



**SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

**FORM S-8**REGISTRATION STATEMENT  
UNDER  
THE SECURITIES ACT OF 1933**GTx, Inc.**

(Exact name of registrant as specified in its charter)

Delaware  
(State of Incorporation)62-1715807  
(I.R.S. Employer Identification No.)3 N. Dunlap Street, 3<sup>rd</sup> Floor  
Van Vleet Building  
Memphis, TN 38163  
(901) 523-9700  
(Address of principal executive offices)2004 Equity Incentive Plan  
2004 Non-Employee Directors' Stock Option Plan  
2002 Stock Option Plan  
2001 Stock Option Plan  
2000 Stock Option Plan  
1999 Stock Option Plan  
(Full title of the plans)Mitchell S. Steiner, M.D., F.A.C.S.  
Chief Executive Officer  
GTx, Inc.3 N. Dunlap Street, 3<sup>rd</sup> Floor  
Van Vleet Building  
Memphis, TN 38163  
(901) 523-9700

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Robert L. Jones, Esq.  
Suzanne Sawochka Hooper, Esq.  
Cooley Godward LLP  
Five Palo Alto Square  
3000 El Camino Real  
Palo Alto, CA 94306  
(650) 843-5000Copies to:  
Leigh Walton, Esq.  
Robert J. DelPriore, Esq.  
Bass, Berry & Sims PLC  
100 Peabody Avenue  
Suite 900  
Memphis, TN 38103  
(901) 543-5904Mark E. Mosteller  
Chief Financial Officer  
3 N. Dunlap Street, 3<sup>rd</sup> Floor  
Van Vleet Building  
Memphis, TN 38163  
(901) 523-9700**CALCULATION OF REGISTRATION FEE**

Title of Securities to be Registered (1)	Amount to be Registered (1)	Proposed Maximum Offering Price per Share (2)	Proposed Maximum Aggregate Offering Price (2)	Amount of Registration Fee
Common Stock, par value \$0.001 per share	2,981,800 shares	\$6.18 - \$12.89	\$32,874,489.50	\$4,165.20

(1) Pursuant to Rule 416(a), this Registration Statement shall also cover any additional shares of Registrant's Common Stock that become issuable under the

plans by reason of any stock dividend, stock split, recapitalization or other similar transaction effected without receipt of consideration that increases the number of outstanding shares of Registrant's Common Stock. In addition, pursuant to Rule 416(c) under the Securities Act, this Registration Statement also covers an indeterminate amount of interests to be offered or sold pursuant to the employee and non-employee benefit plans described herein.

- (2) Estimated solely for the purpose of calculating the amount of the registration fee pursuant to Rule 457(h). The price per share and aggregate offering price are based upon the (a) the weighted average exercise price for outstanding options granted pursuant to the registrant's (i) 2000 Stock Option Plan, (ii) 2001 Stock Option Plan and (iii) 2002 Stock Option Plan and (b) the average of the high (\$13.50) and low (\$12.28) prices of Registrant's Common Stock reported on the Nasdaq National Market for February 4, 2004.

The chart below details the calculations of the registration fee:

Securities	Number of Shares	Offering Price Per Share	Aggregate Offering Price
Shares reserved for future grant under the 2004 Equity Incentive Plan	1,500,000	\$12.89(2)(b)	\$19,335,000.00
Shares reserved for future grant under the 2004 Non-Employee Directors' Stock Option Plan	180,000	\$12.89(2)(b)	\$ 2,320,200.00
Shares issuable for future grants under the 2004 Non-Employee Directors' Stock Option Plan	20,000	\$12.89(2)(b)	\$ 257,800.00
Shares reserved for future grants under the 2002 Stock Option Plan	357,000	\$12.89(2)(b)	\$ 4,601,730.00
Shares issuable pursuant to outstanding options under the 2002 Stock Option Plan	493,000	\$ 6.18(2)(a)	\$ 3,046,740.00
Shares reserved for future grants under the 2001 Stock Option Plan	37,400	\$12.89(2)(b)	\$ 482,086.00
Shares issuable pursuant to outstanding options under the 2001 Stock Option Plan	261,375	\$ 6.18(2)(a)	\$ 1,615,297.50
Shares reserved for future grants under the 2000 Stock Option Plan	34,000	\$12.89(2)(b)	\$ 438,260.00
Shares issuable pursuant to outstanding options under the 2000 Stock Option Plan	74,375	\$ 6.18(2)(a)	\$ 459,637.50
Shares reserved for future grant under the 1999 Stock Option Plan	24,650	\$12.89(2)(b)	\$ 317,738.50
Proposed Maximum Offering Price			\$32,874,489.50
Registration Fee			\$ 4,165.20

## **TABLE OF CONTENTS**

[INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE](#)

[INTERESTS OF NAMED EXPERTS AND COUNSEL](#)

[INDEMNIFICATION OF DIRECTORS AND OFFICERS](#)

[EXHIBITS](#)

[UNDERTAKINGS](#)

[SIGNATURES](#)

[EXHIBIT INDEX](#)

[EXHIBIT 5.1](#)

[EXHIBIT 23.1](#)

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## INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The following documents filed by GTx, Inc. (the “Company”) with the Securities and Exchange Commission are incorporated by reference into this Registration Statement:

(a) The Company’s prospectus filed on February 4, 2004 pursuant to Rule 424(b) under the Securities Act of 1933, as amended (the “Securities Act”), relating to the registration statement on Form S-1 (File No. 333-109700), which contains audited financial statements for the Company’s latest fiscal year for which such statements have been filed.

(b) The description of the Company’s Common Stock, which is contained in a registration statement on Form 8-A filed on January 13, 2004 (File No. 000-50549) under the Exchange Act, including any amendment or report filed for the purpose of updating such description.

All reports and other documents subsequently filed by the Company pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act prior to the filing of a post-effective amendment that indicates that all securities offered have been sold or that deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference herein and to be a part of this registration statement from the date of the filing of such reports and documents.

## INTERESTS OF NAMED EXPERTS AND COUNSEL

The validity of the issuance of the common stock offered by this prospectus and certain other legal matters are being passed upon for us by our counsel, Cooley Godward LLP, Palo Alto, California.

## INDEMNIFICATION OF DIRECTORS AND OFFICERS

As permitted by Delaware law, we have adopted provisions in our certificate of incorporation and bylaws that limit or eliminate the personal liability of directors for a breach of their fiduciary duty of care as a director. The duty of care generally requires that, when acting on behalf of the corporation, a director exercise an informed business judgment based on all material information reasonably available to him or her. Consequently, a director will not be personally liable to us or our stockholders for monetary damages or breach of fiduciary duty as a director, except for liability for:

- any breach of the director’s duty of loyalty to us or our stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- any act related to unlawful stock repurchases, redemptions or other distributions or payments of dividends; or
- any transaction from which the director derived an improper personal benefit.

These limitations of liability do not limit or eliminate our rights or any stockholder’s rights to seek non-monetary relief, such as injunctive relief or rescission. These provisions will not alter a director’s liability under federal securities laws. Our certificate of incorporation also authorizes us to indemnify our officers, directors and other agents to the fullest extent permitted under Delaware law.

As permitted by Delaware law, our bylaws also provide that:

- we will indemnify our directors, officers, employees and other agents to the fullest extent permitted by law;
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## Table of Contents

- we may advance expenses to our directors, officers, employees and other agents in connection with a legal proceeding to the fullest extent permitted by law; and
- the rights provided in our bylaws are not exclusive.

In addition to the indemnification provided for in our certificate of incorporation and bylaws, we have entered and intend to continue to enter, into separate indemnification agreements with each of our directors and executive officers which may be broader than the specific indemnification provisions contained in the Delaware General Corporation Law. These indemnification agreements may require us, among other things, to indemnify our directors and executive officers for some expenses, including attorneys' fees, judgments, fines and settlement amounts incurred by a director or executive officer in any action or proceeding arising out of his service as one of our directors or executive officers, that person's services provided to any other company or enterprise at our request. We believe that these provisions and agreement are necessary to attract and retain qualified individuals to serve as directors and executive officers. We also intend to maintain liability insurance for our officers and directors.

## EXHIBITS

Exhibit Number	
5.1	Opinion of Cooley Godward LLP.
10.1*	1999 Stock Option Plan.
10.2*	2000 Stock Option Plan.
10.3*	2001 Stock Option Plan.
10.4*	2002 Stock Option Plan.
10.5*	2004 Equity Incentive Plan and Form of Stock Option Agreement.
10.6*	2004 Non-Employee Directors' Stock Option Plan and Form of Stock Option Agreement.
23.1	Consent of Ernst & Young LLP, independent auditors.
23.2	Consent of Cooley Godward LLP is contained in Exhibit 5.1 to this Registration Statement.
24.1	Power of Attorney is contained on the signature pages.

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\* Documents incorporated by reference from the Company's Registration Statement of Form S-1, as amended (333-109700), originally filed with the Commission on October 15, 2003.

## UNDERTAKINGS

1. The undersigned registrant hereby undertakes:

(a) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by section 10(a)(3) of the Securities Act;

## Table of Contents

**(ii)** To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) (§ 230.424(b) of this chapter) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the “Calculation of Registration Fee” table in the effective registration statement.

**(iii)** To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

*Provided, however,* that paragraphs (a)(i) and (a)(ii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed by the issuer pursuant to section 13 or section 15(d) of the Exchange Act that are incorporated by reference herein.

**(b)** That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered herein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

**(c)** To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

2. The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the registrant’s annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan’s annual report pursuant to section 15(d) of the Exchange Act) that is incorporated by reference in the Registration Statement shall be deemed to be a new registration statement relating to the securities offered herein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

3. Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

**SIGNATURES**

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Memphis, State of Tennessee, on February 6, 2004.

**GTx, Inc.**

By: /s/ Mitchell S. Steiner

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Mitchell S. Steiner, M.D., F.A.C.S.  
Chief Executive Officer

**POWER OF ATTORNEY**

**Know All Persons By These Presents**, that each person whose signature appears below constitutes and appoints Mitchell S. Steiner and Mark E. Mosteller and each of them acting alone, as his true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their or his substitutes or substitute, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

<b>Signature</b>	<b>Title</b>	<b>Date</b>
/s/ Mitchell S. Steiner _____ Mitchell S. Steiner	Chief Executive Officer, Vice Chairman and Director	February 6, 2004
/s/ Mark E. Mosteller _____ Mark E. Mosteller	Chief Financial Officer	February 6, 2004
/s/ J.R. Hyde, III _____ J.R. Hyde III	Chairman of the Board of Directors	February 6, 2004
/s/ Marc S. Hanover _____ Marc S. Hanover	Director	February 6, 2004
/s/ John H. Pontius _____ John H. Pontius	Director	February 6, 2004
/s/ Rosemary Mazanet _____ Rosemary Mazanet	Director	February 6, 2004



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\* Documents incorporated by reference from the Company's Registration Statement of Form S-1, as amended (333-109700), originally filed with the Commission on October 15, 2003.

ATTORNEYS AT LAW	Broomfield, CO 720 566-4000
Five Palo Alto Square 3000 El Camino Real Palo Alto, CA 94306-2155	Reston, VA 703 456-8000 San Diego, CA 858 550-6000
Main 650 843-5000 Fax 650 849-7400	San Francisco, CA 415 693-2000

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February 6, 2004

GTx, Inc.  
3 N. Dunlap Street, 3rd Floor  
Van Vleet Building  
Memphis, TN 38163

RE: S-8 REGISTRATION STATEMENT 5.1 OPINION

Ladies and Gentlemen:

You have requested our opinion with respect to certain matters in connection with the filing by GTx, Inc. (the "Company") of a Registration Statement on Form S-8 (the "Registration Statement") with the Securities and Exchange Commission covering the offering of up to 2,981,800 shares of the Company's Common Stock, \$.001 par value per share (the "Shares"), pursuant to the Company's 2004 Equity Incentive Plan, 2004 Non-Employee Directors' Stock Option Plan, 2002 Stock Option Plan, 2001 Stock Option Plan, 2000 Stock Option Plan and 1999 Stock Option Plan (collectively, the "Plans").

In connection with this opinion, we have examined the Registration Statement and related Prospectuses, the Company's Certificate of Incorporation and Bylaws, as amended, the Plans and such other documents, records, certificates, memoranda and other instruments as we deem necessary as a basis for this opinion. We have assumed the genuineness and authenticity of all documents submitted to us as originals, the conformity to originals of all documents submitted to us as copies thereof and the due execution and delivery of all documents where due execution and delivery are a prerequisite to the effectiveness thereof.

On the basis of the foregoing, and in reliance thereon, we are of the opinion that the Shares, when sold and issued in accordance with the Plans, the Registration Statement and related Prospectuses, will be validly issued, fully paid and nonassessable (except as to shares issued pursuant to certain deferred payment arrangements, which will be fully paid and nonassessable when such deferred payments are made in full).

We consent to the filing of this opinion as an exhibit to the Registration Statement.

Very truly yours,

COOLEY GODWARD LLP

By: /s/ Suzanne Sawochka Hooper  
Suzanne Sawochka Hooper

Consent of Independent Auditors

We consent to the incorporation by reference in the Registration Statement (Form S-8 No. 333-000000) pertaining to the 2004 Equity Incentive Plan, 2004 Non-Employee Directors' Stock Option Plan, 2002 Stock Option Plan, 2001 Stock Option Plan, 2000 Stock Option Plan and 1999 Stock Option Plan of GTx, Inc. of our report dated May 9, 2003 (except Note 1, as to which the date is December 1, 2003, and Note 13, as to which the date is January 14, 2004) with respect to the financial statements for the year ended December 31, 2002 of GTx, Inc. included in the Registration Statement (Form S-1 No. 333-109700) and related prospectus of GTx, Inc. dated February 2, 2004.

/s/ Ernst & Young LLP

Memphis, Tennessee  
February 5, 2004