to assist in the process of identifying or evaluating director candidates.

The Nominating and Corporate Governance Committee has evaluated, and recommended the nomination of, each of the directors currently standing for re-election at the Annual Meeting.

The Board of Directors does not impose term limits or a mandatory retirement age for directors, except GTx's Chief Executive Officer and Chief Operating Officer are required to leave the Board if he or she ceases to serve as GTx's Chief Executive Officer or Chief Operating Officer, as the case may be. While it is believed that a director's knowledge and/or experience can continue to provide benefit to the Board of Directors following a director's retirement from his or her primary work affiliation, it is recognized that a director's knowledge of and involvement in ever changing business environments can weaken, and therefore his or her ability to continue to be an active contributor to the Board of Directors will be reviewed. Upon a director's change in his or her employment status, if any, he or she is required to notify the Chairman of the Board of Directors and the Chair of the Nominating and Corporate Governance Committee of such change and to offer his or her resignation for review.

Compensation Committee Matters

Scope of Authority. The Compensation Committee acts on behalf of the Board of Directors to establish the compensation of executive officers of GTx and provides oversight of GTx's compensation philosophy. The Compensation Committee also acts as the oversight committee with respect to GTx's benefit plans, stock plans and bonus plans covering executive officers and other senior management. In overseeing those plans, the Compensation Committee has the sole authority for day-to-day administration and interpretation of the plans. Our Compensation Committee retains the authority for establishing all matters with respect to the compensation of our executive officers, although our Compensation Committee may recommend to the full Board of Directors that it take action with respect to such compensation matters. The Compensation Committee has the authority to engage outside advisors to assist it in the performance of its duties; however, the Compensation Committee may not delegate its authority to others.

Mr. Hyde, as Chairman of the Compensation Committee, is responsible for setting the agenda for meetings. Our Compensation Committee annually evaluates the performance, and determines the compensation, of the Chief Executive Officer and the other officers of GTx. More information regarding the Compensation Committee's process and procedures for determining and evaluating our executive officers' compensation packages can be found under the caption "Compensation Discussion and Analysis" below.

Compensation Consultants. Under its charter, the Compensation Committee has the power and authority to hire outside advisors or consultants to assist it in fulfilling its responsibilities upon terms and conditions established by the Compensation Committee. GTx is financially responsible for the fees of any advisor or consultant engaged by the Compensation Committee. In 2006, the Compensation Committee retained a compensation consultant, Mercer Human Resource Consulting, or Mercer, to assist with the Compensation Committee's analysis and determination of the 2007 compensation of our executive officers. The Compensation Committee directed Mercer to review GTx's executive compensation program and to recommend changes as deemed appropriate to ensure that GTx's compensation program provides reasonable and competitive pay opportunities that are aligned with key business objectives and best practices. Mercer reviewed base salaries, bonus compensation and equity incentives provided by each company within a peer group of 23 biopharmaceutical companies Mercer selected as a representative industry group most similar to GTx based on their number of employees, market capitalization and stage of development, and then ranked the compensation provided to GTx executive officers. The results of such review are described under "Compensation Discussion and Analysis". In 2007, 2008 and 2009, the Compensation Committee subscribed to the data service provided by Equilar, Inc., or Equilar, a web-based independent executive compensation firm, to retrieve for the Compensation Committee executive compensation data from

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our industry peer group (which is based on the peer group initially selected by Mercer and subsequently refined by the Compensation Committee) that the Compensation Committee reviewed prior to determining compensation for our executive officers for 2008, 2009 and, with respect to long-term incentive awards, 2010. The Equilar data reviewed by the Compensation Committee includes base salary, bonus compensation and equity and/or stock option awards received by the chief executive officer, president and other executive officers of our industry peer group selected by the Compensation Committee.

Roles of Executives in Establishing Compensation. Our Chief Executive Officer, Dr. Steiner, provides to the Compensation Committee an annual performance review of each of our other executive officers which is considered by the Compensation Committee in its determination of compensation for such officers. Dr. Steiner and our Chief Operating Officer, Mr. Hanover, also recommend to the Compensation Committee the number of stock options to be granted to new hires and existing employees, subject to guidance provided to them by the Chairman of the Compensation Committee and consistent with the data supplied to the Compensation Committee by Equilar regarding GTx's peer group. It is within the prerogative of the Compensation Committee to approve, modify or disapprove any recommendations for grants of options to GTx employees. Dr. Steiner and Mr. Hanover also provide recommendations to the Compensation Committee with respect to the specific performance goals to be achieved to receive executive bonus compensation under GTx's Executive Bonus Compensation Plan. Additional information on the role of our executive officers in establishing compensation can be found under the caption "Compensation Discussion and Analysis" below.

Director Compensation. The Board of Directors sets non-management directors' compensation at the recommendations of the Nominating and Corporate Governance Committee and the Compensation Committee. Periodically, at the request of the Nominating and Corporate Governance Committee, compensation data obtained by Equilar is provided to the Nominating and Corporate Governance Committee and the Compensation Committee relating to director compensation paid by comparable companies, based on the peer group of biopharmaceutical companies initially established for the purpose of competitive compensation comparisons by Mercer, and then refined thereafter by the Compensation Committee as described above. The Nominating and Corporate Governance Committee uses this information in making its recommendations to the Compensation Committee about whether and to what extent director compensation should be modified. The Compensation Committee considers the information supplied by Equilar, as well as the recommendations of the Nominating and Corporate Governance Committee, and determines whether it will recommend to the Board of Directors that the Board of Directors consider approving any modifications to the compensation paid to directors by GTx. The Compensation Committee and Board of Directors believe that: director compensation should fairly compensate directors for work required in a company of GTx's size and scope; the compensation should align directors' interests with the long-term interest of stockholders; and the structure of the compensation should be simple, transparent and easy for stockholders to understand. In 2009, the Nominating and Corporate Governance Committee reviewed the compensation data provided by Equilar and recommended that there be no adjustment to director compensation from that previously approved by the Board in the fall of 2008, but suggested that director compensation be again reevaluated in 2010. During 2009, we paid our non-employee directors retainers in quarterly increments based on an annualized rate of \$25,000 a year, or \$35,000 a year for our Audit Committee Chair, plus an attendance fee of \$2,000 for every Board and committee meeting attended (and \$750 for any telephonic meeting attended). Under our Amended and Restated 2004 Non-Employee Directors' Stock Option Plan, or the Directors' Option Plan, non-employee directors were eligible to receive in 2009 an initial stock option grant under the Directors' Option Plan to purchase 15,000 shares of GTx common stock upon their initial election to the Board, and each continuing non-employee director was eligible to receive an annual stock option grant to purchase 10,000 shares of GTx common stock. For more information on the compensation arrangements for our non-employee directors, please see the section entitled "Director Compensation" below.

Compensation Committee Charter. Our Compensation Committee reviews its charter on an annual basis and, if necessary, recommends changes to the Board of Directors for its approval. A copy of the Compensation Committee's charter can be found on our corporate website at www.gtxinc.com under "About GTx" at "Governance."

Stockholder Nomination Policy

It is the Nominating and Corporate Governance Committee's policy to review and consider all candidates for nomination and election as directors who may be suggested by any director or executive officer of GTx. The Nominating and Corporate Governance Committee will also consider any director candidate recommended by any stockholder if the recommendation is made in accordance with GTx's charter, bylaws and applicable law, although no director candidate has been recommended to date by any stockholder, other than members of the Board of Directors and management who are

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also stockholders of GTx. To be considered, a recommendation for director nomination should be submitted in writing to: GTx, Inc., Nominating and Corporate Governance Committee, Attention: Corporate Secretary, 175 Toyota Plaza, 7th Floor, Memphis, Tennessee 38103. When submitting candidates for nomination to be elected at GTx's annual meetings of stockholders, stockholders must follow the notice procedures and provide the information required by GTx's bylaws. In particular, for the Nominating and Corporate Governance Committee to consider a candidate recommended by a stockholder for nomination at the 2011 Annual Meeting of Stockholders, the recommendation must be delivered to GTx's Corporate Secretary, in writing, not later than the close of business on November 26, 2010, nor earlier than the close of business on October 27, 2010, subject to the different notice submission date requirements provided for in GTx's bylaws in the event that GTx does not hold its 2011 Annual Meeting of Stockholders between March 30, 2011 and May 29, 2011. The recommendation must include the same information as is specified in GTx's bylaws for stockholder nominees to be considered at an annual meeting, including the following:

- the stockholder's name and address and the beneficial owner, if any, on whose behalf the nomination is proposed;
- the class and number of shares of GTx that are owned beneficially and of record by such stockholder and such beneficial owner;
- a description of all arrangements or understandings between the stockholder and the proposed nominee and any other person or persons regarding the nomination;
- the nominee's written consent to being named in GTx's proxy statement as a nominee and to serving as a director if elected; and
- all information regarding the nominee that would be required to be included in GTx's proxy statement by the rules of the SEC, including the nominee's age, business experience for the past five years and any directorships held by the nominee during the past five years.

Code of Business Conduct and Ethics and Guidelines on Governance Issues

Our Board of Directors has adopted a Code of Business Conduct and Ethics applicable to all officers, directors and employees as well as Guidelines on Governance Issues. These documents are available on GTx's website (www.gtxinc.com) under "About GTx" at "Governance." GTx will provide a copy of these documents to any person, without charge, upon request, by writing to: GTx, Inc., Director, Corporate Communications and Financial Analysis, 175 Toyota Plaza, 7th Floor, Memphis, Tennessee 38103. We intend to satisfy the disclosure requirement under Item 5.05 of Form 8-K regarding an amendment to, or waiver from, a provision of the Code of Business Conduct and Ethics by posting such information on our website at the address and the locations specified above.

Communications with the Board

Stockholders and other interested parties may communicate in writing with our Board of Directors, any of its committees, or with any of its non-management directors by sending written communications addressed to: GTx, Inc., Attention: Corporate Secretary, 175 Toyota Plaza, 7th Floor, Memphis, Tennessee 38103. Our Corporate Secretary will review each communication and will forward such communication to the Board or to any individual director to whom the communication is addressed unless the communication is unduly hostile, threatening or similarly inappropriate, in which case, our Corporate Secretary will discard the communication.

Policies on Reporting Certain Concerns Regarding Accounting and Other Matters

We have adopted policies on the reporting of concerns to our Compliance Officer and Audit Committee regarding any suspected misconduct, illegal activities or fraud, including any questionable accounting, internal accounting controls or auditing matters, or misconduct. Any person who has a concern regarding any misconduct by any GTx employee, including any GTx officer, or any agent of GTx, may submit that concern to: GTx, Inc., Attention: Corporate Secretary, 175 Toyota Plaza, 7th Floor, Memphis, Tennessee 38103. Employees may communicate all concerns regarding any misconduct to our Compliance Officer and/or the Audit Committee on a confidential and anonymous basis through GTx's "whistleblower" hotline, the compliance communication phone number established by GTx: 1-877-778-5463, or by filing an anonymous, confidential report through Report-it.com, a web-based online service for "whistleblower" communications accessed at

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www.reportit.net. Any communications received through the toll free number or the online service is promptly reported to GTX's Compliance Officer, as well as other appropriate persons within GTX.

AUDIT COMMITTEE REPORT⁽¹⁾

The Audit Committee of the Board of Directors operates under a written charter approved by the Board of Directors, which is available on GTX's website (www.gtxinc.com) under "About GTX" at "Governance." The Audit Committee's charter specifies that the purpose of the Audit Committee is to assist the Board in its oversight of:

- the engagement and performance of the independent registered public accounting firm;
- the quality and integrity of GTX's financial statements;
- the performance of GTX's internal audit function;
- GTX's system of internal controls; and
- compliance with legal and regulatory requirements.

In carrying out these responsibilities, the Audit Committee, among other things:

- monitors the preparation of quarterly and annual financial reports by GTX's management;
- supervises the relationship between GTX and its independent registered public accounting firm, including:
 - having direct responsibility for its appointment, compensation and retention;
 - reviewing the scope of its audit services;
 - approving audit and non-audit services; and
 - confirming the independence of the independent registered public accounting firm;
- oversees management's implementation and maintenance of effective systems of internal and disclosure controls, including review of GTX's policies relating to legal and regulatory compliance, ethics and conflicts of interests and review of GTX's internal auditing program; and
- supervises the functions of our internal auditor, who is a GTX employee reporting to the Audit Committee, which includes reviewing and testing the effectiveness of GTX's systems of internal and disclosure controls.

Management is responsible for: the preparation, presentation and integrity of GTX's financial statements; accounting and financial reporting principles; establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rule 13a-15(e)); establishing and maintaining internal control over financial reporting (as defined in Exchange Act Rule 13a-15(f)); evaluating the effectiveness of disclosure controls and procedures; evaluating the effectiveness of internal control over financial reporting; and evaluating any change in internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, GTX's internal control over financial reporting. GTX's internal auditor is responsible for testing such internal controls and procedures. The independent registered public accounting firm is responsible for performing an independent audit of GTX's financial statements in accordance with the standards of the Public Company Accounting Oversight Board (United States) and to issue a report thereon, as well as expressing an opinion on the effectiveness of GTX's internal control over financial reporting. The Audit Committee's responsibility is to monitor and oversee these processes.

In connection with these responsibilities, the Audit Committee met with management, the internal auditor and the independent registered public accounting firm to review and discuss the audited financial statements, including a discussion of the quality and acceptability of GTX's financial reporting and controls. The Audit Committee also discussed with the independent registered public accounting firm the matters required to be discussed by the Statement on Auditing Standards No. 61, as amended (AICPA, *Professional Standards*, Vol. 1. AU section 380), as adopted by the Public Company Accounting Oversight Board in Rule 3200T. The Audit Committee has also received the written disclosures and the letter from the independent registered public accounting firm required by applicable requirements of the Public Company Accounting Oversight Board regarding the independent registered public accounting firm's communications with the Audit Committee concerning independence, and the Audit Committee has discussed with the independent registered public accounting firm that firm's independence. The Audit Committee has also received both management's and the independent registered public accountant's reports on internal control over financial reporting.

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Based upon the Audit Committee's discussions with management and the independent registered public accounting firm, and the Audit Committee's review of the representations of management and the independent registered public accounting firm, subject to the limitations on the role and responsibilities of the Audit Committee referred to above and in the Audit Committee Charter, the Audit Committee recommended that the Board of Directors include the audited financial statements in GTx's Annual Report on Form 10-K for the year ended December 31, 2009, filed with the Securities and Exchange Commission.

THE AUDIT COMMITTEE

J. Kenneth Glass, Chair
Kenneth S. Robinson
Robert W. Karr
Timothy R. G. Sear

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- (1) This Section is not "soliciting material," is not deemed filed with the SEC and is not to be incorporated by reference in any filing of GTx under the Securities Act of 1933 or the Securities Exchange Act of 1934, whether made before or after the date hereof and irrespective of any general incorporation language in any such filing.

PROPOSAL NO. 2
RATIFICATION OF APPOINTMENT OF
INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Audit Committee has selected Ernst & Young LLP as GTx's independent registered public accounting firm for the fiscal year ending December 31, 2010, and the Board of Directors has further directed that management submit the appointment of the independent registered public accounting firm for ratification by the stockholders at the Annual Meeting. Ernst & Young LLP has audited GTx's financial statements since its inception in 1997. A representative of Ernst & Young LLP is expected to be present at the Annual Meeting to make a statement if he or she so desires and to answer any appropriate questions.

Stockholder ratification of the appointment of Ernst & Young LLP as GTx's independent registered public accounting firm is not required by GTx's bylaws or other governing documents. However, the Board is submitting the appointment of Ernst & Young LLP to the stockholders for ratification as a matter of good corporate governance. However, the Audit Committee is not bound by a vote either for or against the proposal. The Audit Committee will consider a vote against Ernst & Young LLP by the stockholders in selecting our independent registered public accounting firm in the future. Even if the stockholders do ratify the appointment, the Audit Committee in its discretion may direct the appointment of a different independent registered public accounting firm at any time during the year if it believes that such a change would be in the best interest of GTx and our stockholders.

Stockholder approval of this Proposal No. 2 requires a "FOR" vote from at least a majority of the shares present in person or represented by proxy at the Annual Meeting and entitled to vote on this Proposal No. 2.

On behalf of the Audit Committee, the Board of Directors recommends a vote "FOR" Proposal No. 2.

Independent Registered Public Accounting Firm's Fees

The following table shows the fees paid or accrued by GTx for audit and other services provided by Ernst & Young LLP, GTx's independent registered public accounting firm, for the years ended December 31, 2008 and 2009.

Year	Audit Fees(1)	Audit-Related Fees(2)	Tax Fees(3)	All Other Fees	Total Fees
2008	\$350,000	—	\$43,087	—	\$393,087
2009	\$364,035	\$12,375	\$46,207	—	\$422,617

- (1) "Audit Fees" consisted of fees for professional services provided in connection with the audit of our financial statements and review of our quarterly financial statements and audit services provided in connection with other statutory or regulatory filings.
- (2) "Audit-Related Fees" consist of fees billed for assurance and related services that are reasonably related to the performance of the audit or review of our financial statements and are not reported under "Audit Fees." Audit-related fees for fiscal 2009 consisted of fees associated with a project related to our internal audit function. There were no audit-related fees billed to GTx for services rendered during fiscal 2008.
- (3) "Tax Fees" consisted of fees associated with tax compliance, including tax return preparation.

Pre-Approval Policies and Procedures

Applicable SEC rules require the Audit Committee to pre-approve audit and non-audit services provided by our independent registered public accounting firm. On March 18, 2004, our Audit Committee began pre-approving all services by Ernst & Young LLP and has pre-approved all new services since that time.

The Audit Committee pre-approves all audit and non-audit services to be performed for GTx by its independent registered public accounting firm. The Audit Committee does not delegate the Audit Committee's responsibilities under the Securities Exchange Act of 1934 to GTx's management. The Audit Committee has delegated to the Chairman of the Audit Committee the authority to grant pre-approvals of audit services of up to \$25,000; provided that any such pre-approvals are required to be presented to the full Audit Committee at its next scheduled meeting. The Audit Committee has determined that the rendering of the services other than audit services by Ernst & Young LLP is compatible with maintaining Ernst & Young's independence.

EQUITY COMPENSATION PLAN INFORMATION

The following table provides certain information with respect to all of GTx’s equity compensation plans in effect as of December 31, 2009:

Name	Number of Securities to be Issued upon Exercise of Outstanding Options, Warrants and Rights (a)	Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights (b)	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column (a)) (c)
Plan Category			
Equity compensation plans approved by security holders	3,364,871	\$13.55	3,027,159(1)
Equity compensation plans not approved by security holders	62,665(2)	—(2)	—(3)
Total	3,427,536	\$13.55	3,027,159(1)(3)

- (1) In 1999, 2000, 2001 and 2002, we adopted the Genotherapeutics, Inc. Stock Option Plan, or the 1999 Plan, the GTx, Inc. 2000 Stock Option Plan, or the 2000 Plan, the GTx, Inc. 2001 Stock Option Plan, or the 2001 Plan, and the GTx, Inc. 2002 Stock Option Plan, or the 2002 Plan, respectively. An aggregate of 12,665 shares of GTx common stock remained available for issuance under these plans as of December 31, 2009. On January 14, 2004, we adopted the GTx, Inc. 2004 Equity Incentive Plan, or the 2004 Plan, and the GTx, Inc. 2004 Non-Employee Directors’ Stock Option Plan (which was subsequently amended and restated), or the Directors’ Option Plan, both of which became effective upon the consummation of GTx’s initial public offering of its common stock. As of December 31, 2009, an aggregate of 2,866,494 shares of GTx common stock remained available for issuance under the 2004 Plan; however, the number of shares remaining available for issuance under the 2004 Plan is automatically increased annually on January 1st of each year until 2013 by five percent of the number of shares of common stock outstanding on such date unless the Board of Directors acts to decrease or eliminate any such increase. On January 1, 2010, the number of shares available for issuance under the 2004 Plan increased by 1,821,045 shares. As of December 31, 2009, an aggregate of 148,000 shares of GTx common stock remained available for issuance under the Directors’ Option Plan; however, the number of shares remaining available for issuance under the Directors’ Option Plan is automatically increased annually on January 1st of each year until 2016 by the lesser of the number of shares subject to options granted during the prior calendar year or 100,000 shares, unless the Board of Directors acts to decrease or eliminate any such increase. On January 1, 2010, the number of shares available for issuance under the Directors’ Option Plan increased by 70,000 shares.
- (2) Represents shares credited to individual director stock accounts as of December 31, 2009 under our Directors’ Deferred Compensation Plan. There is no exercise price for these shares.
- (3) Does not include shares that may become issuable under our Directors’ Deferred Compensation Plan. The number of shares that may become issuable under our Directors’ Deferred Compensation Plan depend solely on future elections made by plan participants.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth information as of March 1, 2010 (except as noted) regarding the beneficial ownership of our common stock by:

- each person, or group of affiliated persons, who is known by us to own beneficially five percent or more of our common stock;
- each of our directors and nominees for director;
- each of our named executive officers; and
- all our directors and executive officers as a group.

The number of shares owned and percentage ownership in the following table is based on 36,420,901 shares of common stock outstanding on March 1, 2010. Except as otherwise indicated below, the address of each officer, director and five percent stockholder listed below is c/o GTx, Inc., 175 Toyota Plaza, 7th Floor, Memphis, Tennessee 38103.

We have determined beneficial ownership in accordance with the rules of the SEC. These rules generally attribute beneficial ownership of securities to persons who possess sole or shared voting power or investment power with respect to those securities. In addition, the rules include shares of common stock issuable pursuant to the exercise of stock options that are either immediately exercisable or exercisable within 60 days of March 1, 2010. We have also included shares credited to individual non-employee director stock accounts under our Directors' Deferred Compensation Plan as of March 1, 2010. Amounts credited to individual non-employee director stock accounts under our Directors' Deferred Compensation Plan are payable solely in shares of GTx common stock, but such shares do not have current voting or investment power. Shares issuable pursuant to our Directors' Deferred Compensation Plan and shares issuable pursuant to the exercise of stock options that are either immediately exercisable or exercisable within 60 days of March 1, 2010 are deemed to be outstanding and beneficially owned by the person to whom such shares are issuable for the purpose of computing the percentage ownership of that person, but they are not treated as outstanding for the purpose of computing the percentage ownership of any other person. Unless otherwise indicated, we believe that the persons or entities identified in this table have sole voting and investment power with respect to all shares shown as beneficially owned by them.

Name and Address of Beneficial Owner	Beneficial Ownership	
	Number of Shares	Percent of Total
5% Stockholders:		
Larry N. Feinberg 200 Greenwich Avenue Greenwich, CT 06830	2,631,479(1)	7.2%
Jack W. Schuler 28161 North Keith Drive Lake Forest, Illinois 60045	2,014,682(2)	5.5%
Directors and Named Executive Officers:		
J. R. Hyde, III	11,088,936(3)	30.4%
Mitchell S. Steiner, M.D., F.A.C.S.	4,869,547(4)	13.4%
Marc S. Hanover	1,149,221(5)	3.2%
Ronald A. Morton, Jr., M.D., F.A.C.S.	—	*
James T. Dalton, Ph.D.	71,335(6)	*
Mark E. Mosteller, CPA	124,783(7)	*
Michael G. Carter, M.D., Ch.B., F.R.C.P.	23,098(8)	*
J. Kenneth Glass	76,554(9)	*
Robert W. Karr, M.D.	30,559(10)	*
John H. Pontius	3,607,438(11)	9.9%
Kenneth S. Robinson, M.D., M.Div	9,056(12)	*
Timothy R. G. Sear	198,859(13)	*
All Directors and Executive Officers as a group	17,523,291(14)	48.1%

* Represents less than 1% of the outstanding shares of our common stock.

(1) The indicated ownership is based solely on a Schedule 13G/A filed with the SEC by the reporting person on February 2, 2010, reporting beneficial ownership as of each of December 31, 2009 and February 1, 2010. According to Schedule 13G/A, as of February 1, 2010, the reporting person had

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shared voting and dispositive power over 2,631,479 shares. The Schedule 13G/A filed by the reporting person provides information only as recent as February 1, 2010 and, consequently, the beneficial ownership of above-mentioned reporting person may have changed between February 1, 2010 and March 1, 2010.

- (2) The indicated ownership is based solely on a Schedule 13G filed with the SEC by the reporting person on February 2, 2009, reporting beneficial ownership as of January 22, 2009. According to the Schedule 13G, the reporting person has sole voting and dispositive power over such shares, of which 144,993 shares are owned by an individual retirement account for the reporting person's benefit, and 1,869,689 shares are owned by a revocable grantor-type trust that the reporting person established and of which the reporting person serves as the sole trustee. The Schedule 13G filed by the reporting person provides information only as of January 22, 2009 and, consequently, the beneficial ownership of above-mentioned reporting person may have changed between January 22, 2009 and March 1, 2010.
- (3) Includes 91,628 shares and 715,716 shares held by Pittco Associates, L.P. and Pittco Investments, L.P., respectively, entities controlled by Mr. Hyde, 1,489,968 shares held by trusts with respect to which Mr. Hyde may be deemed to have shared voting or dispositive power or otherwise have beneficial ownership, 2,200,000 shares held by Mr. Hyde's grantor retained annuity trusts and 216,462 shares held by Mr. Hyde's wife, of which Mr. Hyde disclaims beneficial ownership, and 13,685 shares issuable to Mr. Hyde pursuant to our Directors' Deferred Compensation Plan. Mr. Hyde has pledged 750,000 of the shares of stock owned by him to SunTrust Bank to secure personal loans.
- (4) Includes 536,184 shares held by trusts with respect to which Dr. Steiner may be deemed to have shared voting or dispositive power or otherwise have beneficial ownership, 328,010 shares held by Dr. Steiner's grantor retained annuity trust, 2,064,131 shares held by Dr. Steiner's wife, of which Dr. Steiner disclaims beneficial ownership, and 5,100 shares held in a joint account. Dr. Steiner has pledged 1,000,000 shares of stock held by him to Morgan Stanley to secure personal loans.
- (5) Includes 352,875 shares held by Equity Partners XII, LLC, an entity controlled by Mr. Hanover, and 688,208 shares held by trusts of which Mr. Hanover is the trustee.
- (6) Consists of 71,335 shares of common stock issuable upon the exercise of options held by Dr. Dalton.
- (7) Consists of 117,501 shares of common stock issuable upon the exercise of options held by Mr. Mosteller and 7,282 shares held by Mr. Mosteller's wife.
- (8) Consists of 17,779 shares of common stock issuable upon the exercise of options held by Dr. Carter and 5,319 shares issuable to Dr. Carter pursuant to our Directors' Deferred Compensation Plan.
- (9) Includes 28,001 shares of common stock issuable upon the exercise of options held by Mr. Glass and 6,553 shares issuable to Mr. Glass pursuant to our Directors' Deferred Compensation Plan. Mr. Glass has pledged 42,000 of the shares of stock owned by him to Deutsche Bank to secure personal loans.
- (10) Includes 25,335 shares of common stock issuable upon the exercise of options held by Dr. Karr and 4,224 shares issuable to Dr. Karr pursuant to our Directors' Deferred Compensation Plan.
- (11) Includes 28,001 shares of common stock issuable upon the exercise of options held by Mr. Pontius, 13,422 shares issuable to Mr. Pontius pursuant to our Directors' Deferred Compensation Plan, 3,441,973 shares held by trusts of which Mr. Pontius is the trustee, 21,520 shares held by trusts of which Mr. Pontius' wife is the trustee and 46,261 shares beneficially owned by Mr. Pontius' wife. Mr. Pontius disclaims beneficial ownership of the shares held by trusts of which his wife is trustee and shares beneficially owned by her.
- (12) Consists of 3,334 shares of common stock issuable upon the exercise of options held by Dr. Robinson and 5,722 shares issuable to Dr. Robinson pursuant to our Directors' Deferred Compensation Plan.
- (13) Includes 10,667 shares of common stock issuable upon the exercise of options held by Mr. Sear and 12,858 shares issuable to Mr. Sear pursuant to our Directors' Deferred Compensation Plan.
- (14) Includes 383,422 shares of common stock beneficially owned by executive officers that are not named executive officers, of which 235,252 shares were issuable upon the exercise of options held by these executive officers. For purposes of determining the number of shares beneficially owned by directors and executive officers as a group, any shares beneficially owned by more than one director or executive officer are counted only once.

SECTION 16(a) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Section 16(a) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, requires our executive officers and directors and the holders of greater than 10% of our common stock to file initial reports of ownership and reports of changes in ownership with the SEC. Executive officers and directors are required by SEC regulations to furnish us with copies of these reports. Based solely on a review of the copies of these reports furnished to us and written representations from such executive officers, directors and stockholders with respect to the period from January 1, 2009 through December 31, 2009, we are not aware of any required Section 16(a) reports that were not filed on a timely basis.

Copies of the insider trading reports can be found at our corporate website at www.gtxinc.com, on our Investor Relations page, under the category "SEC Filings."

COMPENSATION DISCUSSION AND ANALYSIS

Introduction

Our compensation discussion and analysis discusses the total compensation for our Chief Executive Officer, Chief Financial Officer and the other three most highly compensated executive officers at December 31, 2009, or our “named executive officers.” The compensation program for our named executive officers also applies to our other executive officers. Our compensation discussion and analysis describes our overall executive compensation philosophy, objectives and practices, as well as the Compensation Committee’s decisions and determinations regarding executive compensation for 2009 and 2010.

What are the objectives of our executive compensation program?

The Compensation Committee believes that the compensation program for our executive officers should be designed to attract, motivate and retain highly qualified executive officers responsible for the success of GTx and should be determined within a framework that rewards performance and aligns the interests of our executives with the interests of our stockholders. Within this overall philosophy, our Compensation Committee’s objectives are to:

- Offer a total compensation program that enables GTx to attract, motivate and retain highly qualified and industrious executive officers. Since we and our competitors recruit from a limited pool of resources for individuals who are highly experienced, successful and well rewarded, the Compensation Committee’s policy is to provide total compensation that is competitive with our peer companies within the biotech and pharmaceutical industry.
- Achieve an equitable balance in the compensation offered to each member of our executive team.
- Provide annual variable cash incentive award opportunities that take into account the satisfaction of designated performance criteria and objectives that are based on our company performance goals.
- Make a significant portion of executive officer compensation dependent on GTx’s long-term performance and on enhancing stockholder value by providing appropriate long-term, equity-based incentives and encouraging stock ownership.

What is our executive compensation program designed to reward?

Our compensation program is designed to reward our executive officers for achieving specified performance goals, building stockholder value and maintaining long-term careers with GTx. We reward these three aspects so that our executive team will make balanced annual and long-term decisions that we expect will result in consistent financial performance, scientific and product development innovations and the achievement of our strategic business objectives.

What are the elements of our executive compensation program and why do we provide each element?

We have a straightforward compensation program. The three main elements are salary, annual bonus opportunity and long-term equity incentives. We also provide our executive officers (as well as our other employees) with a 401(k) retirement savings plan that matches employee contributions up to 4% of base salaries, subject, however, to the annual Internal Revenue Service limits then in effect. We may also, from time to time, offer certain additional benefits, such as transition or housing benefits for executive officers consisting of commuting expenses, temporary living expenses and relocation expenses. Each of these elements helps us attract and retain executive officers.

Our Compensation Committee has not adopted any formal guidelines for allocating total compensation between equity compensation and cash compensation, but generally seeks to provide an overall executive compensation package designed to attract, motivate and retain highly qualified executive officers, to reward them for performance over time, and to align the interests of our executive officers with the interests of stockholders. Although equity compensation is an important component of our compensation program, particularly with respect to creating long-term stockholder value, the Compensation Committee has focused on adjusting executive officer base salaries to generally be in line with the median average salaries for comparable positions in our peer company group (subject to some exceptions as noted below) and offering cash bonus compensation pay incentives as the primary means to reward our named executive officers for the

achievement of our larger company objective of moving product candidates through development and towards commercialization. Accordingly, we generally grant options to our executive officers at a level lower than our peer company group average for comparable companies, but generally seek to attain total cash compensation in line with peer group medians. The Compensation Committee's current practice of granting options to our executive officers at a level lower than our peer company group average also reflects the Compensation Committee's belief in the potential for growth in the market value of our common stock.

Elements of Executive Compensation

Base Salary. We provide an annual salary to each executive officer as economic consideration for each person's level of responsibility, expertise, skills, knowledge and experience, which we compare to our peer group companies within the biotech and pharmaceutical industry and adjust, as appropriate, in an effort to ensure that we will retain this expertise, skill and knowledge at our company.

Bonus. Cash incentive bonus compensation is part of our executive officers' annual compensation opportunity and one component of variable compensation. We may or may not award an annual bonus, and the amount of any award will vary, depending on each of the executive officer's successful fulfillment of individual performance criteria (which are largely or in some cases exclusively based on our overall annual company goals) established by the Compensation Committee and, for 2010, depending also on the success of each GTx business unit in meeting its respective objectives for the year.

Long-term Incentives. We currently provide long-term incentives solely in the form of stock options. Long-term incentives are a form of variable compensation in that the number of options granted is discretionary and the amount of any income earned is completely dependent upon, and varies with, our stock price over the option term. We offer stock options as an incentive to build long-term stockholder value, to align the interests of executive officers and stockholders, and to retain executive officers through what we hope will be long-term wealth creation in the value of their stock options, which have vesting provisions that encourage continued employment. Our executive officers are motivated by the potential appreciation in our stock price above the exercise price of the stock options. With respect to encouraging continued employment, stock option grants to our executive officers have historically required the executive to remain a GTx employee for a three year period before the options even begin vesting (subject to vesting acceleration in certain termination and change of control events). However, for the options granted to the named executive officers (and to employees generally) on or after January 1, 2010, the Compensation Committee revised the standard employee vesting schedule to provide that option awards will vest as to 20% of the shares subject to the options annually over a five-year period. The Compensation Committee believes it is important to tie the long-term benefit potentially realizable by the executive to a long-term commitment to GTx. We also encourage stock ownership which we regard as important for commitment, engagement and motivation. We may refine our long-term incentive strategy should it be in the interests of stockholders so that we can continue to attract and retain the highly-skilled talent required to execute our business strategy.

Benefits. Benefits offered to GTx's executive officers serve a different purpose than do the elements of total compensation. In general, benefits provide a safety net of protection against the financial catastrophes that can result from illness, disability or death. In addition to the benefits offered to the general employee population, our executive officers receive life insurance coverage equal to two times the executive officer's annual salary (compared to the \$50,000 of life insurance coverage offered to the general employee population of GTx). The Compensation Committee evaluated the cost of providing such additional life insurance coverage and found it to be minimal in relation to the incremental benefit to be offered to our executive officers. In addition, we provide an Executive Supplemental Long Term Disability Plan to increase the income replacement insurance for executive officers in the case of disability. The Executive Supplemental Long Term Disability Plan currently targets income replacement equal to 75% of base salary to all management employees at the level of Vice Presidents and above, compared to income replacement of 60% of base salary, not to exceed \$10,000 per month, offered to the general employee population of GTx.

Perquisites. Except for the additional benefits provided to its executive officers described above, GTx does not generally provide its executive officers with any other perquisites and benefits that differ from what are provided to GTx employees generally. To date, the Compensation Committee has not considered the provision of such additional perquisites and benefits generally as a necessary element of GTx's executive compensation program. However, GTx may, from time to time, offer certain perquisites and benefits to its executive officers not offered to the general employee population, such as commuting, relocation and temporary housing benefits. In this regard, in 2008 and 2009 we reimbursed travel-related

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expenses for Dr. Morton and Dr. Dalton for travel between their out-of-state permanent residences and GTx's headquarters in Memphis, Tennessee. In June 2009, these additional payments to Dr. Dalton ceased following his and his family's relocation to Memphis; however, we paid Dr. Dalton's relocation expenses in 2009, a benefit that is generally provided to all employees at the level of manager and above. In 2007, we paid the temporary living expenses of Dr. Morton. For 2008 and 2009, the Board, upon the recommendation of the Compensation Committee, also approved tax gross-up payments to Dr. Morton and Dr. Dalton related to these temporary living and travel-related expenses paid by us during the relevant year that were taxable to Dr. Morton and Dr. Dalton as imputed income. The Compensation Committee believes that the provision of tax gross-up payments to Dr. Morton and Dr. Dalton to offset the tax obligation associated with these imputed income amounts is appropriate and necessary for retaining these highly-qualified executive officers during the pendency of their out-of-state permanent residences.

Employment Agreements. Each of our executive officers has entered into a written employment agreement with GTx. These employment agreements provide for base salary and the other customary benefits as described above, as well as "double trigger" post-termination change of control payments equal to one year's base salary as described under "— Post-Employment Compensation" below. Each employment agreement is terminable by either the executive officer or us at any time. Our employment agreements with Dr. Steiner, Mr. Hanover and Mr. Mosteller were approved by our Board of Directors and entered into immediately prior to our initial public offering in February 2004. We entered into substantially similar employment agreements with Dr. Morton in April 2007 when he began his employment with GTx, and with Dr. Dalton in April 2007 when he began his employment with GTx on a full-time basis. Our employment agreements with our named executive officers all have substantially similar terms except for salary and certain non-competition obligations. In this regard, each of Dr. Steiner, Mr. Hanover, Dr. Dalton and Dr. Morton has agreed not to compete with us (including by soliciting our employees for alternative employment) during the term of their employment and for a period of two years after their employment ends (if we undergo a change of control, these two-year periods will be shortened to one year). These provisions help protect GTx from the resignations of these named executive officers from GTx and their using the essential scientific knowledge gained while working for GTx to compete against us. In November 2008, the employment agreements for our executive officers and other company officers were amended in certain particulars to clarify each agreement's exemption from or compliance with Section 409A of the Internal Revenue Code of 1986, as amended, to clarify the time for, form of and conditions to salary, severance payments and certain expense reimbursements, and to implement certain other administrative changes.

Post-Employment Compensation. The employment agreements with our named executive officers contain cash change of control payments that are structured on a "double-trigger" basis, meaning that before a named executive officer can receive cash change of control payments: (1) a change of control must occur and (2) within six months after such change of control, the named executive officer's employment must be terminated for good reason or without cause. These provisions were included to motivate our named executive officers to act in the best interests of our stockholders by removing the distraction of post change of control uncertainties faced by the named executive officers with regard to his continued employment and compensation. Our Compensation Committee believes that a "double-trigger" change of control provision providing for payments equal to one year's base salary is attractive to maintain continuity and retention of key management personnel and is consistent with GTx's compensation philosophy. In addition, under our stock option plans that were adopted prior to our initial public offering and pursuant to which we have granted some stock options to executives historically, a change of control will automatically trigger the full vesting of all options granted under these plans. Our 2004 Equity Incentive Plan (which became effective in connection with our initial public offering and pursuant to which we primarily grant options to our executive officers) and the standard form of stock option agreement under our 2004 Equity Incentive Plan provide for accelerated vesting of unvested options only if the executive officer is involuntary terminated without cause or experiences a constructive termination within twelve months following a change of control, or if the surviving or acquiring entity refuses to assume or substitute for the options. Although almost all of the stock options available for grant under the stock option plans adopted prior to 2004 have already been issued to GTx employees and, therefore, few options remain available for subsequent grants, our Compensation Committee has elected to continue to utilize any available options under these plans for future grants until these plans terminate in accordance with their applicable terms in order to fully preserve options available for grant under the 2004 Equity Incentive Plan. The change of control provisions in our stock option plans are designed to remove any personal disincentive an executive officer may have to a change of control transaction which, if appropriately assessed on its merits, may prove beneficial to GTx and its stockholders.

How do we determine the amount for each element of executive officer compensation?

Process. In its process for deciding the levels at which to compensate our named executive officers, the Compensation Committee receives and reviews competitive compensation data to determine the 25th percentile, median, and 75th percentile of: (1) average salary; (2) target annual cash compensation (i.e., salary + target bonus); (3) long-term incentive compensation; and (4) target total direct compensation (i.e., salary + target bonus + long-term incentives) for executive officer positions among a group of peer companies and to assess how similar compensation arrangements for GTx executive officers compare to its peers. This process was followed for purposes of determining base salary, bonus potential and long-term equity compensation for 2009. A base salary range between the 25th percentile and the 75th percentile of our peer group is consistent with what the Compensation Committee believes is competitively reasonable and appropriate for the named executive officers, although the Compensation Committee's current objective is to establish base salary and provide incentive bonus compensation targets for GTx's executive officers that are generally consistent with the median compensation levels among our peer industry group (subject to certain exceptions as described below). Long-term incentive compensation is provided in the form of stock options with annual grants typically below average grants provided to comparable executives by our peer group, reflecting the Compensation Committee's belief in the potential for growth in the market value of our common stock warranting the grant of fewer numbers of options. However, the Compensation Committee does not tie cash compensation to potential values realizable from option grants to measure total target direct compensation as a means to determine the option grants it authorizes, and looks at this data from our peers only as another guideline for assessing how our executive compensation program compares to our peer group in an effort to ensure that our compensation program remains competitive. In determining executive compensation, the Compensation Committee may also consider other relevant factors in determining appropriate compensation levels for each executive officer in order to ensure that base salaries, bonus compensation targets and stock option awards are fair and equitable among the executive team members and to appropriately reflect the expected contributions to GTx by each executive officer. For example, in late 2008, when the Compensation Committee established base salaries and bonus compensation targets for its named executive officers for 2009, although the Compensation Committee relied primarily on its review of competitive compensation data from our peer group companies in setting base salaries and bonus compensation targets, the Compensation Committee adjusted base salaries and bonus compensation award opportunities to retain an element of fundamental fairness among the executive officer team members. In this regard, recognizing that it is necessary to pay a base salary in excess of the peer group median to retain the services of a skilled physician of Dr. Morton's caliber as our Chief Medical Officer, the Compensation Committee decided to also adjust the base salary to be paid to Mr. Hanover for 2009 to an amount in excess of the median salaries for a comparable position in our peer group, reflecting the Compensation Committee's view that Mr. Hanover's services to GTx warrant his being paid a base salary in excess of Dr. Morton. Similarly, in late 2008, the Compensation Committee adjusted the base salary of Dr. Dalton to an amount in excess of the median salaries for a comparable position in our peer group, reflecting the Compensation Committee's view that Dr. Dalton's services to GTx warrant his being paid a base salary more similar to the base salary of Dr. Morton. As described below, the Compensation Committee determined in late 2009 that there would be no increases in the base salaries for 2010 from 2009 levels company-wide, including for the named executive officers, and therefore did not utilize any peer group compensation data for purposes of determining base salaries for the named executive officers for 2010.

Use of compensation consultants. In 2006, the Compensation Committee retained Mercer Human Resource Consulting, or Mercer, to assist with the Compensation Committee's analysis and determination of the 2007 compensation of our executive officers. The Committee was informed that Mercer also was retained by GTx to assist it in evaluating salary ranges for various employee levels within GTx, but since the Compensation Committee retained the sole power and authority to establish the nature and scope of Mercer's engagement, to set the fee to be paid to Mercer and to terminate Mercer's engagement and since the fee paid by GTx for Mercer's other services were not significant, the Compensation Committee determined that its relationship with Mercer was sufficiently independent of the services Mercer was rendering for GTx. The Compensation Committee directed Mercer to review GTx's executive compensation program and to recommend changes as deemed appropriate to ensure that GTx's executive compensation program provides reasonable and competitive pay opportunities that are aligned with key business objectives and best practices. At the direction of the Compensation Committee, Mr. Mosteller, GTx's Vice President and Chief Financial Officer, and Mr. Doggrell, GTx's Vice President, General Counsel, discussed with Mercer the duties of each executive officer of GTx and provided Mercer with information requested by Mercer as part of its evaluation of GTx's executive compensation programs and policies. The information included each executive officer's title, direct and indirect reports, salary, bonus (if any), option grants and benefits for the preceding three-year period. The Compensation Committee has since supplemented this information with similar more current compensation data obtained from Equilar, Inc., or Equilar, a web-based independent executive compensation firm, which data the Compensation Committee utilized for the purpose of determining base salaries, bonus

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compensation targets and stock option awards for our named executive officers for 2009, and for the purpose of granting stock option awards for our named executive officers for 2010.

Comparison of GTX executive compensation to peer group and Mercer recommendations. In 2006, Mercer reviewed base salaries, bonus compensation and equity incentives provided by each company within a peer group of 23 biopharmaceutical companies Mercer selected as a representative industry group most similar to GTX based on their number of employees, market capitalization and stage of development, and then ranked the compensation provided to GTX executive officers. The results of Mercer's review are summarized below:

- the base salaries for GTX executive officers were found to be below the peer group 50th percentile (median) levels for our then executive officers but, according to Mercer, fell within a competitive range of the peer group median;
- the total cash compensation, consisting of salary plus cash bonuses, was well below the peer group 25th percentile for our then executive officers, reflecting the then existing historic lack of annual cash incentive award opportunities for GTX executive officers; and
- total direct compensation (total cash compensation plus annualized grant date value of long-term equity incentives) was below the peer group 25th percentile for our then executive officers and approximately 91% of the peer group 25th percentile when Dr. Steiner and Mr. Hanover were excluded from the comparison (Dr. Steiner and Mr. Hanover were excluded from the comparison due to the Compensation Committee's determination in 2006 that, as co-founders of GTX with substantial stock holdings, no additional option grants were at that time warranted).

Mercer suggested that the Compensation Committee continue to manage base salaries for GTX's executive officers within a competitive range of market median levels for GTX's peer group, and consider implementing an annual cash bonus plan for executive officers and other key employees to strengthen the link between pay and performance and to reward the attainment of annual company goals in support of long-term stockholder value creation. Mercer also suggested that the Compensation Committee continue to utilize long-term incentive awards through grants of stock options or other equity awards to align the interests of GTX's executive officers, including, if desired, Dr. Steiner and Mr. Hanover, with those of its stockholders. Based on Mercer's recommendations and the Compensation Committee's desire to offer competitive and fair compensation, the Compensation Committee adopted in 2006 the GTX Executive Bonus Compensation Plan, commencing as of the calendar year 2007, which plan is described in more detail below.

Identification of peer group for 2009 compensation. The peer group initially selected by Mercer was refined by the Compensation Committee in 2007 and 2008 to reflect corporate reorganizations, mergers and acquisitions among some of the initial peer group members selected by Mercer, and, with respect to establishing the peer group for purposes of 2009 compensation, the need to add other biopharmaceutical companies to the peer group to make our peer group more reflective of our industry. For purposes of 2009 compensation, the Compensation Committee selected 21 companies to comprise our peer group, some of which were from the original Mercer peer group list. The companies comprising our peer group for purposes of 2009 compensation were as follows:

Antigenics, Inc.	Exelixis, Inc.	Neurogen Corporation
Acorda Therapeutics Inc.	Hollis-Eden Pharmaceuticals, Inc.	Nuvelo, Inc.
Alnylam Pharmaceuticals, Inc.	Idenix Pharmaceuticals, Inc.	Onyx Pharmaceuticals, Inc.
Cell Genesys, Inc.	Imclone Systems Incorporated	Progenics Pharmaceuticals, Inc.
CombinatoRx, Incorporated	Inhibitex, Inc.	Savient Pharmaceuticals, Inc.
Cytokinetics, Inc.	Isis Pharmaceuticals, Inc.	Rigel Pharmaceuticals, Inc.
Dendreon Corp.	Keryx Biopharmaceuticals, Inc.	Telik, Inc.

How compensation or amounts realizable from prior compensation are considered. The Compensation Committee reviews the current value of shares owned and the current value of exercisable and unvested stock options as part of its annual review of executive officer stock option awards, and determines the amount of the annual stock options awards for each group of executives at GTX based, in part, on this historical information and the Compensation Committee's determination of the potential dilution caused by such awards and the incentives provided by such awards for the executive officers to create long-term value. Recognizing that there is a trade-off between utilizing option grants as long-term incentive awards for our executive officers and increasing the prospect of stockholder dilution, the

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Compensation Committee strives to strike a balance between providing meaningful and potentially valuable incentives without creating a potential for excessive stockholder dilution. The Compensation Committee looks at data from its peers to measure the percentage relationship of all vested and unvested options issued to GTx employees to total GTx shares outstanding, in an effort to ensure that this percentage relationship generally is at or below the average median percentages based on similar information regarding its peers. The amount of past cash compensation realized, including annual bonus awards and amounts realized from prior stock option awards, is generally not a significant factor in the Compensation Committee's consideration of current stock option awards since the Compensation Committee believes that annual stock option awards continue to keep the executives focused on our long-term performance.

Chief Executive Officer and Chief Operating Officer involvement in executive compensation decisions. Our Compensation Committee retains the authority for establishing all matters with respect to the compensation of our executive officers (although our Compensation Committee may recommend to the full Board of Directors that it take action with respect to such compensation matters). Dr. Steiner, however, provides to the Compensation Committee an annual performance review of each of our other executive officers which is considered by the Compensation Committee in its determination of compensation for such officers. Dr. Steiner and Mr. Hanover also recommend to the Compensation Committee the number of stock options to be granted to our other executive officers, subject to guidance provided to them by the Chairman of the Compensation Committee and consistent with the data supplied by Equilar regarding GTx's peer group. It is within the prerogative of the Compensation Committee to approve, modify or disapprove any recommendations for grants of options to our executive officers. Dr. Steiner and Mr. Hanover also provide recommendations to the Compensation Committee with respect to the specific performance goals to be achieved to receive executive bonus compensation under our Executive Bonus Compensation Plan. After receipt of the recommendations of Dr. Steiner and Mr. Hanover and the Compensation Committee's review of information obtained from our peer group compensation data and other relevant factors, the Compensation Committee meets in executive session with no members of management present to discuss and determine appropriate base salaries, bonus compensation target awards and stock option grants for each executive officer of GTx.

What is our analysis of the compensation for our named executive officers in 2009?

Salary. As stated above, in determining base salaries, the Compensation Committee seeks to compare the base salaries of our executive officers against the salaries for comparable positions paid by companies in GTx's peer group. Within this comparison group, the Compensation Committee makes comparisons to executive officers at comparable levels of experience, who have a comparable levels of responsibility and expected levels of contribution to our performance. In setting base salaries for 2009, the Compensation Committee relied primarily on the compensation data made available to it by Equilar, and it approved increases from 2008 base salaries for all of our executive officers (other than Mr. Hanover, Dr. Morton and Dr. Dalton) for 2009 to amounts it believed would result in salaries being at or near the median base salaries for comparable executive positions at our peer group companies and reasonably consistent with the average percentage increase in salaries by our peers. The salary increases from 2008 also reflect the Compensation Committee's belief that GTx should retain an equitable balance in the compensation of its executive officers. Accordingly, each executive officer, including each named executive officer (other than Mr. Hanover, Dr. Morton and Dr. Dalton), received a salary increase from 2008 to adjust their salaries for 2009 to levels at or near to median base salaries for comparable executive positions at our peer group. Salaries in excess of the median peer group salary targets were approved by the Compensation Committee for Mr. Hanover and Drs. Morton and Dalton, reflecting the decision of the Compensation Committee to pay competitive compensation consistent with the important roles these individuals have at GTx. As a result of the foregoing adjustments, each of the named executive officers, other than Dr. Dalton, received a 5% salary increase from 2008, which was generally consistent with the average percentage increase in salaries by our peers. Dr. Dalton's 28% salary increase from 2008, though larger than the average percentage increase in salaries by our peers and larger than the percentage increase for the rest of the named executive officers, reflects the Compensation Committee's assessment that Dr. Dalton's services to GTx warrant his being paid a base salary more similar to the base salary of Dr. Morton. A table reflecting the increase from 2008 base salaries is set forth below:

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<u>Name</u>	<u>2008 Base Salary</u>	<u>2009 Base Salary</u>	<u>Percentage Increase</u>
Mitchell S. Steiner	\$500,000	\$525,000	5%
Mark E. Mosteller	\$283,889	\$298,083	5%
Marc S. Hanover	\$435,000	\$456,750	5%
Ronald A. Morton, Jr.	\$430,500	\$452,025	5%
James T. Dalton	\$311,875	\$400,000	28%

Annual Bonus Awards. Based on Mercer's recommendation in 2006, the Compensation Committee established the Executive Bonus Compensation Plan to reward executive officers for their role in achieving specified performance goals. All of our named executive officers are eligible to participate in the Executive Bonus Compensation Plan. Payments of bonus awards are based solely on the attainment of pre-established, objective performance goals that are established by the Compensation Committee. Bonus compensation payments are calculated as a percentage of base salary based on information supplied by Mercer in 2006 that chief executive officers are typically paid bonuses ranging from 45% to 55% of their salaries and other executives received bonuses in the range of 30% to 40% of base salaries. For 2009, the Compensation Committee determined that it would set target bonus payments at 65% of base salary for our Chief Executive Officer, Dr. Steiner, 55% of base salary for Mr. Hanover, our Chief Operating Officer, and 30% of base salaries for all Vice Presidents. The bonus compensation targets for 2009 were increased for Dr. Steiner and Mr. Hanover at the meeting of the Compensation Committee in late 2008 above the applicable bonus ranges identified by Mercer as a result of the Compensation Committee's goal to minimize base salary increases while providing a potential for additional compensation based on achieving performance goals that the Compensation Committee believed would benefit GTx and its stockholders. Although the Compensation Committee retains the discretion to award a bonus under the Executive Bonus Compensation Plan that is higher than target for exemplary performance with respect to the established performance goals, the target bonuses generally reflect the maximum bonus opportunity for our executive officers under the Executive Bonus Compensation Plan. To date, the Compensation Committee has not awarded a bonus higher than target to any of our executive officers, although the Compensation Committee has in the past awarded discretionary bonuses outside of our Executive Bonus Compensation Plan to certain of our executive officers.

The performance goals under the Executive Bonus Compensation Plan for 2009 were based on approved corporate goals and objectives for the year and formed the basis for the bonus compensation opportunity for Dr. Steiner and Mr. Hanover. These performance goals were then tailored to the specific individual performance criteria to be achieved by each other executive officer in support of attaining the designated corporate objectives. The Compensation Committee approves the objective performance goals and specific criteria, including the weight attributable to each objective, for each executive officer after reviewing recommendations supplied to the Compensation Committee by Dr. Steiner and Mr. Hanover, who present the Compensation Committee with stretch goals for the coming year. The objective criteria may include achievement of the operating budget for GTx as a whole or of a business unit of GTx, satisfactory audit results and timely filings of annual and quarterly reports with the SEC, personnel-related objectives, continued innovation in development and progress towards commercialization of our product candidates, timely development of new product candidates or processes, development and implementation of successful marketing and commercialization strategies for our product candidates, implementation of financing strategies and the establishment of strategic alliances, partnerships or collaborations with third parties, as well as meeting preclinical, clinical, or regulatory objectives. The Compensation Committee then evaluates after the end of the calendar year the attainment of the corporate objectives and the extent to which each such executive officer met his or her specified performance criteria to support the corporate objectives. While in some cases the performance objectives for the executive officers can overlap, the Compensation Committee grades each executive officer's performance individually and considers factors that may justify awarding different amounts for the same criteria, if, for example, one executive has more direct control over a particular matter than another. For 2010, the Compensation Committee will also evaluate the extent to which each GTx business unit achieves its stated objectives for 2010 for purposes of determining 2010 bonus compensation awards, if any. The bonus compensation awards, if earned, are paid during the first quarter of the next succeeding year (and in any case before March 15 of the next succeeding year), after the Compensation Committee has reviewed and approved year-end data and other information necessary to establish the awarding of the bonuses. The Compensation Committee establishes performance goals intended to reflect tasks beyond what should be reasonably expected of an executive officer during the particular calendar year, which, if attained, justify the payment of additional compensation.

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Under the Executive Bonus Compensation Plan, the Compensation Committee established specific performance criteria for 2009 for each executive officer. For Dr. Steiner and Mr. Hanover, the performance criteria were based exclusively on our corporate goals and objectives for 2009. Our corporate goals and objectives for 2009 and relative weighting of each such goal and objective for each of Dr. Steiner and Mr. Hanover are set forth in the table below.

2009 Corporate Performance Goal/Objective Category	Weighting	
	Dr. Steiner	Mr. Hanover
ADT(1)	20%	20%
PIN(2)	20%	20%
SARM(3)	15%	15%
GTx-758(4)	15%	10%
Medical affairs(5)	10%	N/A
Commercial(6)	N/A	15%
Budget (7)	10%	10%
Audit/Sarbanes-Oxley requirements(8)	5%	5%
Investor relations(9)	5%	5%

- (1) This category related to regulatory and commercial goals and objectives with respect to toremifene 80 mg to reduce fractures in men on androgen deprivation therapy, or ADT, with prostate cancer, including matters related to our new drug application, or NDA, for toremifene 80 mg to reduce fractures in men with prostate cancer on ADT filed with the U.S. Food and Drug Administration, or FDA, and partnering goals with respect to the development and commercialization of toremifene 80 mg.
- (2) This category related to clinical and regulatory goals and objectives with respect to the development of toremifene 20 mg for the prevention of prostate cancer in high risk men with high grade prostatic intraepithelial neoplasia, or high grade PIN, including matters related to our Phase III clinical trial of toremifene 20 mg, and partnering goals with respect to the development and commercialization of toremifene 20 mg.
- (3) This category related to clinical and development goals and objectives with respect to the development of selective androgen receptor modulators, or SARMS, including clinical and regulatory matters related to the development of Ostarine™ for the treatment of cancer cachexia.
- (4) This category related to certain goals and objectives with respect to the development of GTx-758, an oral luteinizing hormone inhibitor for the treatment of advanced prostate cancer, including clinical and regulatory matters related to the development GTx-758 for the treatment of advanced prostate cancer.
- (5) This category related to medical affairs goals and objectives, including: creating and properly training physician speakers; implementing a plan to educate urologists on disease awareness; and participating in and leading medical affairs activities.
- (6) This category related to certain commercial activity goals and objectives, including: sales force initiatives; establishing commercial compliance policy and procedures; and implementing a successful sales training program.
- (7) This category related to our meeting our fiscal 2009 budget (or any amendments thereto approved by the Board).
- (8) This category related to obtaining unqualified audit opinions from our independent registered public accounting firm on our financial statements and the effectiveness of our internal control over financial reporting, the timely filing of required annual and quarterly reports, and satisfying Sarbanes-Oxley compliance requirements.
- (9) This category related to certain investor relations goals and objectives, including matters related to analyst coverage and healthcare conference participation.

The performance criteria under the Executive Bonus Compensation Plan for each of our other named executive officers were based on a combination of (1) individual performance criteria (weighted 60% in the aggregate), (2) the average achievement, expressed as a percentage, by Dr. Steiner and Mr. Hanover with respect to our 2009 corporate goals and objectives (weighted 30%), and (3) satisfactory team participation (weighted 10%). The individual goals and objectives for 2009 and relative weighting of each such goal and objective for each of our other named executive officers are set forth in the tables below.

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2009 Individual Performance Goal/Objective Category (Mr. Mosteller)	Weighting
Financial(1)	21%
Commercial/launch support(2)	12%
Drug product inventory oversight and supply chain management(3)	6%
IT/contingency planning and recovery(4)	12%
Audit Committee liaison (5)	3%
Strategic transaction(6)	3%
Administrative services/facilities (7)	3%

- (1) This category related to certain financial goals and objectives, including: obtaining unqualified audit opinions from our independent registered public accounting firm on our financial statements and the effectiveness of our internal control over financial reporting; the timely filing of required annual and quarterly reports; maintaining effective internal control over financial reporting; satisfactorily managing our investments; overseeing the production of management reports to monitor compliance with our fiscal 2009 budget; meeting our fiscal 2009 budget (or any amendments thereto approved by the Board); achieving stated financial results and guidance; providing financial support to our other operating departments; and managing our insurable financial risks and obtaining competitive employee benefit insurance.
- (2) This category related to providing significant assistance with respect to potential toremifene 80 mg launch activities.
- (3) This category related to providing oversight of our drug product inventory and supply chain management, including: overseeing forecasting and inventory purchases; overseeing our supply chain process; and managing and overseeing our agreements with our wholesale distributors and proposals from potential third party vendors.
- (4) This category related to maintaining our information technology systems at a designated high level of efficiency and overseeing our contingency planning and recovery efforts to adequately safeguard our data, and generally assisting all departments with their information technology needs.
- (5) This category related to satisfactorily acting as management's primary liaison with the Audit Committee and overseeing the activities of our internal audit manager.
- (6) This category related to providing financial and accounting input for all of our contemplated or potential strategic transactions during the year.
- (7) This category related to overseeing our facilities and administrative services.

2009 Individual Performance Goal/Objective Category (Dr. Morton)	Weighting
ADT(1)	6%
PIN(2)	12%
Ostarine™(3)	12%
GTx-758(4)	6%
Medical affairs(5)	12%
Pipeline(6)	6%
Budget and other (7)	6%

- (1) This category related to certain regulatory and medical affairs goals and objectives with respect to toremifene 80 mg to reduce fractures in men on ADT with prostate cancer, including assisting with responses to the FDA with respect to our NDA for toremifene 80 mg and supporting our collaborative activities with Ipsen.
- (2) This category related to clinical and regulatory goals and objectives with respect to the development of toremifene 20 mg for the prevention of prostate cancer in high risk men with high grade PIN, including matters related to our Phase III clinical trial of toremifene 20 mg and related regulatory matters.
- (3) This category related to clinical and development goals and objectives with respect to the development of Ostarine™.
- (4) This category related to certain goals and objectives with respect to the development of GTx-758, including overseeing the clinical development plan for GTx-758.
- (5) This category related to medical affairs goals and objectives, including: overseeing the expansion of our medical team; providing medical education on our product candidate pipeline; developing and executing on certain medical publication strategies; and overseeing the development of a medical education program as well as key opinion leader relationships.

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- (6) This category related to product candidate and preclinical pipeline goals and objectives, including providing various medical assessments and satisfactory participation in business development discussions.
- (7) This category related to our meeting our fiscal 2009 budget (or any amendments thereto approved by the Board), including with respect to certain department budgets, and satisfactorily performing other duties as requested by Dr. Steiner.

2009 Individual Performance Goal/Objective Category (Dr. Dalton)

	Weighting
Medicinal chemistry ⁽¹⁾	12%
Discovery and animal resources ⁽²⁾	24%
Preclinical development ⁽³⁾	12%
Analytical sciences ⁽⁴⁾	6%
Product development ⁽⁵⁾	6%

- (1) This category related to certain preclinical medicinal chemistry goals and objectives, including drug substance synthesis and collaborating with respect to intellectual property matters.
- (2) This category related to certain drug discovery and animal study activity goals and objectives.
- (3) This category related to preclinical development goals and objectives, including planning and initiating preclinical studies and reports.
- (4) This category related to analytical sciences goals and objectives, including drug discovery and product development analyses.
- (5) This category related to product development goals and objectives, including those related to drug development, manufacturing and regulatory activities.

At the Compensation Committee meeting held in August 2009, Dr. Steiner and Mr. Hanover reviewed with the Compensation Committee the status of the objective performance goals established under our Executive Bonus Compensation Plan for each of our executive officers and the likelihood that the performance goals would be fulfilled by year end 2009 so the Compensation Committee members could monitor the progress of the executives in fulfilling their specific performance goals, which helped Committee members better understand the likelihood of whether various corporate objectives would be attained during the year. At the Compensation Committee meeting held in December 2009, after reviewing the performance of the company for the year to date and noting the failure of the executives to achieve the more material corporate goals and objectives for the year, including the failure to obtain FDA approval of toremifene 80 mg, Compensation Committee decided that it would pay no cash bonuses to any executive or to any other GTx employee for 2009 performance. The Compensation Committee also decided that it would not be appropriate to pay any bonus awards for 2009 for employees when our company, in consultation with its Board of Directors, determined that a reduction in its work force was necessary to reduce the overall planned expenditures for GTx for 2010. For the same reasons, and concurrently with the determination by the Compensation Committee that no bonuses would be awarded for 2009 performance, the Compensation Committee also determined that there would be no increases in employee base salaries for 2010 company-wide, including for the named executive officers.

Long-term Incentive Compensation. As stated above, in determining the amount of each stock option grant, the Compensation Committee reviews the current value of shares owned and the current value of exercisable and unvested stock options as part of its annual review of executive officer stock option awards, and determines the amount of the annual stock option awards for each group of executives at GTx based, in part, on this historical information and the Compensation Committee's determination of the potential dilution caused by such awards and the incentives provided by such awards for the executive officers to create long-term value. The Compensation Committee also takes into account the number of options to be granted to an executive officer relative to grants to other executive officers and grants to similar officers within the GTx peer group. The Compensation Committee has continued to follow a conservative approach to issuing stock option awards to our executive officers, issuing annual option grants which are lower than peer average equity based awards during the same period. In late 2008, the Compensation Committee approved stock option grants of 50,000 shares of GTx common stock to Mr. Hanover and 25,000 each for our Vice Presidents, which grants were effective as of January 1, 2009. The Compensation Committee also approved the grant of a stock option for 75,000 shares of GTx common stock for Dr. Steiner in late 2008, which is the first stock option we have granted to Dr. Steiner, reflecting the Compensation Committee's assessment of the success GTx had then achieved under his direction. As with the other executive officer grants, Dr. Steiner's stock option grant was effective as of January 1, 2009.

2010 Compensation

As described above, concurrently with the determination by the Compensation Committee in December 2009 that no cash bonuses would be awarded for 2009 performance, the Compensation Committee also determined that there would be no increases in employee base salaries for 2010 company-wide, including for the named executive officers. However, the Compensation Committee determined to continue its historical practice of providing annual stock option grants for GTx's employees, including for the named executive officers, to provide additional incentive for our employees to increase stockholder value. In determining to grant annual stock option awards, the Compensation Committee continued to follow its conservative approach to issuing stock option awards to GTx's executive officers, granting annual stock options which are typically lower than peer average equity-based awards for the same period. In this regard, the Compensation Committee evaluated equity compensation data obtained from Equilar that was derived from some of the same peer group companies selected by the Compensation Committee for its review of comparable industry data in 2008 for purposes of establishing 2009 compensation. For purposes of 2010 equity compensation, the Compensation Committee selected 16 companies to comprise our peer group. The companies comprising our peer group for purposes of 2010 equity compensation were as follows:

Accorda Therapeutics Inc.	Isis Pharmaceuticals, Inc.	Rigel Pharmaceuticals, Inc.
Alnylam Pharmaceuticals, Inc.	Ligand Pharmaceuticals, Inc.	Savient Pharmaceuticals, Inc.
Dendreon Corp.	Momenta Pharmaceuticals, Inc.	Seattle Genetics, Inc.
Exelixis, Inc.	Osiris Therapeutics, Inc.	Theravance, Inc.
Idenix Pharmaceuticals, Inc.	Progenics Pharmaceuticals, Inc.	Zymogenetics, Inc.
InterMune, Inc.		

The 2010 annual option grants, which were granted effective January 1, 2010, were moderately higher than the option grants made in 2009 to take into account the fact that there was no cash bonus compensation paid for 2009 to any executive officer (or to any other GTx employee) and no executive officer (or other GTx employee) received a salary increase for 2010 over his or her 2009 base salary. The Compensation Committee approved stock option grants of 105,000 shares of GTx common stock to Dr. Steiner, 70,000 shares of GTx common stock to Mr. Hanover and 35,000 shares of GTx common stock each for our other executive officers. The Compensation Committee also modified the vesting schedule for all employee option grants made on or after January 1, 2010, which vesting schedule was revised to provide that the options will vest as to 20% of the shares subject to the options on an annual basis over a five-year period. Previously, the Compensation Committee awarded options that vest in three equal annual installments beginning on the third anniversary of the grant date. The Compensation Committee determined to revise the general employee option vesting schedule starting in 2010 to bring GTx's option grant practices more in line with its peers as well as to provide both a long-term and annual incentive to help improve the market price of GTx's common stock and increase stockholder value.

At the Compensation Committee meeting in March 2010, bonus criteria under the Executive Bonus Compensation Plan were established and approved by the Compensation Committee for 2010, which, if achieved, would provide incentive bonus compensation pay of up to 65% of 2010 base salary for Dr. Steiner, 55% of 2010 base salary for Mr. Hanover, and 30% of 2010 base salary for the rest of our executive officers. The target bonus percentages for 2010 are the same as the target bonus percentages established for 2009. In determining to keep the target bonus percentages the same as the 2009 target bonus percentages, the Compensation Committee believed it appropriate to maintain for 2010 both the same base salary and bonus compensation potential as 2009 for the executive officers until there have been demonstrated improvements to GTx's prospects through the successful execution of our goals and objectives.

The methodology for determining an executive's bonus award under the Executive Bonus Compensation Plan was revised for 2010. For our executive officers for 2010, the bonus opportunity under the Executive Bonus Compensation Plan is based on a combination of (1) individual performance criteria (weighted 40%-60% in the aggregate), (2) the extent to which each GTx business unit that the particular named executive officer is a member of achieves its stated business objectives for 2010 (weighted 40% in the aggregate), and (3) satisfactory team participation (weighted 0%-20%). The weightings for each of the foregoing categories for the named executive officers is set forth in the following table:

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Performance Category	Weighting for Each Named Executive Officer				
	Dr. Steiner	Mr. Mosteller	Mr. Hanover	Dr. Morton	Dr. Dalton
Individual Goals	60%	50%	60%	40%	40%
Business Unit Objectives	40%	40%	40%	40%	40%
Satisfactory Team Participation	N/A	10%	N/A	20%	20%

While the performance objectives for 2010 under the Executive Bonus Compensation Plan are still largely based on the achievement of GTx's overall corporate objectives for the year, the Compensation Committee determined that tying a percentage of an executive's bonus to the achievement or non-achievement of applicable GTx business unit objectives provides a more direct incentive for GTx success in 2010 since each of our executive officer's participation in and the success of each of our business units in meeting their respective objectives is integral to GTx meeting its overall corporate objectives for the year. Accordingly, the success or failure of each business unit to obtain its objectives for the year will directly impact the bonus award, if any, for each executive who is a member of that business unit. At the same time, the Compensation Committee desired to ensure that each executive officer also have performance objectives for which each such executive officer will be evaluated individually. Other than with respect to Dr. Steiner and Mr. Hanover, the individual performance objectives are more closely tied to each executive's function. Given their roles at GTx, the individual goals for Dr. Steiner and Mr. Hanover are based on our corporate objectives for the year, the most material of which are as follows:

- obtaining FDA agreement on a proposed protocol for and initiating a second pivotal Phase III clinical trial of toremifene 80 mg to reduce fractures in men on ADT;
- obtaining positive data from the Phase III clinical trial of toremifene 20 mg for the prevention of prostate cancer in high risk men with high grade PIN and submitting an NDA to the FDA to seek marketing approval for the drug candidate;
- conducting an end of Phase II meeting with FDA for Ostarine™ for the treatment of cancer cachexia and, thereafter, initiating a pivotal Phase III clinical trial for the drug candidate to treat cancer cachexia;
- securing partnerships for some of our clinical development programs, including obtaining funding for clinical trials planned for 2010;
- meeting certain clinical goals with respect to the development of GTx-758;
- increasing FARESTON® net sales and meeting our fiscal 2010 budget (or any amendments thereto approved by the Board); and
- obtaining unqualified audit opinions from our independent registered public accounting firm on our financial statements and the effectiveness of our internal control over financial reporting, the timely filing of required annual and quarterly reports, and satisfying Sarbanes-Oxley compliance requirements.

As noted above, individual objectives for GTx's other executive officers are more closely tied to their respective business functions and fall within the same general categories as those identified above with respect to 2009 individual performance objectives. With respect to business unit objectives, the main business units for purposes of the Executive Bonus Compensation Plan are the ADT business unit, the PIN business unit, the cancer cachexia business unit, the GTx-758 business unit, and the preclinical research and development business unit, with each business unit's objectives designed to support our overall corporate objectives for 2010. The Compensation Committee believes that tying a portion of an executive's bonus opportunity directly to the level of success or failure of each GTx business unit in meeting its respective objectives will further incentivize our executive officers to directly participate in and provide meaningful assistance to each of our business units, which the Compensation Committee believes is integral to our success in meeting our corporate goals for 2010.

Tax and Accounting Considerations

Section 162(m) of the Internal Revenue Code of 1986 limits our deduction for federal income tax purposes to not more than \$1 million of compensation paid to certain executive officers in a calendar year. Compensation above \$1 million may be deducted if it is "performance-based compensation." Our Compensation Committee has not yet established a policy for determining which forms of incentive compensation awarded to our executive officers should be designated to qualify

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as “performance-based compensation.” To maintain flexibility in compensating our executive officers in a manner designed to promote our objectives, the Compensation Committee has not adopted a policy that requires all compensation to be deductible and in fact, none of the named executive officers received compensation in 2009 that would exceed the \$1 million limit on deductibility. However, the Compensation Committee intends to evaluate the effects of the compensation limits of Section 162(m) on any compensation it proposes to grant, and the Compensation Committee intends to provide future compensation in a manner consistent with our best interests and those of our stockholders.

Effective January 1, 2006, we began accounting for share-based awards under the provisions of Financial Accounting Standards Board Accounting Standards Codification Topic 718, *Compensation—Stock Compensation*, or FASB ASC Topic 718 (formerly Statement of Financial Accounting Standards No. 123(R), *Share-Based Payment*). FASB ASC Topic 718 establishes accounting for stock-based awards exchanged for employee services. Accordingly, stock-based compensation cost is measured at grant date, based on the fair value of the awards, and is recognized as an expense ratably over the requisite employee service period. The Compensation Committee has determined to retain for the foreseeable future our stock option program as the sole component of its long-term compensation program, and, therefore, to record this expense on an ongoing basis according to FASB ASC Topic 718. Accounting rules also require us to record cash compensation as an expense at the time the obligation is incurred.

Timing, grant date and exercise price for stock option awards

The Compensation Committee has historically maintained a practice to award stock options only at specific times during the year. Consistent with this historical practice, at a meeting scheduled late in the year, the Compensation Committee grants stock options to a broad group of employees, including executive officers, in amounts determined by the Compensation Committee. These grants are effective on January 1 of the following year with an exercise price equal to the closing price of GTx’s common stock on the NASDAQ Global Market on the last trading day of the prior year. Other than the annual grants described above, the Compensation Committee generally approves additional grants only for new employees, employees who are promoted or granted additional responsibilities or, more rarely, employees who have performed at a level that warrants recognition. These grants, if any, are made only on the date of a scheduled meeting of the Compensation Committee, in amounts determined by the Compensation Committee, and with an exercise price equal to the closing price of GTx’s common stock on the NASDAQ Global Market on the date of grant (or the closing price of GTx’s common stock on the NASDAQ Global Market on the trading date immediately prior to the grant date if the grant date is not a trading date).

Conclusion

The Compensation Committee believes the executive leadership of GTx is a key element to its success and that the compensation package offered to the executive officers is a key element in attracting and retaining the appropriate personnel.

The Compensation Committee believes it has historically maintained compensation for its executive officers at levels that are reflective of the talent and success of the individuals being compensated given our current stage of development, and, with the inclusion, starting in 2007, of additional compensation directly tied to performance, the Compensation Committee believes executive compensation will be sufficiently comparable to its industry peers to allow GTx to retain its key personnel at costs which are appropriate for GTx.

The Compensation Committee will continue to develop, analyze and review its methods for aligning executive management’s long-term compensation with the benefits generated for stockholders. The Compensation Committee believes the idea of creating ownership in GTx helps align management’s interests with the interests of stockholders. The Compensation Committee has no pre-determined timeline for implementing new or ongoing long-term incentive plans. New plans are reviewed, discussed and implemented as the Compensation Committee feels it is necessary and/or appropriate as a measure to incentivize, retain and/or reward GTx’s executive officers.

COMPENSATION COMMITTEE REPORT⁽¹⁾

The Compensation Committee of the Board of Directors of GTx, Inc. has reviewed and discussed with management the information contained in the Compensation Discussion and Analysis section of this Proxy Statement and based on such review and discussion, has recommended to the Board of Directors that the Compensation Discussion and Analysis be included in this Proxy Statement and incorporated into our Annual Report on Form 10-K for the fiscal year ended December 31, 2009.

COMPENSATION COMMITTEE:

J. R. Hyde, III (Chairman)

Michael G. Carter

J. Kenneth Glass

Timothy R.G. Sear

⁽¹⁾ This Section is not “soliciting material,” is not deemed filed with the SEC and is not to be incorporated by reference in any filing of GTx under the Securities Act of 1933 or the Securities Exchange Act of 1934, whether made before or after the date hereof and irrespective of any general incorporation language in any such filing.

EXECUTIVE COMPENSATION

Summary Compensation Table

The following table sets forth certain summary information for the year indicated with respect to the compensation earned by our Chief Executive Officer, our Chief Financial Officer and each of the three other most highly compensated executive officers of GTX at December 31, 2009. We refer to these executive officers in this proxy statement as the “named executive officers.”

SUMMARY COMPENSATION TABLE—FISCAL 2007, 2008 AND 2009

Name and Principal Position	Year	Salary (\$)	Bonus (\$)	Option Awards (\$)(1)	Non-Equity Incentive Plan Compensation (\$)(2)	All Other Compensation (\$)(3)	Total (\$)
Mitchell S. Steiner, M.D., F.A.C.S.	2009	525,000	—	702,675	—	9,118	1,236,793
<i>Chief Executive Officer and Vice-Chairman of the Board of Directors</i>	2008	500,000	—	—	202,500	8,467	710,967
	2007	446,250	—	—	128,520	5,024	579,794
Mark E. Mosteller, CPA	2009	298,083	—	234,225	—	12,910	545,218
<i>Vice President, Chief Financial Officer and Treasurer</i>	2008	283,889	—	200,623	70,263	11,891	566,666
	2007	246,750	—	257,888	66,623	9,226	580,487
Marc S. Hanover	2009	456,750	—	468,450	—	18,389	943,589
<i>President and Chief Operating Officer</i>	2008	435,000	—	1,003,113	158,558	12,893	1,609,564
	2007	306,600	—	—	77,263	10,344	394,207
Ronald A. Morton, Jr., M.D., F.A.C.S.	2009	452,025	—	234,225	—	30,434	716,684
<i>Vice President, Chief Medical Officer</i>	2008	430,500	28,000(5)	200,623	105,903	29,200	794,226
	2007	294,885(4)	—	836,198	71,094	20,397	1,222,574
James T. Dalton, Ph.D.	2009	400,000	—	234,225	—	54,940	689,165
<i>Vice President, Preclinical Research and Development</i>	2008	311,875	—	200,623	77,189	43,088	632,775
	2007	260,000	—	257,888	59,280	8,839	586,007

- Represents the aggregate grant date fair value of all option awards granted during the indicated fiscal year as computed in accordance with FASB ASC Topic 718. Assumptions used in computing the aggregate grant date fair value in accordance with FASB ASC Topic 718 are set forth in Note 3—Share-Based Compensation to our audited financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2009. For more information on options granted to the named executive officers in 2009, see “Grants of Plan-Based Awards” below.
- Represents amounts awarded to the named executive officers pursuant to our Executive Bonus Compensation Plan. For more information on our Executive Bonus Compensation Plan, please see “Compensation Discussion and Analysis — What is our analysis of the compensation for our named executive officers in 2009? — Annual Bonus Awards” above as well as “Executive Compensation — Grants of Plan-Based Awards” below.
- The amounts indicated consisted of: (a) the incremental cost of life insurance premiums to provide additional term life insurance benefits equal to two times each such named executive’s base salary, (b) supplemental long-term disability insurance premiums, and (c) other than with respect to Dr. Steiner, employer matching contributions to our defined contribution 401(k) Plan. The amounts indicated also included, with respect to Dr. Morton and Dr. Dalton, the following items of compensation:

Name	Year	Payment of Travel and Temporary Housing Expenses (\$)	Payment of Relocation Expenses (\$)	Tax Gross-Up Payment (\$)
Dr. Morton	2009	6,969	—	3,197
	2008	8,601	—	3,946
	2007	12,355	—	—
Dr. Dalton	2009	11,527	21,716	5,288
	2008	21,313	—	9,778
	2007	—	—	—

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- (4) Represents a partial year of base salary from Dr. Morton’s date of hire on April 12, 2007 through December 31, 2007.
- (5) On February 13, 2008, the Compensation Committee awarded Dr. Morton a special one-time discretionary bonus to reward Dr. Morton for his efforts in undertaking specific roles and tasks since the beginning of 2008 that proved instrumental in allowing us to achieve our goals for our clinical trial operations.

Grants of Plan-Based Awards

The following table summarizes grants of plan-based awards made to our named executive officers in 2009.

GRANTS OF PLAN-BASED AWARDS TABLE—FISCAL 2009

Name	Award Type	Grant Date	Approval Date	Estimated Possible Payouts Under Non-Equity Incentive Plan Awards(1) Target (\$)	All Other Option Awards: Number of Securities Underlying Options (#)(2)	Exercise or Base Price of Option Awards (\$/Sh)(3)	Grant Date Fair Value of Option Awards \$(4)
Mitchell S. Steiner	Annual Cash	—	—	341,250	—	—	—
	Annual Option	1/1/2009	11/4/2008	—	75,000	16.84	702,675
Mark E. Mosteller	Annual Cash	—	—	89,425	—	—	—
	Annual Option	1/1/2009	11/4/2008	—	25,000	16.84	234,225
Marc S. Hanover	Annual Cash	—	—	251,213	—	—	—
	Annual Option	1/1/2009	11/4/2008	—	50,000	16.84	468,450
Ronald A. Morton, Jr.	Annual Cash	—	—	135,608	—	—	—
	Annual Option	1/1/2009	11/4/2008	—	25,000	16.84	234,225
James T. Dalton	Annual Cash	—	—	120,000	—	—	—
	Annual Option	1/1/2009	11/4/2008	—	25,000	16.84	234,225

- (1) This column sets forth the target amount of each named executive officer’s annual cash bonus award for the year ended December 31, 2009 under our Executive Bonus Compensation Plan. As described under “Compensation Discussion and Analysis—What is our analysis of the compensation for our named executive officers in 2009?—Annual Bonus Awards,” no cash bonuses were earned for the year ended December 31, 2009 under our Executive Bonus Compensation Plan. Accordingly, the amounts set forth in this column do not represent additional compensation earned by the named executive officers for the year ended December 31, 2009.
- (2) The options vest in three equal annual installments beginning on the third anniversary of the grant date. For more information on the terms of the stock options granted to our named executive officers in fiscal 2009, please see “Executive Compensation— Narrative Disclosure to Summary Compensation Table and Grants of Plan-Based Awards Table— Option Awards” and “Executive Compensation—Potential Payments Upon Termination or Change of Control—Stock Option Plan Provisions” below.
- (3) Options were granted with an exercise price equal to 100% of the fair market value on the date of grant, which was determined by reference to the closing sales price of our common stock on the trading date immediately prior to the grant date. These options carry an exercise price of \$16.84 per share, the closing price of GTx’s common stock on December 31, 2008, the last trading day immediately prior to the grant date.
- (4) Represents the grant date fair value as computed in accordance with FASB ASC Topic 718. Assumptions used in computing the grant date fair value in accordance with FASB ASC Topic 718 are set forth in Note 3—Share-Based Compensation to our audited financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2009.

Narrative Disclosure to Summary Compensation Table and Grants of Plan-Based Awards Table

Employment Agreements. Each of our named executive officers has entered into a written employment agreement with GTx. Descriptions of our employment agreements with our named executive officers are included under the captions “Compensation Discussion and Analysis—What are the elements of our executive officer compensation program and why do we provide each element?— Elements of Executive Compensation— Employment Agreements” and “—Post-Employment Compensation” above, as well as “Executive Compensation—Potential Payments upon Termination or Change of Control” below.

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Annual Cash Bonus Awards. Our Executive Bonus Compensation Plan provides for an annual cash bonus awards to reward executive officers for performance in the prior fiscal year. For more information regarding our Executive Bonus Compensation Plan, please see “Compensation Discussion and Analysis—What is our analysis of the compensation for our named executive officers in 2009?—Annual Bonus Awards” above.

Option Awards. Consistent with its practices for awarding stock options described in “Compensation Discussion and Analysis — Timing, grant date and exercise price for stock option awards,” the Compensation Committee approved the grant of stock options to our named executive officers in the fall of 2008, all of which grants were effective on January 1, 2009. The exercise price for these stock options is \$16.84 per share, the closing price of GTX’s common stock on December 31, 2008, the last trading day of 2008. The options vest in equal annual installments on January 1, 2012, 2013 and 2014. The options expire on December 31, 2018, unless they are forfeited or expire earlier in accordance with their terms. During the fall of 2009, the Compensation Committee approved the grant of a stock option to purchase 105,000 shares of GTX common stock to Dr. Steiner, a stock option to purchase 70,000 shares of GTX common stock to Mr. Hanover, and stock options to purchase 35,000 shares of GTX common stock to each of the other named executive officers, all of which grants were effective on January 1, 2010. The exercise price for these stock options is \$4.20 per share, the closing price of GTX’s common stock on December 31, 2009, the last trading day of 2009. The options vest in five equal annual installments beginning January 1, 2011. The options expire on December 31, 2019, unless they are forfeited or expire earlier in accordance with their terms. Options granted to our named executive officers may be exercised with cash, provided that the Board or the Compensation Committee may provide that the exercise price may also be paid by delivery to us of other unencumbered shares of our common stock with a value equal to the aggregate option exercise price, pursuant to a cashless exercise program, or in any other form of legal consideration that may be acceptable to the Board or the Compensation Committee (which may include a “net exercise” of the option). As a general matter, the vested portion of options granted to our named executive officers will expire three months after the named executive officer’s last day of employment with us, subject to extension in certain termination situations are described under “Executive Compensation — Potential Payments Upon Termination or Change of Control — Stock Option Plan Provisions — Extended Post-Termination Exercise Period” below. Events that can accelerate the vesting of GTX’s stock options are described below under “Executive Compensation — Potential Payments Upon Termination or Change of Control — Stock Option Plan Provisions — Stock Option Vesting Acceleration” below.

Other Compensatory Arrangements. For a description of the other elements of our executive compensation program, see “Compensation Discussion and Analysis — What are the elements of our executive compensation program and why do we provide each element?” above.

Outstanding Equity Awards at Fiscal-Year End

The following table summarizes the number of outstanding equity awards held by each of our named executive officers as of December 31, 2009.

OUTSTANDING EQUITY AWARDS AT 2009 FISCAL-YEAR END TABLE

Name	Option Awards			
	Number of Securities Underlying Unexercised Options (#)	Number of Securities Underlying Unexercised Options (#)	Option Exercise Price (\$)	Option Expiration Date
	Exercisable	Unexercisable		
Mitchell S. Steiner	—	75,000(1)	16.84	12/31/18
Mark E. Mosteller	23,000	—	6.78	08/05/11
	17,000	—	6.78	04/10/12
	17,000	—	6.24	07/31/13
	25,500	—	6.24	08/31/13
	10,000	—	8.90	07/27/14
	16,667	8,333(2)	10.86	07/26/15
	—	25,000(3)	17.84	12/31/16
Marc S. Hanover	—	25,000(4)	14.35	12/31/17
	—	25,000(1)	16.84	12/31/18
	—	125,000(4)	14.35	12/31/17
Ronald A. Morton, Jr.	—	50,000(1)	16.84	12/31/18
	—	75,000(5)	19.51	04/30/17
	—	25,000(4)	14.35	12/31/17
James T. Dalton	—	25,000(1)	16.84	12/31/18
	27,667	5,333(6)	13.07	01/19/15
	16,667	8,333(7)	9.71	05/18/15
	6,667	13,333(8)	7.56	12/31/15
	—	25,000(3)	17.84	12/31/16
	—	25,000(4)	14.35	12/31/17
—	25,000(1)	16.84	12/31/18	

- (1) The shares vest in three equal annual installments beginning on January 1, 2012, the third anniversary of the grant date.
- (2) The remaining shares will vest on July 27, 2010.
- (3) One-third of the shares vested on January 1, 2010, the third anniversary of the grant date, with the remaining shares vesting as to one-third of the shares on each of January 1, 2011 and January 1, 2012.
- (4) The shares vest in three equal annual installments beginning on January 1, 2011, the third anniversary of the grant date.
- (5) The shares vest in three equal annual installments beginning on May 1, 2010, the third anniversary of the grant date.
- (6) The remaining shares vested on January 20, 2010.
- (7) The remaining shares will vest on May 19, 2010.
- (8) The remaining shares vest as follows: 6,667 shares vested on January 1, 2010 and 6,666 shares will vest on January 1, 2011.

Option Exercises and Stock Vested During 2009

GTx's named executive officers did not exercise any stock options during the year ended December 31, 2009, nor was any GTx common stock held by GTx's named executive officers subject to vesting during the year ended December 31, 2009.

Potential Payments upon Termination or Change of Control

We have entered into employment agreements with each of our named executive officers. Described below are the circumstances that would trigger our obligation to make cash payments pursuant to these agreements following the termination of a named executive officer's employment and the cash payments that we would be required to provide. We also describe below the circumstances that would trigger the accelerated vesting of stock options held by our named executive officers, as well as those termination events that would result in an extension of the post-termination exercise period with respect to the stock options held by our named executive officers.

Employment Agreements

Termination Without "Cause" or For "Good Reason" after a Change of Control

The employment agreements with our named executive officers contain cash post-termination change of control payments equal to one year's base salary. These change of control salary continuation benefits that are structured on a "double-trigger" basis, meaning that before a named executive officer is eligible to receive salary continuation benefits, (1) a change of control must occur and (2) within six months after such change of control, the named executive officer's employment must be terminated without "cause" or the named executive officer resigns for "good reason." GTx's obligation to make the salary continuation payments under the employment agreements is conditioned upon the former named executive officer's compliance with the confidentiality provisions of the employment agreement and, with respect to each of Dr. Steiner, Mr. Hanover, Dr. Dalton and Dr. Morton, compliance with the provisions of the non-competition provisions of their employment agreements for a period of one year following their termination. In addition, GTx's obligation to make the salary continuation payments is conditioned upon GTx's receipt of an effective general release of claims executed by the named executive officer. The post-termination salary continuation payments will be generally made over the one-year period following termination on our regular payroll dates rather than in a lump sum, except that the timing of these payments may be deferred for up to six months if these payments would constitute deferred compensation under Section 409A of the Internal Revenue Code (in which case, the deferred payment would be made in a lump sum following the end of the deferral period, with the balance being paid thereafter on our regular payroll dates).

A change of control generally means the following:

- the sale or other disposition of all or substantially all of GTx's assets;
- if any person or group acquires beneficial ownership of 50% or more of GTx's voting securities (subject to certain exceptions); or
- a merger or consolidation of GTx with or into any other entity, if immediately after the transaction more than 50% of the voting stock of the surviving entity is held by persons who were not holders of at least 20% of GTx's voting stock as of the effective date of the named executive officer's employment agreement.

"Cause" is generally defined as the named executive officer's:

- conviction for a felony;
- theft, embezzlement, misappropriation of or intentional infliction of material damage to GTx's property or business opportunities;
- breach of his confidentiality or non-competition obligations, as applicable, under his employment agreement; or
- ongoing willful neglect of or failure to perform his duties, or his ongoing willful failure or refusal to follow any reasonable, unambiguous duly adopted written direction of Dr. Steiner (or the Board in the case of

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Dr. Steiner) that is not inconsistent with the description of such named executive officer's duties, provided that such willful neglect or failure is materially damaging or materially detrimental to the business and operations of GTx, and after 30 days notice and the opportunity to cure.

"Good reason" is generally defined as the following actions taken without the consent of the named executive officer within six months after a change of control (in each case where the named executive officer has provided written notice within 30 days of the action, such action is not remedied by GTx within 30 days following such notice, and the named executive officer's resignation is effective not later than 60 days after the expiration of such 30-day cure):

- an adverse change in the named executive officer's authority, duties or responsibilities (including reporting responsibilities) which, without the named executive officer's consent, represents a material reduction in or a material demotion of the named executive officer's authority, duties or responsibilities as in effect immediately prior to the change of control, or the assignment to the named executive officer of any duties or responsibilities that are materially inconsistent with and materially adverse to such authority, duties or responsibilities;
- a material reduction in the then current base salary of the named executive officer;
- the relocation of the named executive officer's principal office to a location that increases his one-way commute by more than 20 miles;
- the failure of GTx to obtain an agreement reasonably satisfactory to the named executive officer from any successor entity to assume and agree to perform his employment agreement in all material respects; or
- a material breach by GTx of any provision of the named executive officer's employment agreement or any other then-effective agreement with the named executive officer.

Other Termination Scenarios

If we terminate a named executive officer's employment for "cause," or if a named executive officer voluntarily terminates his or her employment without "good reason," or upon the death of a named executive officer, the named executive officer would have no right to receive any compensation or benefits under his employment agreement on or after the effective date of termination, other than any accrued and unpaid salary and expense reimbursement. Likewise, if we terminate a named executive officer's employment without "cause," or if a named executive officer voluntarily terminates his employment with "good reason," in each case not in connection with a change of control, the named executive officer would have no right to receive any compensation or benefits under his employment agreement on or after the effective date of termination, other than any accrued and unpaid salary and expense reimbursement.

Other Benefits

Except as set forth above, under the employment agreements with our named executive officers, our named executive officers would not be entitled to any other benefits following termination of service, including the continuation of general employee benefits, life insurance coverage and long term disability coverage, except as otherwise required by applicable law.

Stock Option Plan Provisions

Stock Option Vesting Acceleration

Pre-IPO Plans. The Genotherapeutics, Inc. Stock Option Plan, or the 1999 Plan, the GTx, Inc. 2000 Stock Option Plan, or the 2000 Plan, the GTx, Inc. 2001 Stock Option Plan, or the 2001 Plan, and the GTx, Inc. 2002 Stock Option Plan, or the 2002 Plan, each provide that in the event of a specified change of control transaction, all shares subject to option awards granted under these plans will immediately vest and be converted into cash, options or stock of equivalent value in the surviving organization under terms and conditions that substantially preserve the economic status of plan participants. Certain of the options granted to our executive officers to date have been granted pursuant to these plans. For purposes of our 1999 Plan, 2000 Plan, 2001 Plan and 2002 Plan, the definition of change of control is substantially similar to the definition of change of control under the employment agreements with our named executive officers.

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2004 Plan. Our 2004 Equity Incentive Plan, or the 2004 Plan, provides that in the event of a specified corporate transaction such as a merger, consolidation or similar transaction, all outstanding options and stock appreciation rights under the 2004 Plan may be assumed, continued or substituted for by any surviving or acquiring entity. If the surviving or acquiring entity elects not to assume, continue or substitute for such awards, such equity awards held by individuals whose service has not terminated prior to the effective date of the corporate transaction will become fully vested, and, if applicable, exercisable and such equity awards will be terminated if not exercised prior to the effective date of the corporate transaction. Other forms of equity awards that may be granted under the 2004 Plan, such as restricted stock awards, may be assumed, continued or substituted for by any surviving or acquiring entity and may have their repurchase or forfeiture rights assigned to the surviving or acquiring entity. If such awards are not assumed, continued or substituted for by any surviving or acquiring entity, then such equity awards will become fully vested prior to the effective date of the transaction. A recipient's award agreement may provide for acceleration upon other events. In this regard, the standard form of stock option agreement under the 2004 Plan provides for each stock option to become fully vested and exercisable if the option holder's service with GTX or its successor terminates within twelve months after a change of control and the termination of service is a result of an involuntary termination without cause or a constructive termination.

For purposes of our 2004 Plan, the definition of change of control is similar to the definition of change of control under the employment agreements with our named executive officers, except that under our 2004 Plan, a change of control would be deemed to have occurred if "incumbent directors" cease to constitute at least a majority of the members of our Board of Directors. For this purpose, "incumbent directors" means the directors in office on the date the 2004 Plan was adopted and any subsequent directors who were nominated by a majority of the incumbent directors (those directors nominated by a majority of the incumbent directors are themselves considered incumbent directors for these purposes).

The standard form of stock option agreement under the 2004 Plan generally defines "cause" as the grant recipient:

- committing an act that materially injures the business of GTX;
- refusing or failing to follow the lawful and reasonable directions of the Board or the appropriate individual to whom he or she reports, after 15 days notice and the opportunity to cure;
- willfully or habitually neglecting his or her duties with GTX, after 15 days notice and the opportunity to cure;
- being convicted of a felony that is likely to inflict or has inflicted material injury on the business of GTX; or
- committing a material fraud, misappropriation, embezzlement or other act of gross dishonesty that resulted in material loss, damage or injury to GTX.

The standard form of stock option agreement under the 2004 Plan generally defines a "constructive termination" as the following actions taken without the consent of the grant recipient within 12 months after a change of control:

- the assignment to the grant recipient of any duties or responsibilities which results in a significant reduction in his or her function as in effect immediately prior to the change of control;
- a material reduction in the grant recipient's salary, as in effect on the effective date of the change of control;
- the failure to continue in effect any benefit plan or program in which the grant recipient was participating immediately prior to the effective date of the change of control, or the taking of any action that would adversely affect his or her participation in (or reduce his or her benefits under) any such benefit plan or program;
- a relocation of the grant recipient's principal office to a location more than fifty (50) miles from the location at which he or she performed his or her duties as of the effective date of the change of control; or
- a material breach by GTX of any provision of the grant recipient's stock option agreement under the 2004 Plan.

Extended Post-Termination Exercise Period

As a general matter, the vested portion of options granted to our named executive officers will expire three months after the named executive officer's termination of service. We refer to the period following the named executive officer's termination during which he can continue to exercise his vested stock options as the post-termination exercise

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period. Although the post-termination exercise period generally ends three months after the named executive officer's termination of service, in termination situations involving the death or disability of the named executive officer, or the named executive officer's voluntary retirement, the post-termination exercise period is generally extended beyond three months following the named executive officer's termination of service. In addition, under our 2004 Plan and the form of stock option agreement under the 2004 Plan, the post-termination exercise period will generally be one year following termination if the termination of service is a result of an involuntary termination without cause or a constructive termination within twelve months after a change of control. With respect to all of our stock option plans and the forms of option agreement under our stock option plans, if the termination is due to the named executive officer's death, the post-termination exercise period will generally be 18 months following termination, and if the termination is due to the named executive officer's disability, the post-termination exercise period will generally be one year following termination. With respect to our 1999 Plan, 2000 Plan, 2001 Plan and 2002 Plan and the forms of option agreements under those plans, if a named executive officer voluntarily retires his employment (which generally means a retirement after age 65 or after age 55 following a specified period of service), the post-termination exercise period will generally be five years following termination. Under our 2004 Plan and the form of stock option agreement under the 2004 Plan, if a named executive officer voluntarily retires his employment (which generally means a retirement after age 65 following a specified period of service or after age 55 following a specified period of service and with the authorization of our Chief Executive Officer or the Board), the post-termination exercise period will generally be two years following termination. In no event, however, will the post-termination exercise period be extended beyond the initial ten-year term of the option.

Calculation of Termination and Change of Control Benefits

The following table includes an estimate of the potential compensation and benefits payable to our named executive officers in certain termination and change of control situations. The actual compensation to be paid can be determined only at the time of a named executive officer's termination of employment. In providing the estimated potential payments and benefits, we have made the following general assumptions in all circumstances where applicable:

- a change of control event has occurred and the date of termination is December 31, 2009;
- the annual salary at the time of termination is as follows: Mitchell S. Steiner, \$525,000; Mark E. Mosteller, \$298,083; Marc S. Hanover \$456,750; Ronald A. Morton, Jr., \$452,025; and James T. Dalton, \$400,000;
- there is no accrued and unpaid salary; and
- there is no unpaid reimbursement for expenses incurred prior to the date of termination.

Because all of the stock options held by the named executive officers were out-of-the-money at December 31, 2009, meaning that all of such stock options had exercise prices that were in excess of the closing price of our common stock on December 31, 2009 (\$4.20), we have not separately quantified the value that the named executive officers would have received by reason of the vesting acceleration benefits provided under our 1999 Plan, 2000 Plan, 2001 Plan, 2002 Plan and 2004 Plan as described above, assuming a termination or change of control event has occurred on December 31, 2009.

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	Triggering Event	
	Termination w/o Cause or for Good Reason (or Constructive Termination) in Connection with Change of Control (\$)	Change of Control (Single-Trigger) (\$)
Benefits and Payments Upon Termination		
Mitchell S. Steiner		
Base Salary Continuation	525,000	—
Stock Option Vesting Acceleration(1)	—	—
Total	525,000	—
Mark E. Mosteller		
Base Salary Continuation	298,083	—
Stock Option Vesting Acceleration(1)	—	—
Total	298,083	—
Marc S. Hanover		
Base Salary Continuation	456,750	—
Stock Option Vesting Acceleration(1)	—	—
Total	456,750	—
Ronald A. Morton, Jr.		
Base Salary Continuation	452,025	—
Stock Option Vesting Acceleration(1)	—	—
Total	452,025	—
James T. Dalton		
Base Salary Continuation	400,000	—
Stock Option Vesting Acceleration(1)	—	—
Total	400,000	—

(1) As stated above, on December 31, 2009, the last business day of our last fiscal year, the closing sale price of our common stock was \$4.20 per share. All of the stock options held by the named executive officers were out-of-the-money at that date, and accordingly, no stock option vesting acceleration benefit is shown in the table above with respect to such options. See “Outstanding Equity Awards at Fiscal-Year End” for information regarding stock options held by each of our named executive officers as of December 31, 2009.

Compensation and Risk

We believe that our compensation policies and practices do not encourage excessive or inappropriate risk-taking by our employees, including by our executive officers. Through our use of different types of compensation vehicles that provide a balance of long- and short-term incentives with fixed and variable components, as well as our through our use of multi-year vesting for stock option awards and performance criteria under our bonus plans that emphasize the achievement of our overall corporate objectives, we believe that our employee compensation programs promote a long-term stockholder perspective, encourage decisions that will result in sustainable performance over the longer term, and mitigate the risks associated with an undue short-term focus on results.

DIRECTOR COMPENSATION

Retainer and Fees. During 2009, we paid our non-employee directors retainers in quarterly increments based on an annualized rate of \$25,000 a year, or \$35,000 a year for our Audit Committee Chair. In addition, during 2009, we paid our non-employee directors a daily fee of \$2,000 for regularly scheduled (or special) meetings of the Board and its committees attended each day, and a daily \$750 telephonic meeting fee, payable quarterly in arrears. No directors currently receive consulting fees from GTx. Directors who are also our employees (currently Dr. Steiner and Mr. Hanover) receive no additional compensation for service on the Board.

Directors' Deferred Compensation Plan. Since June 30, 2004, our non-employee directors have had the opportunity to defer all or a portion of their fees under our Directors' Deferred Compensation Plan. Deferrals can be made into a cash account, a stock account, or a combination of both. Deferrals into a cash account accrue interest at the prime rate of interest announced from time to time by a local bank utilized by us, and deferrals into a stock account accrue to the deferring director rights in shares of GTx common stock equal to the cash compensation then payable to the director for his or her Board service divided by the then current fair market value of GTx common stock. Currently, all but two non-employee directors have elected to defer their Board compensation into stock accounts in prior years, and all but three directors deferred their Board compensation under the Directors' Deferred Compensation Plan for the year ended December 31, 2009. No directors have deferred their Board compensation into cash accounts. Under the Directors' Deferred Compensation Plan, a director may elect to receive a distribution of amounts credited to such cash or stock accounts on a date selected by the director at the time of the election. As a general matter, if a director does not select a distribution date or if the distribution date selected by the director occurs after the date of such director's separation from service as a director, then the amounts credited to the director's cash account under the Directors' Deferred Compensation Plan will be distributed within 30 days after commencement of the year following the date of such director's separation from service as a director, and the amounts credited to the director's stock account under the Directors' Deferred Compensation Plan will be distributed within the later of (a) 30 days after commencement of the year following the date of such director's separation from service as a director and (b) six months after such separation. All distributions under our Directors' Deferred Compensation Plan will be made in the form of a single lump sum in cash (for amounts credited to cash accounts) or in shares of GTx common stock (for amounts credited to stock accounts), except that any fractional shares of GTx common stock will be distributed in cash valued at the then current fair market value of GTx common stock.

Stock Options. Our Amended and Restated 2004 Non-Employee Directors' Stock Option Plan, or the Directors' Option Plan, provides for the automatic grant of initial and annual nonstatutory stock options to GTx's non-employee directors who do not own more than ten percent of the combined voting power of GTx's then outstanding securities. The exercise price per share for the options granted under the plan is not less than the fair market value of the stock on the date of grant. Pursuant to the Directors' Option Plan, any individual who first becomes a non-employee director automatically is granted an option to purchase shares of common stock. The number of shares subject to each of these initial grants is currently 15,000 shares, provided that the number of shares may be increased or decreased by our Board of Directors in its sole discretion. Any individual who is serving as a non-employee director on the day following an annual meeting of GTx's stockholders automatically will be granted an option to purchase shares of common stock on that date; provided, however, that if the individual has not been serving as a non-employee director for the entire period since the preceding annual meeting, the number of shares subject to such individual's annual grant will be reduced pro rata for each full month prior to the date of grant during which such individual did not serve as a non-employee director. The number of shares subject to each annual grant is currently 10,000 shares, provided that the number of shares may be increased or decreased by our Board of Directors in its sole discretion. The shares subject to each initial grant and each annual grant vest in a series of three successive equal annual installments measured from the date of grant, so that each initial grant and each annual grant will be fully vested three years after the date of grant. In the event of a specified corporate transaction, as defined in the Directors' Option Plan, all outstanding options under the Directors' Option Plan may be assumed or substituted for by any surviving or acquiring entity. If the surviving or acquiring entity elects not to assume or substitute for such options, then (a) with respect to any such options that are held by optionees then performing services for GTx or its affiliates, the vesting and exercisability of such options will be accelerated in full and such options will be terminated if not exercised prior to the effective date of the corporate transaction, and (b) all other outstanding options will terminate if not exercised prior to the effective date of the corporate transaction. If a specified change of control transaction occurs, as defined in the Directors' Option Plan, then the vesting and exercisability of the optionee's options will be accelerated in full immediately prior to (and contingent upon) the effectiveness of the transaction. If an optionee is required to resign his or her position as a non-employee director as a condition of the change in control transaction, the vesting and exercisability of the optionee's options will be accelerated in full immediately prior to the effectiveness of such resignation. In addition, during 2008, the Board, upon the recommendation of the Compensation Committee, adopted a general policy regarding the retirement of

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non-employee directors that provides that the Board will act, on a case-by-case basis, to accelerate the vesting and exercisability of the retiring director's options in full provided such director retires from the Board in good standing.

The table below represents the compensation earned by each non-employee director during 2009.

DIRECTOR COMPENSATION—FISCAL 2009

Name	Fees Earned or Paid in Cash \$(1)	Option Awards \$(2)	Total (\$)
J. R. Hyde, III	36,750	—	36,750
John H. Pontius	36,000	53,436	89,436
Rosemary Mazanet, M.D., Ph.D.(3)	36,750	53,436	90,186
J. Kenneth Glass	47,500	53,436	100,936
Timothy R. G. Sear	34,000	53,436	87,436
Robert W. Karr, M.D.	36,000	53,436	89,436
Michael G. Carter, M.D.	36,750	53,436	90,189
Kenneth S. Robinson, M.D., M.Div.	34,500	53,436	87,936

- (1) Represents fees earned and retainers paid in 2009. Each director in the table above, other than Dr. Mazanet, Mr. Glass and Dr. Karr, elected to defer his or her fees earned during 2009 pursuant to the Directors' Deferred Compensation Plan. The number of shares credited to individual stock accounts for our non-employee directors under the Directors' Deferred Compensation Plan as of December 31, 2009 was as follows: 12,197 shares for Mr. Hyde; 11,934 shares for Mr. Pontius; 8,322 shares for Dr. Mazanet; 6,553 shares for Mr. Glass; 11,370 shares for Mr. Sear; 4,224 shares for Dr. Karr; 3,831 shares for Dr. Carter; and 4,234 shares for Dr. Robinson. In connection with Dr. Mazanet's resignation from the Board of Directors, the 8,322 shares then credited to Dr. Mazanet's individual stock account under the Directors' Deferred Compensation Plan will be distributed to Dr. Mazanet in accordance with the terms of the Directors' Deferred Compensation Plan as described above.
- (2) Represents the aggregate grant date fair value of all option awards granted to our non-employee directors during the year ended December 31, 2009 as computed in accordance with FASB ASC Topic 718. Assumptions used in computing the aggregate grant date fair value in accordance with FASB ASC Topic 718 are set forth in Note 3—Share-Based Compensation to our audited financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2009.

The following table indicates the grant date fair value for each option awarded to our non-employee directors during the year ended December 31, 2009, as determined in accordance with FASB ASC Topic 718, as well as the total number of shares subject to options outstanding as of December 31, 2009 for each non-employee director:

Name	FASB ASC Topic 718 Grant Date Fair Value (\$)	Total Shares Subject to Options Outstanding at 12/31/2009 (#)
John H. Pontius	53,436	46,000
Rosemary Mazanet, M.D., Ph.D.	53,436	46,000
J. Kenneth Glass	53,436	46,000
Timothy R. G. Sear	53,436	28,666
Robert W. Karr, M.D.	53,436	43,334
Michael G. Carter, M.D.	53,436	35,667
Kenneth S. Robinson, M.D., M.Div.	53,436	20,000

- (3) Dr. Mazanet resigned from the Board of Directors effective February 19, 2010.

COMPENSATION COMMITTEE INTERLOCKS AND INSIDER PARTICIPATION

During the year ended December 31, 2009, the Compensation Committee consisted of Mr. Hyde, as Chairman, Dr. Carter, Mr. Glass and Mr. Sear. None of the current members of the Compensation Committee is or was an officer or employee of GTX. During 2009, none of GTX's executive officers served as a director or member of the compensation committee of any other entity whose executive officers served on GTX's Board of Directors or Compensation Committee.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Policies and Procedures for Review of Related Party Transactions

Upon recommendation of the Audit Committee, the Board adopted a related party transactions policy, which specifies GTX's policies and procedures regarding transactions between GTX and its employees, officers, directors or their family members. GTX's General Counsel is responsible for (a) ensuring that policy is distributed to all GTX officers, directors and other managers and (b) requiring that any proposed related party transaction be presented to the Audit Committee for consideration before GTX enters into any such transactions. This policy can be found on GTX's website (www.gtxinc.com) under "About GTX" at "Governance."

It is the policy of GTX to prohibit all related party transactions unless the Audit Committee determines in advance of GTX entering into any such transaction that there is a compelling business reason to enter into such a transaction. There is a general presumption that the Audit Committee will not approve a related party transaction with GTX. However, the Audit Committee may approve a related party transaction if:

- the Audit Committee finds that there is a compelling business reason to approve the transaction, taking into account such factors as the absence of other unrelated parties to perform similar work for a similar price within a similar timeframe; and
- the Audit Committee finds that it has been fully apprised of all significant conflicts that may exist or otherwise arise on account of the transaction, and it believes, nonetheless, that GTX is warranted entering into the related party transaction and has developed an appropriate plan to manage the potential conflicts of interest.

Certain Transactions With or Involving Related Persons

Licensed SARM Technology. James T. Dalton, Ph.D., GTX's Vice President, Preclinical Research & Development, is a party to an agreement among the University of Tennessee, or UT, the University of Tennessee Research Foundation, or UTRF, and the inventors of many of the patents filed by UT and UTRF for selective androgen receptor modulator, or SARM, technology, which was entered while Dr. Dalton and the other inventors were employed by UT. Under this agreement, all rights in the SARM technology were assigned to UTRF with the commitment that payments received by UTRF from the licensing of the SARM technology would be shared between UT and the inventors, including Dr. Dalton. In 2002, subsequent to Dr. Dalton entering into this agreement, the SARM technology was licensed exclusively to GTX. In 2005, Dr. Dalton became one of GTX's employees. In July 2007, GTX and UTRF entered into a Consolidated, Amended, and Restated License Agreement, or the New SARM Agreement, to consolidate and replace GTX's previously existing SARM license agreements with UTRF and to modify and expand certain rights and obligations of each of the parties. GTX agreed to pay to UTRF a one-time, upfront fee of \$290,000 as consideration for entering into the New SARM Agreement. GTX also agreed to pay an annual license maintenance fee during the term of the New SARM Agreement, which fee is creditable against various royalties GTX agreed to pay to UTRF on sublicense revenues and net sales of products subject to the New SARM Agreement. In November 2007, we entered into an exclusive license and collaboration agreement with Merck & Co., Inc., or Merck, with respect to SARM development and commercialization, which was subsequently terminated, pursuant to which Merck paid us an upfront licensing fee of \$40,000,000. In December 2008, GTX and UTRF entered into an amendment to the New SARM Agreement in connection with which GTX agreed to pay to UTRF one-time fee of \$494,000 as consideration for entering into the amendment to the New SARM Agreement. Since joining GTX in 2005, Dr. Dalton received from UT and UTRF a portion of the payments made by GTX to UTRF for the licensing and sublicensing of the SARM technology totaling approximately \$578,810. Dr. Dalton will continue to receive a portion of the payments GTX will make to UTRF under the New SARM Agreement in accordance with the agreement among the UT scientists, including Dr. Dalton, UT and UTRF. Since Dr. Dalton's interest in GTX's agreement with UTRF

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arose while Dr. Dalton was an employee of UTRF, not GTx, and GTx's initial arrangements with UTRF regarding the licensing of the SARM technology were created in 2002, our related party transactions policy did not require that the Audit Committee review and approve the transaction in advance. The members of the Audit Committee were, however, aware of Dr. Dalton's interest when the GTx Board of Directors approved the entering into of the New SARM Agreement with UTRF in July 2007 as well as when the GTx Board of Directors approved the entering into of the amendment to the New SARM Agreement in December 2008.

Indemnity Agreements. GTx has entered into indemnity agreements with each of its current directors and certain of its executive officers to give such directors and officers additional contractual assurances regarding the scope of the indemnification set forth in GTx's charter and bylaws and to provide additional procedural protections.

OTHER MATTERS

The Board of Directors, at the time of the preparation of this proxy statement, knows of no business to come before the meeting other than that referred to herein. If any other business should properly come before the meeting, the person named in the enclosed proxy will have discretionary authority to vote all proxies in accordance with his best judgment.

By Order of the Board of Directors,



Henry P. Doggrell
Vice President, General Counsel and Secretary

Memphis, Tennessee
March 17, 2010

<STOCK#>

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6 IF YOU HAVE NOT VOTED VIA THE INTERNET OR TELEPHONE, FOLD ALONG THE PERFORATION, DETACH AND RETURN THE BOTTOM PORTION IN THE ENCLOSED ENVELOPE. 6



Proxy — GTx, Inc.

THIS PROXY IS SOLICITED BY THE BOARD OF DIRECTORS OF GTX, INC. FOR THE ANNUAL MEETING OF STOCKHOLDERS TO BE HELD ON APRIL 29, 2010

The undersigned hereby appoints **Henry P. Doggrell** and **Mark E. Mosteller**, and each of them, as attorneys and proxies of the undersigned, with full power of substitution, to vote all of the shares of stock of GTx, Inc. that the undersigned may be entitled to vote at the Annual Meeting of Stockholders of GTx, Inc. to be held at The Toyota Center, 175 Toyota Plaza, Memphis, Tennessee 38103, on Thursday, April 29, 2010 at 4:00 p.m. Central Daylight Time, and at any and all postponements, continuations and adjournments thereof, with all powers that the undersigned would possess if personally present, upon and in respect of the following matters and in accordance with the following instructions, with discretionary authority as to any and all other matters that may properly come before the meeting.

UNLESS A CONTRARY DIRECTION IS INDICATED, THIS PROXY WILL BE VOTED FOR ALL NOMINEES LISTED IN PROPOSAL NO. 1 AND FOR PROPOSAL NO. 2, AS MORE SPECIFICALLY DESCRIBED IN THE PROXY STATEMENT. IF SPECIFIC INSTRUCTIONS ARE INDICATED, THIS PROXY WILL BE VOTED IN ACCORDANCE THEREWITH. IN THEIR DISCRETION, THE PROXIES OF THE UNDERSIGNED ARE AUTHORIZED TO VOTE UPON ANY AND ALL OTHER MATTERS THAT MAY PROPERLY COME BEFORE THE MEETING.

**Important Notice Regarding the Availability of Proxy Materials for the Annual Meeting of Stockholders to be Held on April 29, 2010
at The Toyota Center, 175 Toyota Plaza, Memphis, Tennessee 38103**

The proxy statement and annual report to stockholders are available at www.proxydocs.com/GTXI.

THANK YOU FOR VOTING
(Items to be voted appear on reverse side.)