

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

SCHEDULE 13D

**Under the Securities Exchange Act of 1934
(Amendment No. 6)***

GTx, Inc.

(Name of Issuer)

Common Stock, Par Value \$0.001

(Title of Class of Securities)

40052B108

(CUSIP Number)

John Hofmann Pontius
17 West Pontotoc Ave., Suite 200
Memphis, TN 38103
(901) 685-3412

(Name, Address and Telephone Number of Person Authorized to
Receive Notices and Communications)

Copy to:

Bass, Berry & Sims PLC
100 Peabody Place, Suite 900
Memphis, TN 38103
(901) 543-5900

June 15, 2010

(Date of Event Which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of §§240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box. o

Note: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See Rule 13d-7 for other parties to whom copies are to be sent.

* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

1	NAMES OF REPORTING PERSONS John Hofmann Pontius	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS) (a) <input type="radio"/> (b) <input type="radio"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (SEE INSTRUCTIONS) AF	
5	CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e) <input type="radio"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION United States	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 100,929
	8	SHARED VOTING POWER 4,400,138
	9	SOLE DISPOSITIVE POWER 100,929
	10	SHARED DISPOSITIVE POWER 4,400,138
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 4,501,067	
12	CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) <input checked="" type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 12.3%	
14	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) IN	

Item 1. Security and Issuer.

This statement relates to the common stock, \$0.001 par value per share (“Common Stock”), issued by GTx, Inc. (the “Company” or the “Issuer”) whose principal executive offices are located at 175 Toyota Plaza, 7th Floor, Memphis, Tennessee 38103.

Item 2. Identity and Background.

- (a) The name of the person filing this statement is John Hofmann Pontius (“Mr. Pontius”), with respect to shares of Common Stock of GTx, Inc.
- (b) The business address of Mr. Pontius is 17 West Pontotoc Ave., Suite 200, Memphis, TN 38103.
- (c) The principal occupation of Mr. Pontius is investment and business management. He serves as President of Pittco Management LLC, located at 17 West Pontotoc Ave., Suite 200, Memphis, TN 38103.
- (d) During the last five years, Mr. Pontius has not been convicted in a criminal proceeding.
- (e) During the last five years, Mr. Pontius has not been a party to a civil proceeding of a judicial or administrative body of competent jurisdiction and as a result of such proceeding was or is subject to a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws.
- (f) Mr. Pontius is a citizen of the United States.

Item 3. Source and Amount of Funds or Other Consideration.

On June 15, 2010, J.R. Hyde, III (“Mr. Hyde”), a director of the Company, contributed 1,000,000 shares of Common Stock to a newly established grantor retained annuity trust (“2010-1 GRAT”) for which Mr. Pontius is the trustee. These shares were previously owned directly by Mr. Hyde and were obtained by him with personal funds prior to the Company’s IPO on February 2, 2004 (the “IPO”).

On June 15, 2010, Mr. Hyde contributed 200,000 shares of Common Stock to a second newly established grantor retained annuity trust (“2010-2 GRAT”) for which Mr. Pontius is the trustee. These shares were previously owned directly by Mr. Hyde, and were obtained by him with personal funds prior to the Company’s IPO.

Item 4. Purpose of Transaction.

Mr. Pontius and each of the parties described acquired the shares of Common Stock for investment purposes, and Mr. Pontius and each party intend to evaluate the performance of such securities as an investment in the ordinary course of business. Neither Mr. Pontius nor any of the parties described has any plans or proposals which relate or could result in:

- (a) The acquisition by any person of additional securities of the Issuer, or the disposition of securities of the Issuer;

- (b) An extraordinary corporate transaction, such as a merger, reorganization or liquidation, involving the Issuer or any of its subsidiaries;
- (c) A sale or transfer of a material amount of assets of the Issuer or of any of its subsidiaries;
- (d) Any change in the present board of directors or management of the Issuer, including any plans or proposals to change the number or term of directors or to fill any existing vacancies on the board;
- (e) Any material change in the present capitalization or dividend policy of the Issuer;
- (f) Any other material change in the Issuer's business or corporate structure;
- (g) Changes in the Issuer's charter, bylaws or instruments corresponding thereto or other actions which may impede the acquisition of control of the Issuer by any person;
- (h) Causing a class of securities of the Issuer to be delisted from a national securities exchange or to cease to be authorized to be quoted in an inter-dealer quotation system of a registered national securities association;
- (i) A class of equity securities or the Issuer becoming eligible for termination of registration pursuant to Section 12(g)(4) of the Securities Exchange Act of 1934; or
- (j) Any action similar to any of those enumerated above.

Item 5. Interest in Securities of the Issuer.

- (a) The approximate percentage of shares of Common Stock beneficially owned by Mr. Pontius is based upon 36,457,569 shares of Common Stock which include 36,420,901 shares outstanding as of June 18, 2010 and 36,668 shares which are not currently issued but are subject to options held by Mr. Pontius and exercisable within 60 days. As of June 21, 2010, Mr. Pontius beneficially owned, for purposes of Rule 13d-3 under the Securities and Exchange Act of 1934, an aggregate of 4,501,067 of the Common Stock, constituting approximately 12.3% of the shares outstanding. The total does not include 46,261 shares held by Mr. Pontius' spouse, Patricia Pontius ("Mrs. Pontius"), as to which Mr. Pontius disclaims beneficial interest pursuant to Rule 13d-4, or 16,109 shares issuable pursuant to the Company's Deferred Compensation Plan.
- (b) Shares beneficially owned.
 - (i) Mr. Pontius has the sole power to vote or direct the vote and sole power to dispose or direct the disposition of 100,929 shares, which are owned individually, by a trust for which Mr. Pontius is trustee or are within Mr. Pontius' power to acquire within 60 days.
 - (ii) Mr. Pontius shares the power to vote or direct the vote and the power to dispose of 4,400,138 shares held indirectly (1) by trusts for the benefit of Mr. Pontius' family members ("Family Trusts") for which Mr. Pontius or Mrs. Pontius is trustee; (2) by trusts for the benefit of Mr. Hyde's children ("Hyde Family Trusts") for which Mr. Pontius is trustee; and (3) by a number of GRATs on behalf of Mr. Hyde ("Hyde GRATs"), for which Mr. Pontius is trustee.
 - (iii) As trustee of certain of the Family Trusts, Mrs. Pontius shares the power to vote and dispose of shares beneficially owned by Mr. Pontius. Mrs. Pontius is a tax associate with PriceWaterhouseCoopers. Mrs. Pontius' business address is 50 N. Front Street, Suite 1000, Memphis, Tennessee 38103. Mrs. Pontius is a citizen of the United States.

- (iv) During the last five years, Mrs. Pontius has not been convicted in a criminal proceeding, nor has she been a party to a civil proceeding of a judicial or administrative body of competent jurisdiction and as a result of such proceeding was or is subject to a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws.
 - (v) Mr. Hyde shares the power to vote or direct the vote and the power to dispose of shares beneficially owned by Mr. Pontius and held in the Hyde Family Trusts and the Hyde GRATs. Mr. Hyde is the Chief Executive Officer of Pittco Management LLC, located at 17 West Pontotoc Ave., Suite 200, Memphis, TN 38103. Mr. Hyde is a citizen of the United States.
 - (vi) During the last five years, Mr. Hyde has not been convicted in a criminal proceeding, nor has he been a party to a civil proceeding of a judicial or administrative body of competent jurisdiction and as a result of such proceeding was or is subject to a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws.
- (c) In addition to the transactions set forth in Item 3 above, the trading dates, number of shares of Common Stock purchased or sold, the manner in which the transaction was effected, and price per share for all transactions in the Common Stock during the past 60 days by Mr. Pontius are as follows:
- (i) On April 30, 2010, pursuant to the Company's Amended and Restated 2004 Non-Employee Directors' Stock Option Plan, Mr. Pontius received an annual stock option grant to purchase 10,000 shares of Common Stock. One third of the options shall vest on the anniversary date of the grant and each anniversary date thereafter with the options being fully vested at the end of three years from the date of grant. The options have a strike price of \$3.28 and expire on April 29, 2020.
- (d) Except for persons described above in paragraph (b) of this Item 5, no person is known to have the right to receive or the power to direct the receipt of dividends from or the proceeds from the sale of any shares of Common Stock.
- (e) Not applicable.

Item 6. Contracts, Arrangements, Understandings or Relationships with Respect to Securities of the Issuer.

Not Applicable.

Item 7. Material to be filed as Exhibits.

Not Applicable.

CUSIP No.

40052B108

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Dated: June 21, 2010

/s/ John H. Pontius
John Hofmann Pontius