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): June 1, 2009

GTx, Inc.

(Exact Name of Registrant as Specified in its Charter)

Delaware
(State or Other Jurisdiction of Incorporation)

000-50549	**62-1715807**
(Commission File Number)	(I.R.S. Employer Identification No.)

175 Toyota Plaza
7th Floor
Memphis, Tennessee 38103
(Address of Principal Executive Office, Including Zip Code)

(901) 523-9700
(Registrant's Telephone Number, Including Area Code)

Not Applicable
(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 (see General Instruction A.2. below):

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 8.01 Other Events.

On June 1, 2009, GTx, Inc. issued a press release announcing the presentation at the 2009 Annual Meeting of the American Society of Clinical Oncology of data demonstrating that toremifene 80 mg treatment compared to placebo increased bone mineral density in multiple clinically relevant subpopulations of men with prostate cancer on androgen deprivation therapy. A copy of the press release is furnished as Exhibit 99.1 to this Current Report.

ITEM 9.01 Financial Statements and Exhibits.

(d) Exhibits

Exhibit Number	Description
99.1	Press Release issued by GTx, Inc. dated June 1, 2009

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: June 1, 2009

By: /s/ Henry P. Doggrell
Name: Henry P. Doggrell
Title: Vice President, General Counsel and Secretary

Exhibit 99.1

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

GTx's toremifene 80 mg increased bone mineral density in multiple clinically relevant subpopulations of prostate cancer patients on androgen deprivation therapy

Data from the Phase III clinical trial evaluating toremifene 80 mg for the prevention of bone fractures in men with prostate cancer on androgen deprivation therapy presented at 2009 Annual Meeting of the American Society of Clinical Oncology

Orlando — June 1, 2009 — GTx, Inc. (Nasdaq: GTXI) announced the presentation yesterday of data demonstrating that toremifene 80 mg treatment compared to placebo increased bone mineral density (BMD) in multiple clinically relevant subpopulations of men with prostate cancer on androgen deprivation therapy (ADT). The data, an analysis of results of the recent Phase III clinical trial evaluating toremifene 80 mg for the prevention of bone fractures and treatment of other estrogen deficiency side effects of androgen deprivation therapy in men with prostate cancer, were presented yesterday at the 2009 Annual Meeting of the American Society of Clinical Oncology.

Toremifene 80 mg treatment compared to placebo showed higher BMD at the spine and the hip in an analysis of specific subgroups defined by baseline characteristics such as time on ADT (above/below the median 2.3 years), age (above/below 70 years), baseline BMD (normal or low), prevalent fracture, country of origin (United States or Mexico), or use of calcium/vitamin D (Abstract # 5055: "The effect of toremifene citrate on BMD in men on ADT: A phase III clinical trial").

"Estrogen is the principal hormone responsible for maintaining bone integrity, and loss of estrogen due to androgen deprivation therapy can lead to increased risk of fracture in men with prostate cancer," said Daniel W. Lin, MD, Associate Professor and Chief of Urologic Oncology, Department of Urology, University of Washington School of Medicine, and a Principal Investigator in the study. "In the Phase III clinical trial, treatment with toremifene 80 mg, a selective estrogen receptor modulator, resulted in increased bone mineral density compared to placebo in men with prostate cancer on ADT and, most importantly, toremifene 80 mg treatment significantly reduced the risk of fracture."

Additional data from the clinical trial presented yesterday at ASCO demonstrated that in a univariate analysis, age greater than 70 years and degree of bone loss are independent predictors of fracture risk in men with prostate cancer on androgen deprivation therapy (Abstract # 9517: "Use of age and BMD to predict fracture risk in men on androgen deprivation therapy").

About the Study

The two year, double blind, placebo controlled, randomized study of 1,389 ADT patients was conducted at approximately 150 clinical sites in the United States and Mexico. The primary endpoint was new morphometric vertebral fractures measured by dual X-ray absorptiometry (DEXA). Key secondary endpoints included bone mineral density, lipid changes, hot flashes, and gynecomastia.

In the study, toremifene 80 mg treatment demonstrated statistically significant reductions compared to placebo in new morphometric vertebral fractures (the primary endpoint), in all nontraumatic fractures, and in first of either a nontraumatic fracture or greater than 7% bone loss. Toremifene 80 mg treatment compared to placebo also resulted in statistically significant increases in bone mineral density at the lumbar spine, hip, and femur; improvements in lipid profiles including a reduction in LDL, triglycerides and total cholesterol and an increase in HDL; and improvements in breast pain and tenderness.

Toremifene 80 mg was well tolerated. Among the most common adverse events that occurred in over 2 percent of study subjects were joint pain (treated 7.2 percent, placebo 11.5 percent), back pain (treated 5.9 percent, placebo 5.0 percent), dizziness (treated 5.9 percent, placebo 4.8 percent), and constipation (treated 4.2 percent, placebo 5.0 percent).

About ADT for Prostate Cancer

ADT, primary treatment for advanced prostate cancer, has improved survival in men with prostate cancer. Approximately 700,000 men with prostate cancer are being treated with ADT and an estimated 100,000 initiate ADT each year.

ADT is accomplished either surgically by removal of the testes, or more commonly by injection with LH releasing hormone (LHRH) agents. ADT works by reducing testosterone to castrate levels. The reduction in testosterone from ADT also results in very low estrogen levels, because estrogen is derived from testosterone in men. Estrogen deficiency side effects associated with ADT include high risk of skeletal fractures, adverse lipid changes, hot flashes, gynecomastia, depression, and memory loss.

Of patients on ADT, up to 77% develop significant bone loss, making them susceptible to fracture. Recent studies indicate that the annual risk of fracture in men on ADT is 5% to 8%. Fractures are serious and can reduce survival in men on ADT by more than three years.

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 to prevent and treat cancer, fractures and bone loss, muscle loss and other serious medical conditions. GTx has completed a pivotal Phase III clinical trial evaluating toremifene citrate, a selective estrogen receptor modulator, or SERM, at an 80 mg dose for the prevention of bone fractures and treatment of other estrogen deficiency side effects of androgen deprivation therapy in men with prostate cancer. GTx has applied for marketing approval in the United States for toremifene 80 mg and, if approved, plans to commercialize toremifene 80 mg

in the U.S. GTx is also developing toremifene citrate at a 20 mg dose in a Phase III clinical trial for the prevention of prostate cancer in high risk men with high grade prostatic intraepithelial neoplasia, or PIN. GTx and Ipsen have entered into a development and collaboration agreement for toremifene citrate in all indications except breast cancer for Europe and the Commonwealth of Independent States (CIS). In December 2007, GTx and Merck & Co., Inc. formed a collaboration to discover and develop selective androgen receptor modulators, or SARMs, a new class of drugs with the potential to treat sarcopenia, which is the loss of skeletal muscle mass resulting in reduced physical strength and ability to perform activities of daily living, as well as cancer cachexia (cancer induced muscle loss) and other musculoskeletal wasting conditions. GTx and Merck are evaluating multiple SARM product candidates, including Ostarine™ (designated by Merck as MK-2866) and MK-0773 for a variety of musculoskeletal wasting indications including sarcopenia and cancer cachexia. In the second half of 2009, Merck and GTx expect to complete an ongoing Phase II clinical trial evaluating MK-0773 in sarcopenia. GTx also is conducting a Phase I clinical trial evaluating GTx-758, an oral luteinizing hormone inhibitor, for first line treatment of advanced prostate cancer.

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 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 that (i) GTx and its collaboration partners will not be able to commercialize their product candidates if clinical trials do not demonstrate safety and efficacy in humans; (ii) GTx may not be able to obtain required regulatory approvals to commercialize product candidates; (iii) clinical trials being conducted by GTx and its collaboration partners may not be completed on schedule, or at all, or may otherwise be suspended or terminated; and (iv) 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 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 May 11, 2009 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.