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): April 17, 2007

GTx, Inc.

(Exact name of Registrant as specified in its charter)

Delaware	**005-79588**	**62-1715807**
(State or other jurisdiction of incorporation or organization)	(Commission File Number)	(I.R.S. Employer Identification No.)

3 N. Dunlap Street
Van Vleet Building
Memphis, Tennessee 38163
(901) 523-9700
(Address, including zip code, of Registrant's principal executive offices
Registrant's telephone number, including area code)

(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 April 17, 2007, GTx, Inc. issued a press release announcing Ostarine™ improved insulin resistance among elderly patients based on data from its Phase II clinical trial of 120 elderly men and postmenopausal women completed in December 2006, 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 April 17, 2007

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: April 17, 2007

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

Exhibit 99.1

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

GTx Announces Ostarine™ Improved Insulin Resistance Among Elderly Patients in A Recently Completed Phase II Clinical Trial

MEMPHIS, Tenn. — April 17, 2007 — GTx, Inc. (Nasdaq: GTXI) announced today that data from a recently conducted Phase II Ostarine™ clinical trial of 60 elderly men and 60 postmenopausal women revealed that insulin and glucose levels were reduced and insulin resistance was improved among subjects receiving the 3 mg dose of Ostarine compared to baseline. These observations were even more pronounced among a subset of prediabetic subjects.

Data from the Phase II clinical trial of Ostarine are being highlighted at the GTx Analyst Day meeting being held today from 11 a.m. to 2 p.m. at the Loews Regency Hotel in New York City. During the meeting, GTx also will provide information about its clinical development plans and commercialization strategy for Ostarine, the company's first-in-class selective androgen receptor modulator (SARM).

In the three month Phase II clinical trial in which patients with diabetes or obesity (BMI>30) were excluded, subjects treated with Ostarine 3 mg (n=23) had on average an 11% decline in fasting blood glucose ($p<0.001$), a 17.6% reduction in insulin levels ($p=0.043$), and a 26.8% reduction in insulin resistance (HOMA-IR) ($p=0.037$), when compared to their baseline measurements. Improvements in insulin resistance were more apparent among a small subset of prediabetic (fasting blood glucose of 100 — 125 mg/dL) patients (n=5) treated with Ostarine 3 mg in whom the mean fasting blood glucose declined by 17.4%, insulin levels reduced by 29.4%, and insulin resistance decreased by 41.3%.

Improvements in insulin resistance among subjects receiving the 3 mg dose provide additional supporting evidence of the anabolic activity of Ostarine. The resulting changes in body composition (increased muscle and decreased fat) with Ostarine treatment appear to have a beneficial impact on insulin resistance. These data compare favorably with results of clinical trials using FDA approved diabetic drugs in a prediabetic population. For example, in a one year study (the DREAM study), prediabetic patients taking rosiglitazone 8 mg evidenced a decline in fasting blood glucose of 9% from their baseline measurements (*Lancet*, 2006). Similarly, in prediabetic patients taking glipizide 2.5 mg for 6 months, the mean fasting blood glucose decreased by 4 percent, insulin declined by 17%, and insulin resistance reduced by 35% (Erikson JG *et al,* 2006). In prediabetic patients taking metformin 1.7 g for 16 weeks, fasting blood glucose declined by 6%, insulin decreased by 29%, and the calculated insulin resistance decreased by approximately 39% (Bulcao C *et al*, 2007).

"The data from our Phase II clinical trial provide more evidence that Ostarine is having the desired anabolic effect," said Ronald A. Morton, Jr, MD, Chief Medical Officer of GTx. "By increasing muscle and decreasing fat, Ostarine appears to improve levels of glucose and insulin and to reduce insulin resistance. These data suggest Ostarine may have a beneficial impact on prediabetic conditions and potentially diabetes, which, if validated in later studies, could provide the basis for our seeking expanded indications for Ostarine."

“It would be clinically meaningful and exciting if Ostarine is shown to have an effect of similar magnitude in chronic kidney disease patients where diabetes and prediabetes are highly prevalent,” said T. Alp Ikizler, MD, Associate Professor of Medicine at Vanderbilt University School of Medicine.

GTx is planning to initiate a Phase IIb clinical trial evaluating Ostarine for the treatment of chronic kidney disease muscle wasting by the end of the year 2007. Diabetes is a highly prevalent comorbidity among patients with chronic kidney disease. Nearly one half of treated Stage 3 and 4 chronic kidney disease patients are diabetic, and the majority of remaining patients are prediabetic. Testing Ostarine in this population will allow GTx to gather additional information about the effect of Ostarine on glucose, insulin and insulin resistance in diabetics or people at risk for diabetes.

About GTx
GTx, headquartered in Memphis, Tenn., is a biopharmaceutical company dedicated to the discovery, development, and commercialization of small molecules that selectively target hormone pathways to treat cancer, osteoporosis and bone loss, muscle wasting and other serious medical conditions. GTx is developing ACAPODENE® (toremifene citrate), a selective estrogen receptor modulator, or SERM, in two separate clinical programs in men: first, a pivotal Phase III clinical trial for the treatment of serious side effects of androgen deprivation therapy for advanced prostate cancer, and second, a pivotal Phase III clinical trial for the prevention of prostate cancer in high risk men with high grade prostatic intraepithelial neoplasia, or PIN. GTx has licensed to Ipsen Limited exclusive rights in Europe to develop and commercialize ACAPODENE®. GTx also is developing Ostarine™, a first-in-class selective androgen receptor modulator, or SARM. GTx plans to initiate a Phase IIb Ostarine™ clinical trial for cancer cachexia by the summer of 2007. GTx plans to initiate a Phase IIb Ostarine™ clinical trial for the treatment of chronic kidney disease and end stage renal disease muscle wasting by the end of 2007. GTx believes that Ostarine™ also has the potential to treat a variety of other indications associated with muscle wasting and bone loss, including sarcopenia and osteoporosis.

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 will not be able to commercialize its product candidates if clinical trials do not demonstrate safety and efficacy in humans; (ii) GTx may not able to obtain required regulatory approvals to commercialize its product candidates; (iii) GTx’s clinical trials may not be initiated and/or 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 annual report on form 10-K filed with the U.S. Securities and Exchange Commission (the “SEC”) on March 9, 2007, 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.