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

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 OR 15(d) of The Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): August 9, 2010

GTx, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**000-50549**	**62-1715807**
(State or other jurisdiction of incorporation)	(Commission File Number)	(IRS Employer Identification No.)

175 Toyota Plaza 7th Floor Memphis, Tennessee	**38103**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: **(901) 523-9700**

(Former name or former address, if changed since last report.)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- o Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- o Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- o Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- o Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

ITEM 2.02 Results of Operations and Financial Condition.

On August 9, 2010, GTx, Inc. issued an earnings release for the second quarter ended June 30, 2010, a copy of which is furnished as Exhibit 99.1 to this Current Report.

This release is furnished by GTx pursuant to Item 2.02 of Form 8-K and is not to be considered “filed” under the Exchange Act, and shall not be incorporated by reference into any previous or future filing by the Registrant under the Securities Act or the Exchange Act.

ITEM 9.01 Financial Statements and Exhibits.

(c) Exhibits

Exhibit Number	Description
99.1	Press Release issued by GTx, Inc. dated August 9, 2010

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, the Registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

GTx, INC.

Date: August 9, 2010

By: /s/ Mark E. Mosteller
Name: Mark E. Mosteller
Title: Vice President and Chief Financial Officer
(principal accounting and financial officer)

Exhibit 99.1

Contact:
McDavid Stilwell
GTx, Inc.
Director, Corporate Communications & Financial Analysis
901-523-9700

GTX, INC. REPORTS SECOND QUARTER 2010 CORPORATE RESULTS

MEMPHIS, TENN. — August 9, 2010 — GTx, Inc. (Nasdaq: GTXI) today reported financial results for the second quarter of 2010. The net loss for the quarter ended June 30, 2010 was $12.9 million compared with a net loss of $11.3 million for the quarter ended June 30, 2009. The net loss for the second quarter of 2010 included a $1.7 million non-cash impairment charge related to the conclusion of the Phase III clinical trial of toremifene 20 mg. For the six months ended June 30, 2010, GTx reported net income of $31.4 million compared with a net loss of $22.6 million for the same period in 2009.

“In the third quarter, we will report topline results of the Phase II clinical trial of GTx-758, which is a selective ER alpha agonist for first line treatment of advanced prostate cancer,” said Mitchell S. Steiner, MD, CEO of GTx. “GTx-758 is being developed as an oral agent to reduce serum total testosterone to castrate levels and serum free testosterone to levels lower than orchiectomy or LHRH analogs, without bone loss or hot flashes. If we are able to achieve this potential product profile, GTx-758 would be the first truly differentiated approach to androgen deprivation therapy for prostate cancer within the last three decades.”

Clinical Pipeline Updates

- GTx-758, a selective ER alpha agonist for the first line treatment of advanced prostate cancer: GTx has conducted a Phase II clinical trial evaluating GTx-758 in 70 healthy males and expects results from the study in the third quarter of 2010. GTx-758 has the potential to reduce serum total testosterone and serum free testosterone to castrate levels without causing hot flashes or bone loss.

- Ostarine™ for the treatment of cancer cachexia and other muscle wasting diseases: GTx is pursuing a partnership for the development of selective androgen receptor modulators (SARMs), which include ostarine, our lead SARM, for the treatment of cancer cachexia.

- Toremifene 80 mg to reduce fractures in men with prostate cancer on androgen deprivation therapy: GTx has met with the United States Food and Drug Administration and is continuing to work with the agency to finalize the protocol for the Phase III TREAT 2 (Toremifene for Reduction of fractures and other Estrogen deficiency side effects in men on Androgen deprivation Therapy) clinical trial. GTx expects to initiate the TREAT 2 clinical trial in the first quarter of 2011.

Second quarter 2010 financial highlights

The net loss for the quarter ended June 30, 2010 was $12.9 million, which included a $1.7 million non-cash impairment charge, compared with a net loss of $11.3 million for the same period in 2009.

Revenue for the second quarter of 2010 was $935,000 compared to $3.8 million for the same period in 2009. Revenues for both periods included net sales of FARESTON® (toremifene citrate) 60 mg, marketed for the treatment of metastatic breast cancer in postmenopausal women, and collaboration revenue from our collaboration with Ipsen Biopharm Limited. Revenues for the second quarter of 2009 also included collaboration revenue from our collaboration with Merck & Co., Inc., which was terminated in March 2010. Net sales of FARESTON® were $599,000 and $949,000 for the three months ended June 30, 2010 and 2009, respectively. Collaboration revenue was $336,000 and $2.9 million for the second quarter of 2010 and 2009, respectively.

For the three months ended June 30, 2010 and 2009, research and development expenses were $9.5 million and $7.7 million, respectively. Research and development expenses for the three months ended June 30, 2010 included a non-cash impairment charge of $1.7 million related to toremifene 20 mg intangible assets. The impairment charge was recorded in connection with the unsuccessful conclusion of the Phase III clinical trial evaluating toremifene 20 mg for the prevention of prostate cancer in men with high grade prostatic intraepithelial neoplasia and the Company's current expectation not to conduct additional clinical testing of toremifene 20 mg.

General and administrative expenses decreased during the three months ended June 30, 2010 to $4.3 million from $7.0 million for the three months ended June 30, 2009.

At June 30, 2010, GTx had cash, cash equivalents and short-term investments of $28.4 million.

Conference Call

There will be a conference call today at 9 a.m. Eastern Time to discuss GTx's second quarter financial results and to provide a company update. To listen to the conference call, please dial:

- 866-362-4666 from the United States and Canada or
- 617-597-5313 (International)

The access code for the call is 17336053.

A playback of the call will be available beginning today at 11:00 a.m. Eastern Time through August 23, and may be accessed by dialing:

- 888-286-8010 from the United States and Canada or
- 617-801-6888 (International)

The reservation number for the replay is 25791292.

Additionally, you may access the live and subsequently archived webcast of the conference call from the Investor Relations section of the company's website at http://www.gtxinc.com.

About GTx

GTx, Inc., headquartered in Memphis, Tenn., is a biopharmaceutical company dedicated to the discovery, development, and commercialization of small molecules that selectively target hormone pathways for the treatment and prevention of cancer, the treatment of side effects of anticancer therapy, cancer supportive care, and other serious medical conditions.

GTx's newest product candidate is GTx-758, which is a selective ER alpha agonist. GTx-758 has the potential to achieve medical castration without causing bone loss or hot flashes. GTx expects results of a Phase II clinical trial of GTx-758 in the third quarter of 2010.

GTx is developing ostarine™ (GTx-024) and other selective androgen receptor modulators, or SARMs, for cancer cachexia and other muscle wasting diseases. GTx is pursuing a partnership for the development of SARMs, which will include our lead SARM, ostarine, for the treatment of cancer cachexia.

GTx is also developing toremifene 80 mg for the reduction of fractures and treatment of other estrogen deficiency side effects of androgen deprivation therapy for prostate cancer. GTx has completed a successful toremifene 80 mg Phase III clinical trial and expects to initiate TREAT 2, the second Phase III clinical trial, in the first quarter of 2011.

Forward-Looking Information is Subject to Risk and Uncertainty

This press release contains forward-looking statements based upon GTx's current expectations. Forward-looking statements include, but are not limited to, statements relating to GTx's plans to continue to pursue the development of and marketing approval for, and the potential commercialization of, toremifene 80 mg, and the continued development and potential commercialization of GTx's other product candidates. Forward-looking statements involve risks and uncertainties. GTx's actual results and the timing of events could differ materially from those anticipated in such forward-looking statements as a result of these risks and uncertainties, which include, without limitation, the risks (i) that GTx and its collaboration partner will not be able to commercialize their product candidates if clinical trials do not demonstrate safety and efficacy in humans, including in any additional clinical trials that GTx may conduct for toremifene 80 mg to reduce fractures in men with prostate cancer on ADT; (ii) that GTx may not be able to obtain required regulatory approvals to commercialize its product candidates, including toremifene 80 mg to reduce fractures in men with prostate cancer on ADT, in a timely manner or at all; (iii) that clinical trials being conducted or planned to be conducted by GTx and its collaboration partner may not be initiated or completed on schedule, or at all, or may otherwise be suspended or terminated; (iv) related to GTx's dependence on its collaboration partner for product candidate development and commercialization efforts; (v) related to GTx's reliance on third parties to manufacture its product candidates and to conduct its clinical trials; and (vi) that GTx could utilize its available cash resources sooner than it currently expects and may be unable to raise capital when needed, which would force GTx to delay, reduce or eliminate its product candidate development programs or commercialization efforts. You should not place undue reliance on these forward-looking statements, which apply only as of the date of this press release. GTx's quarterly report on Form 10-Q filed with the SEC on May 4, 2010 contains under the heading, "Risk Factors," a more comprehensive description of these and other risks to which GTx is subject. GTx expressly disclaims any obligation or undertaking to release publicly any updates or revisions to any forward-looking statements contained herein to reflect any change in its expectations with regard thereto or any change in events, conditions or circumstances on which any such statements are based.

GTx, Inc.
CONDENSED BALANCE SHEETS
(in thousands, except share data)

	June 30, 2010 (unaudited)	December 31, 2009
ASSETS		
Current assets:		
Cash and cash equivalents	$ 19,990	$ 40,219
Short-term investments	8,374	8,825
Accounts receivable, net	369	406
Inventory	124	116
Prepaid expenses and other current assets	6,326	1,109
Total current assets	35,183	50,675
Property and equipment, net	2,680	3,291
Intangible and other assets, net	1,915	3,755
Total assets	$ 39,778	$ 57,721
LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)		
Current liabilities:		
Accounts payable	$ 851	$ 1,268
Accrued expenses	4,150	4,730
Deferred revenue – current portion	1,344	9,954
Total current liabilities	6,345	15,952
Deferred revenue, less current portion	7,394	49,898
Other long term liabilities	598	621
Commitments and contingencies		
Stockholders' equity (deficit):		
Common stock, $0.001 par value: 60,000,000 shares authorized; 36,420,901 shares issued and outstanding at June 30, 2010 and December 31, 2009	37	36
Additional paid-in capital	362,180	359,388
Accumulated deficit	(336,776)	(368,174)
Total stockholders' equity (deficit)	25,441	(8,750)
Total liabilities and stockholders' equity (deficit)	$ 39,778	$ 57,721

GTx, Inc.
CONDENSED STATEMENTS OF OPERATIONS
(in thousands, except share and per share data)
(unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2010	**2009**	**2010**	**2009**
Revenues:				
Product sales, net	$ 599	$ 949	$ 1,398	$ 1,708
Collaboration revenue	336	2,873	56,114	5,745
Total revenue	935	3,822	57,512	7,453
Costs and expenses:				
Cost of product sales	134	431	285	779
Research and development expenses	9,477	7,746	17,127	16,058
General and administrative expenses	4,325	6,981	8,834	13,492
Total costs and expenses	13,936	15,158	26,246	30,329
Income (loss) from operations	(13,001)	(11,336)	31,266	(22,876)
Other income, net	60	76	132	121
Income (loss) before income taxes	(12,941)	(11,260)	31,398	(22,755)
Income tax benefit	—	—	—	194
Net income (loss)	$ (12,941)	$ (11,260)	$ 31,398	$ (22,561)
Net income (loss) per share:				
Basic and diluted	$ (0.36)	$ (0.31)	$ 0.86	$ (0.62)
Weighted average shares used in computing net income (loss) per share:				
Basic and diluted	36,420,901	36,417,056	36,420,901	36,410,866