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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) October 26, 2010

GTx, Inc.

(Exact name of registrant as specified in its charter)

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

175 Toyota Plaza
7th Floor
Memphis, Tennessee 38103
(901) 523-9700
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

(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))

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ITEM 2.02. RESULTS OF OPERATIONS AND FINANCIAL CONDITION.

On October 26, 2010, GTx, Inc. ("us," "we," "our," "GTx" or the "Company") filed a preliminary prospectus supplement with the Securities and Exchange Commission (the "Preliminary Prospectus") with respect to a proposed underwritten public offering of its common stock as described under Item 8.01 under the heading "Proposed Public Offering." In the Preliminary Prospectus, the Company disclosed the following information with respect to the Company's financial results for the three and nine months ended September 30, 2010:

While the Company has not finalized its full financial results for the three and nine months ended September 30, 2010, the Company expects to report that it had $19.7 million of cash, cash equivalents and short-term investments as of September 30, 2010, which does not include the final $5.0 million research and development expense reimbursement payment from Merck & Co., Inc. that the Company will receive later this year, and the Company also expects to report that its total costs and expenses were $9.9 million and $36.1 million for the three and nine months ended September 30, 2010, respectively.

ITEM 8.01. OTHER EVENTS.

Proposed Public Offering

October 26, 2010, GTx announced that it is offering to sell, subject to market conditions, shares of its common stock in an underwritten public offering. A copy of the press release is filed herewith as Exhibit 99.1 and is incorporated herein by reference.

Updated Company Disclosure

The Company is filing information for the purpose of supplementing and updating its description of certain risks and uncertainties that may have a material adverse effect on its business, financial condition or results of operations from the description included under the heading, "Item 1A. Risk Factors" in the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2010, filed with the SEC on August 9, 2010. The Company is also updating the description of its business from that described under the heading, "Item 1. Business—Overview" in the Company's Annual Report on Form 10-K for the year ended December 31, 2009, filed with the SEC on March 15, 2010. The updated descriptions are filed herewith as Exhibit 99.2 and are incorporated herein by reference.

ITEM 9.01. FINANCIAL STATEMENTS AND EXHIBITS.

(d) Exhibits.

Exhibit No.	Description
99.1	Press Release, dated October 26, 2010
99.2	Updated Company Disclosure

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SIGNATURES

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

GTx, Inc.

Dated: October 26, 2010

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

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EXHIBIT INDEX

Exhibit No.	Description
99.1	Press Release, dated October 26, 2010
99.2	Updated Company Disclosure

Exhibit 99.1

GTx Announces Proposed Public Offering of Common Stock

MEMPHIS, TENN. — October 26, 2010 —GTx, Inc. (Nasdaq: GTXI) today announced that it is offering to sell shares of its common stock in an underwritten public offering. GTx also expects to grant the underwriter a 30-day option to purchase up to an additional 15% of the shares of common stock offered in the public offering to cover over-allotments, if any. All of the shares in the offering are to be sold by GTx. Lazard Capital Markets LLC is acting as sole book-running manager in the offering. The offering is subject to market conditions, and there can be no assurance as to whether or when the offering may be completed, or as to the actual size or terms of the offering.

A shelf registration statement on Form S-3 relating to the public offering of the shares of common stock described above was filed with the Securities and Exchange Commission and is effective. A preliminary prospectus supplement relating to and describing the terms of the offering will be filed with the SEC and will be available on the SEC's web site at http://www.sec.gov. When available, copies of the preliminary prospectus supplement relating to these securities may also be obtained from the offices of Lazard Capital Markets LLC at 30 Rockefeller Plaza, 60th Floor, New York, NY, 10020 or via telephone at (800) 542-0970. This press release does not constitute an offer to sell, or the solicitation of an offer to buy, these securities, nor will there be any sale of these securities in any state or other jurisdiction in which such offer, solicitation or sale is not permitted.

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.

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 expectations regarding the completion, timing and size of the proposed public offering. 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, risks and uncertainties related to market conditions and the satisfaction of customary closing conditions related to the proposed public offering. There can be no assurance that GTx will be able to complete the proposed public offering at the anticipated size or on the anticipated terms, or at all. GTx will continue to need significant additional capital to fund its operations 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.

Additional risks and uncertainties relating to the proposed offering, GTx and its business can be found under the heading "Risk Factors" in GTx's quarterly report on Form 10-Q filed with the SEC on August 9, 2010, and in the preliminary prospectus supplement related to the proposed offering to be filed with the Securities and Exchange Commission on October 26, 2010. 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.

SOURCE: GTx, Inc.

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

FORWARD-LOOKING STATEMENTS

The statements in this Current Report on Form 8-K contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, which we refer to as the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, which we refer to as the Exchange Act. These statements relate to future events or to our future financial performance and involve known and unknown risks, uncertainties and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performances or achievements expressed or implied by the forward-looking statements. All statements, other than statements of historical facts, are forward-looking statements for purposes of these provisions, including without limitation any statements relating to:

- the anticipated progress of our research, development and clinical programs, including whether any future clinical trials we conduct will achieve similar results to clinical trials that we have successfully concluded;
- the timing, scope and anticipated initiation and completion of any future clinical trials that we may conduct;
- the timing of regulatory submissions and the timing, scope and anticipated outcome of related regulatory actions;
- potential future licensing fees, milestone payments and royalty payments, including any milestone payments or royalty payments that we may receive under our collaborative arrangement with Ipsen Biopharm Limited, or Ipsen;
- our ability to maintain our collaborative arrangement with Ipsen and to establish and maintain potential new collaborative arrangements for the development and commercialization of our product candidates;
- our and our current and potential future collaborators' ability to obtain and maintain regulatory approvals of our product candidates and any related restrictions, limitations, and/or warnings in the label of an approved product candidate;
- our and our current and potential future collaborators' ability to market, commercialize and achieve market acceptance for our product candidates or products that we may develop;
- our ability to generate additional product candidates for clinical testing;
- our ability to protect our intellectual property and operate our business without infringing upon the intellectual property rights of others; and
- our estimates regarding the sufficiency of our cash resources.

In some cases, you can identify forward-looking statements by terms such as "anticipates," "believes," "could," "estimates," "expects," "intends," "may," "plans," "potential," "predicts," "projects," "should," "will," "would" and similar expressions intended to identify forward-looking statements. Forward-looking statements reflect our current views with respect to future events, are based on assumptions and are subject to risks, uncertainties and other important factors. We discuss many of these risks, uncertainties and other important factors in greater detail under the heading "Risk Factors" in this Current Report on Form 8-K. Given these risks, uncertainties and other important factors, you should not place undue reliance on these forward-looking statements. Also, these forward-looking statements represent our estimates and assumptions only as of the date such forward-looking statements are made. You should read this Current Report on Form 8-K with the understanding that our actual future results may be materially different from what we expect. We hereby qualify all of our forward-looking statements by these cautionary statements.

Except as required by law, we assume no obligation to update any forward-looking statements publicly, or to update the reasons actual results could differ materially from those anticipated in any forward-looking statements, even if new information becomes available in the future.

RISK FACTORS

We have identified the following additional risks and uncertainties that may have a material adverse effect on our business, financial condition or results of operations. Investors should carefully consider the risks described below before making an investment decision. Our business faces significant risks, and the risks described below may not be the only risks we face. Additional risks not presently known to us or that we currently believe are immaterial may also significantly impair our business operations. If any of these risks occur, our business, results of operations or financial condition could suffer, the market price of our common stock could decline and you could lose all or part of your investment in our common stock.

Risks Related to Our Financial Condition and Need for Additional Financing

We have incurred losses since inception, and we anticipate that we will incur continued losses for the foreseeable future.

We have a limited operating history. As of June 30, 2010, we had an accumulated deficit of $336.8 million. We have incurred losses in each year since our inception in 1997, including net losses of $46.3 million and $51.8 million in 2009 and 2008, respectively. Due to the termination of our collaboration with Merck & Co., Inc., or Merck, and the associated recognition in the first quarter of 2010 of $49.9 million in deferred revenue and the final payment to be received from Merck later in 2010 of $5.0 million of cost reimbursement for research and development activities, we expect to report net income for the year ending December 31, 2010. However, while recognition of this revenue is expected to result in net income for 2010, we expect to incur significant operating losses in 2011 and for the foreseeable future. These losses have had and will continue to have an adverse effect on our stockholders' equity and working capital.

In October 2009, we received a Complete Response Letter from the U.S. Food and Drug Administration, or FDA, regarding our New Drug Application, or NDA, for toremifene 80 mg to reduce fractures in men with prostate cancer on ADT notifying us that the FDA would not approve our NDA in its present form as a result of certain clinical deficiencies identified in the Complete Response Letter. As a result, FDA approval of toremifene 80 mg, if it occurs, will be substantially delayed. In addition, significant additional clinical development will be required in order to potentially obtain FDA approval of toremifene 80 mg, including a second pivotal Phase III clinical trial of toremifene 80 mg. We recently expanded our collaboration with Ipsen Biopharm Limited, or Ipsen, pursuant to which Ipsen committed, subject to certain conditions, up to €42.0 million to fund a second pivotal Phase III clinical trial of toremifene 80 mg. However, our amended agreement with Ipsen provides that if the projected third-party costs of such second pivotal Phase III clinical trial of toremifene 80 mg exceed €42.0 million by a certain amount, then we and Ipsen agreed to discuss whether to initiate such trial or to renegotiate the terms of the collaboration. We believe that we have finalized the protocol for a second pivotal Phase III clinical trial evaluating toremifene 80 mg to reduce fractures in men with prostate cancer on ADT to address in a single clinical trial the deficiencies identified by the FDA in the Complete Response Letter, which we refer to as the planned TREAT 2 trial. The projected third-party costs of the planned TREAT 2 trial exceed the threshold in excess of €42.0 million established under our agreement with Ipsen, and Ipsen has not agreed to the initiation and funding of the planned TREAT 2 trial. We and Ipsen are in discussions with respect to whether to commence the planned TREAT 2 trial and, if so, the renegotiation of the terms of our collaboration, including in particular each party's respective funding commitments related to the planned TREAT 2 trial. Although we continue to be engaged in discussions intended to resolve the matter, we cannot predict the outcome, including whether we will be able to initiate the planned TREAT 2 trial or, if it is initiated, what our respective funding commitments for the planned TREAT 2 trial would be. If we and Ipsen determine to initiate the planned TREAT 2 trial as proposed, the portion of the costs of such trial that we would be required to fund could be substantial. Each of our other product candidates are in earlier-stage clinical development, and significant additional clinical development and financial resources will be required to obtain necessary regulatory approvals for our other product candidates, including ostarine™ and GTx-758, and to develop them into commercially viable products. Accordingly, we do not expect to obtain FDA or any other regulatory approvals to market any of our product candidates in the near future, if at all.

Because of the numerous risks and uncertainties associated with developing and commercializing small molecule drugs, we are unable to predict the extent of any future losses or when we will become profitable, if at all. We have financed our operations and internal growth primarily through public offerings and private placement of our common stock, as well as payments from our current and former collaborators, including Merck and Ipsen. In March 2010, we and Merck agreed to terminate our collaboration and, as a result, we will not receive any milestone payments or royalties for the development or sale of selective androgen receptor modulators, or SARMs, from Merck, although Merck remains obligated to make a final payment to us this year of $5.0 million for the reimbursement of SARM research and development costs. FARESTON® is currently our only commercial product and, until such time that we receive regulatory approval to market any of our product candidates, if ever, we expect that FARESTON® will account for all of our product revenue. For the six months ended June 30, 2010, we recognized $1.4 million in net revenues from the sale of FARESTON®. If we, Ipsen, and/or any potential future collaborators are unable to develop and commercialize any of our product candidates, if development is further delayed or eliminated, or if sales revenue from any product candidate that receives marketing approval is insufficient, we may never become profitable and we will not be successful.

We will need to raise substantial additional funding and may be unable to raise capital when needed, which would force us to further delay, reduce or eliminate our product development programs or commercialization efforts.

We will need to raise substantial additional capital to:

- fund our operations and conduct clinical trials;
- continue our research and development; and
- commercialize our product candidates, if any such product candidates receive regulatory approval for commercial sale.

We estimate that our current cash and cash equivalent balances, short-term investments, interest income, product revenue from the sale of FARESTON®, and the final payment from Merck of $5.0 million of cost reimbursement, together with the anticipated net proceeds from our proposed public offering of common stock announced on October 26, 2010, will be sufficient to meet our projected operating requirements through the first quarter of 2012. We have based this estimate on our current business plan and assumptions that may prove to be wrong, and we could utilize our available capital resources sooner than we currently expect. In addition, we will need to raise substantial additional capital prior to that time to fully finance our currently-planned clinical trials that we anticipate will be ongoing at that time. Our future funding requirements will depend on many factors, including:

- matters related to our collaborative arrangement with Ipsen, including a determination as to whether we and Ipsen determine to conduct the planned TREAT 2 trial and, if so, the costs that we will be required to bear with respect to the trial and any other continued development, which costs are expected to be substantial;
- the scope, rate of progress and cost of our, Ipsen's and/or any potential future collaborators' clinical trials and other research and development activities;
- future clinical trial results;
- the terms and timing of any potential future collaborative, licensing and other arrangements that we may establish;
- the cost and timing of regulatory filings and/or approvals to commercialize our product candidates and any related restrictions, limitations, and/or warnings in the label of an approved product candidate;
- potential future licensing fees, milestone payments and royalty payments, including the amount and timing of any milestone payments that we may receive under our collaborative arrangement with Ipsen, particularly with respect to any development milestone payments for our planned TREAT 2 trial, if the trial is initiated;
- the cost and timing of establishing medical education, sales, marketing and distribution capabilities;

- the cost of establishing clinical and commercial supplies of our product candidates and any products that we, Ipsen, and/or any potential future collaborators may develop;
- the effect of competing technological and market developments;
- the cost of filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights, and the cost of defending any other litigation claims; and
- the extent to which we acquire or invest in businesses, products and technologies, although we currently have no commitments or agreements relating to any of these types of transactions.

Until we can generate a sufficient amount of product revenue, which we may never do, we expect to finance future cash needs through public or private equity offerings, debt financings or collaboration and licensing arrangements, or a combination of the above, as well as through interest income earned on the investment of our cash balances and short-term investments, and revenues from the sale of FARESTON®. With the exception of payments that we may receive under our collaboration with Ipsen, we do not currently have any commitments for future external funding. In December 2009, we announced a reduction of approximately 26% of our workforce in order to reduce our operating expenses in connection with the receipt of the Complete Response Letter regarding our NDA for toremifene 80 mg and the associated delay in the potential regulatory approval of toremifene 80 mg. If we are unable to raise additional funds when we need them, we may need to further reduce our expenditures, perhaps significantly, to preserve our cash. The cost-cutting measures that we may take in the future may not be sufficient to enable us to meet our cash requirements, and they may negatively affect our business and growth prospects.

To the extent we raise additional funds by issuing equity securities, our stockholders may experience dilution, and debt financing, if available, may involve restrictive covenants. Any debt financing or additional equity that we raise may contain terms that are not favorable to us or our stockholders. To the extent we raise additional funds through collaboration and licensing arrangements, such as our arrangement with Ipsen, it may be necessary to relinquish rights to some of our technologies or product candidates, or grant licenses on terms that are not favorable to us. Our ability to raise additional funds and the terms upon which we are able to raise such funds may be adversely impacted by the uncertainty regarding our ability to gain FDA approval of toremifene 80 mg, the uncertainty regarding our ability to fully finance our currently-planned clinical trials, and/or current economic conditions, including the effects of the disruptions to and continuing volatility in the credit and financial markets in the United States and worldwide. As a result of these and other factors, we cannot be certain that additional funding will be available on acceptable terms, or at all. If adequate funds are not available when we need them, we may be required to further delay, reduce the scope of or eliminate one or more of our research or development programs, including our SARM and toremifene programs, conduct additional workforce or other expense reductions, or obtain funds through collaborations with others that are on unfavorable terms or that require us to relinquish rights to some of our technologies or product candidates that we would otherwise seek to develop on our own.

Risks Related to Development of Product Candidates

We will not be able to commercialize our product candidates if our preclinical studies do not produce successful results or if our or our collaborators' clinical trials do not demonstrate safety and efficacy in humans.

Preclinical and clinical testing is expensive, can take many years and has an uncertain outcome. Success in preclinical testing and early clinical trials does not ensure that later clinical trials will be successful, and interim results of a clinical trial do not necessarily predict final results. Typically, the failure rate for development candidates is high. Significant delays in clinical testing could materially impact our product development costs. We do not know whether planned clinical trials will begin on time, will need to be restructured or will be completed on schedule, if at all.

In clinical studies, the efficacy and/or safety results from the trial may be insufficient to support the submission or approval of a NDA with the FDA. For example, we received a Complete Response Letter in October 2009 from the FDA regarding our NDA for toremifene 80 mg to reduce fractures in men with prostate cancer on ADT, notifying us that the FDA would not approve our NDA in its present form as a result of certain clinical deficiencies identified in the Complete Response Letter, which deficiencies may only be addressed by conducting an additional pivotal Phase III clinical trial of toremifene 80 mg. In addition, in May 2010, we announced that toremifene 20 mg

failed to meet its primary efficacy endpoint in our Phase III clinical trial of toremifene 20 mg for the prevention of prostate cancer in high risk men with high grade prostatic intraepithelial neoplasia, or high grade PIN. As a result, we do not currently expect to conduct any additional clinical development of toremifene 20 mg for the high grade PIN indication or to submit a NDA to the FDA for this indication.

We, Ipsen, or any potential future collaborators may experience numerous unforeseen events during, or as a result of, preclinical testing and the clinical trial process that could delay or prevent our or our collaborators' ability to commercialize our product candidates, including:

- regulators or institutional review boards may not authorize us, Ipsen, or any potential future collaborators to commence a clinical trial or conduct a clinical trial at a prospective trial site;
- preclinical or clinical trials may produce negative or inconclusive results, which may require us, Ipsen, or any potential future collaborators to conduct additional preclinical or clinical testing or to abandon projects that we expect to be promising;
- registration or enrollment in clinical trials may be slower than we currently anticipate, resulting in significant delays;
- we, Ipsen, or any potential future collaborators may suspend or terminate clinical trials if the participating patients are being exposed to unacceptable health risks;
- regulators or institutional review boards may suspend or terminate clinical research for various reasons, including noncompliance with regulatory requirements; and
- our product candidates may not have the desired effects or may include undesirable side effects.

If any of these events were to occur and, as a result, we, Ipsen, or any potential future collaborators have significant delays in or termination of clinical trials, our costs could increase and our ability to generate revenue could be impaired, which would adversely impact our financial results.

If we, Ipsen, or any potential future collaborators observe serious or other adverse events during the time our product candidates are in development or after our products are approved and on the market, we, Ipsen, or any potential future collaborators may be required to perform lengthy additional clinical trials, may be denied regulatory approval of such products, may be forced to change the labeling of such products or may be required to withdraw any such products from the market, any of which would hinder or preclude our ability to generate revenues.

Although the results from our completed Phase III clinical trial for toremifene 80 mg to reduce fractures and treat other estrogen deficiency side effects of ADT in men with prostate cancer showed that the drug was well tolerated and had a generally favorable safety profile, more subjects experienced a venous thromboembolic event, or VTE, such as a deep vein thrombosis, pulmonary embolism or heart attack, in the toremifene 80 mg treatment group, 17 (2.6%) compared to 7 (1.1%) in the placebo group. Even though the majority of VTEs recorded in the clinical trial occurred in men who were at high risk for a VTE (including: age greater than 80 years, history of VTEs, recent surgical procedure or immobilization) and data from the clinical trial showed that the number of men without any of these independent risk factors for VTEs in whom a VTE occurred during the clinical trial was 5 in the toremifene 80 mg treatment group versus 3 in the placebo group, the FDA will consider the overall safety profile from our clinical trials when making its determination whether to grant marketing approval and to require potential warnings in the label, if approval is granted.

We have conducted a number of studies of toremifene in addition to our clinical trials, including a Thorough QT study (toremifene 80 mg and toremifene 20 mg), a bioequivalence study (toremifene 80 mg), a series of drug-drug interaction studies (toremifene 80 mg and toremifene 20 mg), and a semen quality study (toremifene 20 mg) to assess the effect of toremifene. The results of the Thorough QT study of 250 healthy male volunteers, with 5 parallel cohorts receiving 20 mg, 80 mg or 300 mg doses of toremifene, moxifloxacin, or placebo, showed that toremifene prolonged the QT interval in a dose dependent manner. The mean change in QTcB (a measurement of QT interval corrected by Bazett's formula) from baseline relative to placebo for toremifene 20 mg was 5.79 milliseconds, for toremifene 80 mg, it was 22.43 milliseconds, and for moxifloxacin, it was 8.83 milliseconds. Since we market

FARESTON® in the United States under a license agreement with Orion Corporation, or Orion, we notified the FDA of the Thorough QT study results and have proposed modifications to the FARESTON® label in the United States. FDA action on the proposed label changes is pending. Separately, Orion recommended label changes to the European Medicines Agency, or EMEA. In January 2009, the EMEA recommended that the FARESTON® label within the European Union reflect that toremifene should not be given to patients at risk of prolonged QT intervals or other certain heart problems. The results of these completed studies were included as a part of the NDA submission to the FDA for our toremifene 80 mg product candidate to reduce fractures in men with prostate cancer on ADT and will be included as part of any future NDA submission for our toremifene 80 mg product candidate we make to the FDA if we and Ipsen determine to conduct the planned TREAT 2 trial and the results of such trial are positive. In addition, the results of these completed studies will be used to update the label for FARESTON®. The study results could lead to the inclusion of restrictions, limitations and/or warnings in the label of FARESTON® or an approved toremifene 80 mg product candidate, which may adversely affect the marketability of the product or limit the patients to whom the product is prescribed.

In addition, in our Phase II clinical trial for ostarine™ for the treatment of cancer cachexia (cancer induced muscle loss), we observed mild elevations of hepatic enzymes in a few patients, and in our preclinical studies for ostarine™, only at the highest doses, we observed expected selective effects on the reproductive and other target organs in the male population consistent with the stimulating and inhibiting effects on the androgen receptor which is located in these organs.

If the incidence of the events described above increases in number or severity, if a regulatory authority believes that these or other events constitute an adverse effect caused by the drug, or if other effects are identified during clinical trials that we, Ipsen, or any potential future collaborators may conduct in the future or after any of our product candidates are approved and marketed:

- we, Ipsen, or any potential future collaborators may be required to conduct additional preclinical or clinical trials, make changes in labeling of any such approved products, reformulate any such products, or implement changes to or obtain new approvals of our contractors' manufacturing facilities;
- regulatory authorities may be unwilling to approve our product candidates or may withdraw approval of our products;
- we may experience a significant drop in the sales of the affected products;
- our reputation in the marketplace may suffer; and
- we may become the target of lawsuits, including class action suits.

Any of these events could prevent approval or harm sales of the affected product candidates or products, or could substantially increase the costs and expenses of commercializing and marketing any such products.

Risks Related to Our Dependence on Third Parties

We are dependent upon our collaborative arrangement with Ipsen to further develop and commercialize toremifene in Ipsen's licensed territories. We may also be dependent upon additional collaborative arrangements to complete the development and commercialization of some of our other product candidates. These collaborative arrangements may place the development and commercialization of our product candidates outside our control, may require us to relinquish important rights or may otherwise be on terms unfavorable to us.

In September 2006, we entered into a collaboration agreement with Ipsen for the development and commercialization of toremifene, which collaboration was amended in March 2010 to, among other things, expand Ipsen's licensed territory for the development and commercializing of toremifene product candidates. Pursuant to the collaboration agreement, as recently amended, Ipsen committed up to €42.0 million to fund a second pivotal Phase III clinical trial of toremifene 80 mg in exchange for certain additional rights we granted to Ipsen, including an expansion of its licensed territory, as well as a reduction in or, in some cases, an elimination of Ipsen's potential future milestone and royalty obligations to us under our original agreement with Ipsen. However, our amended agreement with Ipsen provides that if the projected third-party costs of such second pivotal Phase III clinical trial of

toremifene 80 mg (our planned TREAT 2 trial) exceed €42.0 million by a certain amount, then we and Ipsen agreed to discuss whether to initiate such trial or to renegotiate the terms of the collaboration. If we do not to initiate the trial, Ipsen would not be obligated to provide any additional funding for the development of toremifene 80 mg. The projected third-party costs of the planned TREAT 2 trial exceed the threshold in excess of €42.0 million established under our agreement with Ipsen, and Ipsen has not agreed to the initiation and funding of the planned TREAT 2 trial. We and Ipsen are in discussions with respect to whether to commence the planned TREAT 2 trial and, if so, the renegotiation of the terms of our collaboration, including in particular each party's respective funding commitments related to the planned TREAT 2 trial. Although we continue to be engaged in discussions intended to resolve the matter, we cannot predict the outcome, including whether we will be able to initiate the planned TREAT 2 trial or, if it is initiated, what our respective funding commitments for the planned TREAT 2 trial would be. In the event we are unable to satisfactorily renegotiate the terms of our agreement with Ipsen, we or Ipsen may determine not to initiate the planned TREAT 2 trial, and Ipsen could elect to terminate our collaboration. The loss of Ipsen as a collaborator in the development or commercialization of toremifene, any disputes over the terms of our collaboration with Ipsen, or any other adverse developments in our relationship with Ipsen, including our inability to satisfactorily renegotiate the terms of our collaboration, could materially harm our business and would substantially increase our need for additional capital. For example, if we were to lose Ipsen as a collaborator, we may not be able to obtain sufficient additional funding to complete the development of toremifene 80 mg. In addition, Ipsen is obligated to initiate and conduct appropriate clinical studies as required by the appropriate regulatory authorities in order to obtain marketing approvals of toremifene in its licensed territory. Any failure on the part of Ipsen to initiate these studies could delay the commercialization of toremifene in its licensed territory. In addition, the receipt of the Complete Response Letter from the FDA in October 2009 has delayed Ipsen's plans to seek marketing approval of toremifene 80 mg in its licensed territory. Moreover, if we and Ipsen (or either of us individually) determines that clinical development of toremifene 80 mg should be further delayed or discontinued, our potential future milestone payments and potential future revenues from the commercialization of toremifene 80 mg would be reduced or eliminated. In addition, we do not currently expect to conduct additional clinical development of toremifene 20 mg for the high grade PIN indication, and we therefore do not currently expect to receive any milestone payments or royalty payments from Ipsen associated with our toremifene 20 mg product candidate.

We may not be successful in entering into additional collaborative arrangements with other third parties, including as a result of any collaboration discussions we chose to pursue for ostarine™ and GTx-758, and even if we do enter into collaborative arrangements with other parties, such arrangements may not be successful. If we fail to enter into additional collaborative arrangements on favorable terms, it could delay or impair our ability to develop and commercialize our other product candidates and could increase our costs of development and commercialization.

Dependence on collaborative arrangements, including our collaborative arrangement with Ipsen for the development and commercialization of toremifene subjects us to a number of risks, including:

- we are not able to control either the amount and timing of resources that Ipsen devotes to toremifene;
- we may not be able to control the amount and timing of resources that our potential future collaborators may devote to our other product candidates;
- Ipsen or any potential future collaborations may experience financial difficulties or changes in business focus;
- we may be required to relinquish important rights such as marketing and distribution rights;
- under certain circumstances, Ipsen may not be required to commercialize toremifene in its licensed territory if Ipsen determines that it is not commercially reasonable for it to do so;
- pricing reimbursement constraints in Europe, which is part of Ipsen's licensed territory, may diminish the prospects of our receiving royalty payments from Ipsen on aggregate net sales of toremifene if approved for commercial sale in some or all of the countries in Europe;

- should a collaborator fail to develop or commercialize one of our compounds or product candidates, we may not receive any future milestone payments and will not receive any royalties for the compound or product candidate;
- business combinations or significant changes in a collaborator's business strategy may also adversely affect a collaborator's willingness or ability to complete its obligations under any arrangement;
- under certain circumstances, a collaborator could move forward with a competing product candidate developed either independently or in collaboration with others, including our competitors; and
- collaborative arrangements are often terminated or allowed to expire, such as our former collaboration with Merck, which would delay the development and may increase the cost of developing our product candidates.

We may not realize the anticipated benefits from our collaborative arrangement with Ipsen, and may not receive the anticipated benefits from any future collaboration arrangements that we might establish.

We may never receive any of the clinical development milestone payments for our planned TREAT 2 trial provided for under our collaboration agreement with Ipsen if our negotiations with Ipsen are not successful and we determine not to initiate the planned TREAT 2 trial or Ipsen otherwise determines to terminate our collaboration. In addition, we do not currently expect to conduct additional clinical development of toremifene 20 mg for the high grade PIN indication, and we therefore do not currently expect to receive any milestone payments or royalty payments from Ipsen associated with our toremifene 20 mg product candidate. Even if required regulatory approvals to market toremifene are obtained, it is possible that Ipsen will not successfully market and sell any toremifene products in which case we would not receive royalties to the extent that we currently anticipate. Furthermore, our royalty rates under our collaboration and license agreement with Ipsen are subject to a possible reduction if a generic version of toremifene achieves specified sales levels in a major country within its licensed territory. Ipsen also may be entitled to offset a portion of any royalties due to us if Ipsen licenses patent rights from a third party that would otherwise be infringed by Ipsen's use, manufacture, sale or import of toremifene compounds. Moreover, we have agreed to grant Ipsen co-promotion rights in the United States with respect to toremifene 80 mg for the ADT indication, which may, if toremifene 80 mg receives regulatory approval and is commercialized, reduce the amount of product revenue that we would have otherwise received had we commercialized toremifene 80 mg in the United States solely ourselves.

Under our agreement with Ipsen, we and Ipsen have agreed that neither party will seek to commercialize, promote, market or sell certain products within its licensed territory for an agreed period of time subsequent to the time of the first commercial launch of toremifene within its licensed territory. We and Ipsen have also agreed to grant to the other a right of first negotiation with respect to the development, marketing, sale and distribution of any new SERM-based products for the field of the prevention and treatment of prostate cancer or related side effects, or any other indication the parties agree on. We have also agreed to grant to Ipsen a right of first negotiation, subject to certain conditions, with respect to the development, marketing, sale and distribution of GTx-758 in Ipsen's licensed territory. However, there can be no assurance that we will be able to reach an agreement with Ipsen on reasonable terms, or at all, for any new SERM-based products or GTx-758, as applicable.

Ipsen may terminate our collaboration agreement for our uncured breach, upon our bankruptcy, with 12 months prior written notice for any reason and with 30 days prior written notice as a result of legitimate and documented safety concerns, or in the event that either the UTRF license for chemoprevention of prostate cancer or our license and supply agreement with Orion terminates early. If our agreement with Ipsen is terminated, the anticipated future benefits to us from this agreement would be eliminated and the development and commercialization of toremifene, including in Ipsen's licensed territory, would be delayed and could be abandoned. In any such or similar events, we may not realize the anticipated benefits from our collaborative arrangement with Ipsen.

Besides Ipsen, we have in the past established and intend to continue to establish collaborations with third parties to develop and commercialize some of our current and future product candidates, and these collaborations may not be successful or we may otherwise not realize the anticipated benefits from these collaborations. For example, in March 2010, following Merck's determination to discontinue internal development of ostarine™, we and Merck mutually agreed to terminate our collaboration and, as a result, we will not receive any milestone

payments or royalties for the development or sale of SARMs from Merck. In the future, we may not be able to locate third-party collaborators to develop and market our product candidates, and we may lack the capital and resources necessary to develop our product candidates alone.

If third parties do not manufacture our product candidates in sufficient quantities, in the required timeframe, and at an acceptable cost, clinical development and commercialization of our product candidates would be delayed.

We do not currently own or operate manufacturing facilities, and we rely, and expect to continue to rely, on third parties for the production of clinical and commercial quantities of our product candidates. Our current and anticipated future dependence upon others for the manufacture of our product candidates may adversely affect our future profit margins, if any, and our ability to develop product candidates and commercialize any product candidates on a timely and competitive basis.

We have agreed to purchase from Orion our worldwide requirements of toremifene in a finished tablet form at specified prices under a license and supply agreement. Similarly, Ipsen has agreed to purchase from Orion toremifene tablets for clinical testing and commercial sale in its licensed territory under an amended supply agreement with Orion. As such, both we and Ipsen rely on Orion as the single source supplier of toremifene.

Orion may terminate its supply obligations at its election at any time as a result of our failure to obtain regulatory approval of one of our toremifene product candidates in the United States prior to December 31, 2009, although we have received no indication from Orion to date that it intends to do so. If Orion elects to terminate its obligation to manufacture and supply us and Ipsen with toremifene, any arrangements we make for an alternative supply would have to be made with a qualified alternative supplier with appropriate FDA approval in order for us to obtain our supply requirements for toremifene. In addition, although Orion's composition of matter patents have expired, and as such, neither we nor Ipsen would be prevented from manufacturing toremifene within the United States or European Territory, there is no obligation on the part of Orion to transfer its manufacturing technology to us or Ipsen or to assist us or Ipsen in developing manufacturing capabilities to meet our respective supply needs. We and Ipsen have mutually agreed to cooperate in the manufacture of toremifene in the event that Orion elects to terminate its obligation to manufacture and supply us and Ipsen with toremifene. Although we and Ipsen have agreed to cooperate with each other in the event either of our supply rights are terminated by Orion for any reason, a disruption in the supply of toremifene could delay the development of and impair our and Ipsen's ability to commercialize toremifene. In addition, in the event of such a termination by Orion, Ipsen could elect to exercise its right to terminate our collaboration agreement on limited notice to us.

We also rely on Orion to cooperate with us in the filing and maintenance of regulatory filings with respect to the manufacture of toremifene, and Orion may terminate its obligation to assist us in obtaining and maintaining regulatory approval of toremifene at its election at any time. If Orion terminates its obligation to cooperate in these activities, or does not cooperate with us or otherwise does not successfully file or maintain these regulatory filings, we would be required to make arrangements with a qualified alternative supplier, which could further delay or prevent regulatory approval of toremifene.

Historically, we have relied on third party vendors for the manufacture of ostarine™ drug substance. However, Merck assumed primary manufacturing responsibilities for ostarine™ under our exclusive license and collaboration agreement with Merck, which agreement was terminated in March 2010. In connection with the termination of the agreement with Merck, Merck agreed to return to us all remaining inventory of ostarine™ drug substance. If this supply of ostarine™ becomes unusable or if the contract manufacturers that we are currently utilizing to meet our supply needs for ostarine™ or our other SARM product candidates prove incapable or unwilling to continue to meet our supply needs, we could experience a further delay in conducting any additional clinical trials of ostarine™ or other SARM product candidates. In addition, we rely on third party contractors for the manufacture of GTx-758 drug substance. We may not be able to maintain or renew our existing or any other third-party manufacturing arrangements on acceptable terms, if at all. If we are unable to continue our relationship with Orion for toremifene, or to do so at an acceptable cost, or other suppliers fail to meet our requirements for GTx-758, or ostarine™ or our other SARM product candidates for any reason, we would be required to obtain alternate suppliers. Any inability to obtain alternate suppliers, including an inability to obtain approval from the FDA of an alternate supplier, would delay or prevent the clinical development and commercialization of these product candidates.

Use of third-party manufacturers may increase the risk that we will not have adequate supplies of our product candidates.

Reliance on third-party manufacturers entails risks, to which we would not be subject if we manufactured product candidates or products ourselves, including:

- reliance on the third party for regulatory compliance and quality assurance;
- the possible breach of the manufacturing agreement by the third party because of factors beyond our control;
- the possible termination or non-renewal of the agreement by the third party, based on its own business priorities, at a time that is costly or inconvenient for us;
- drug product supplies not meeting the requisite requirements for clinical trial use; and
- the possible exercise by Orion of its right to terminate its obligation to supply us with toremifene, which it may do at its election at any time.

If we are not able to obtain adequate supplies of our product candidates, it will be more difficult for us to develop our product candidates and compete effectively. Our product candidates and any products that we, Ipsen and/or our potential future collaborators may develop may compete with other product candidates and products for access to manufacturing facilities. For example, the active pharmaceutical ingredient in our toremifene 80 mg product candidate is also the active pharmaceutical ingredient in FARESTON®. Further, Orion has agreed to supply toremifene tablets to Ipsen for clinical trials and commercial supply in its licensed territory. Orion also manufactures toremifene for third parties for sale outside the United States for the treatment of metastatic breast cancer in postmenopausal women.

Our present or future manufacturing partners may not be able to comply with FDA-mandated current Good Manufacturing Practice regulations, other FDA regulatory requirements or similar regulatory requirements outside the United States. Failure of our third-party manufacturers or us to comply with applicable regulations could result in sanctions being imposed on us, including fines, injunctions, civil penalties, failure of regulatory authorities to grant marketing approval of our product candidates, delays, suspension or withdrawal of approvals, license revocation, seizures or recalls of product candidates or products, operating restrictions and criminal prosecutions, any of which could significantly and adversely affect supplies of our product candidates.

If third parties on whom we rely do not perform as contractually required or expected, we may not be able to obtain regulatory approval for or successfully commercialize our product candidates.

We do not have the ability to independently conduct clinical trials for our product candidates, and we must rely on third parties, such as contract research organizations, medical institutions, clinical investigators and contract laboratories to conduct our clinical trials. In addition, we rely on third parties to assist with our preclinical development of product candidates. If these third parties do not successfully carry out their contractual duties or regulatory obligations or meet expected deadlines, if the third parties need to be replaced, or if the quality or accuracy of the data they obtain is compromised due to the failure to adhere to our clinical protocols or regulatory requirements or for other reasons, our preclinical development activities or clinical trials may be extended, delayed, suspended or terminated, and we may not be able to obtain regulatory approval for or successfully commercialize our product candidates.

Risks Related to Our Intellectual Property

If we lose our licenses from the University of Tennessee Research Foundation, or UTRF, we may be unable to continue a substantial part of our business.

We have licensed intellectual property rights and technology from UTRF used in a substantial part of our business. These license agreements may be terminated by UTRF if we are in breach of our obligations under, or fail to perform any terms of, the agreement and fail to cure that breach. If any of these agreements were terminated,

then we may lose our rights to utilize the technology and intellectual property covered by that agreement to market, distribute and sell our licensed products, which may prevent us from continuing a substantial part of our business and may result in a serious adverse effect on our financial condition, results of operations and any prospects for growth. Additionally, the termination of our UTRF license for chemoprevention of prostate cancer could lead to a termination of our license and collaboration agreement with Ipsen, which would result in a loss of any potential milestone or royalty payments from Ipsen.

If some or all of our, or our licensors', patents expire or are invalidated or are found to be unenforceable, or if some or all of our patent applications do not result in issued patents or result in patents with narrow or unenforceable claims, or if we are prevented from asserting that the claims of an issued patent cover a product of a third party, we may be subject to competition from third parties with products in the same class of products as our product candidates or products with the same active pharmaceutical ingredients as our product candidates.

Our commercial success will depend in part on obtaining and maintaining patent and trade secret protection for our product candidates, as well as the methods for treating patients in the product indications using these product candidates. We will be able to protect our product candidates and the methods for treating patients in the product indications using these product candidates from unauthorized use by third parties only to the extent that we or our exclusive licensors own or control such valid and enforceable patents or trade secrets. Additionally, Ipsen's ability to successfully market toremifene within a substantial portion of its licensed territory may depend on having marketing and data exclusivity from the appropriate regulatory authorities.

Our rights to certain patents and patent applications relating to SARM compounds that we have licensed from UTRF are subject to the terms of UTRF's inter-institutional agreements with The Ohio State University, or OSU, and our rights to future related improvements in some instances are subject to UTRF's exercise of exclusive options under its agreements with OSU for such improvements.

Even if our product candidates and the methods for treating patients for prescribed indications using these product candidates are covered by valid and enforceable patents and have claims with sufficient scope, disclosure and support in the specification, the patents will provide protection only for a limited amount of time. For example, the patent that we have licensed from Orion covering the composition of matter of toremifene has expired in the United States and abroad. As a result, we will need to rely primarily on the protection afforded by method of use patents relating to the use of toremifene for the relevant prescribed indications that have been issued or may be issued from our owned or licensed patent applications. Also, within its licensed territories, Ipsen may need to rely primarily on the protection afforded by marketing and data exclusivity for the toremifene products that may be sold within the respective territory. To date, many of our applications for method of use patents filed for toremifene outside of the United States are still pending and have not yielded issued patents. Loss of marketing and data exclusivity for any toremifene products that may be commercialized within the territories licensed to Ipsen could adversely affect Ipsen's ability to successfully commercialize these products.

Our and our licensors' ability to obtain patents can be highly uncertain and involve complex and in some cases unsettled legal issues and factual questions. Furthermore, different countries have different procedures for obtaining patents, and patents issued in different countries provide different degrees of protection against the use of a patented invention by others. Therefore, if the issuance to us or our licensors, in a given country, of a patent covering an invention is not followed by the issuance, in other countries, of patents covering the same invention, or if any judicial interpretation of the validity, enforceability, or scope of the claims in, or the written description or enablement in, a patent issued in one country is not similar to the interpretation given to the corresponding patent issued in another country, our ability to protect our intellectual property in those countries may be limited. Changes in either patent laws or in interpretations of patent laws in the United States and other countries may materially diminish the value of our intellectual property or narrow the scope of our patent protection.

Even if patents are issued to us or our licensors regarding our product candidates or methods of using them, those patents can be challenged by our competitors who can argue such patents are invalid or unenforceable, lack sufficient written description or enablement, or that the claims of the issued patents should be limited or narrowly construed. Patents also will not protect our product candidates if competitors devise ways of making or using these product candidates without legally infringing our patents. The Federal Food, Drug, and Cosmetic Act and FDA regulations and policies create a regulatory environment that encourages companies to challenge branded drug

patents or to create non-infringing versions of a patented product in order to facilitate the approval of abbreviated new drug applications for generic substitutes. These same types of incentives encourage competitors to submit new drug applications that rely on literature and clinical data not prepared for or by the drug sponsor, providing another less burdensome pathway to approval.

We also rely on trade secrets to protect our technology, especially where we do not believe that patent protection is appropriate or obtainable. However, trade secrets are difficult to protect. Our employees, consultants, contractors, outside scientific collaborators and other advisors may unintentionally or willfully disclose our confidential information to competitors, and confidentiality agreements may not provide an adequate remedy in the event of unauthorized disclosure of confidential information. Enforcing a claim that a third party illegally obtained and is using our trade secrets is expensive and time-consuming, and the outcome is unpredictable. Moreover, our competitors may independently develop equivalent knowledge, methods and know-how. Failure to obtain or maintain trade secret protection could adversely affect our competitive business position.

Off-label sale or use of third-party toremifene products could decrease sales of any toremifene product candidates that we continue to develop and that are approved for commercial sale, and could lead to pricing pressure if such products become available at competitive prices and in dosages that are appropriate for the indications for which we and Ipsen may continue to develop toremifene.

In all countries in which we hold or have licensed rights to patents or patent applications related to toremifene, the composition of matter patents we license from Orion have expired. As a result, we will need to rely primarily on the protection afforded by method of use patents. Our method of use patents may not protect toremifene from the risk of off-label sale or use of other toremifene products in place of any toremifene product candidates that we continue to develop and that are approved for commercial sale. Physicians are permitted to prescribe legally available drugs for uses that are not described in the drug's labeling and that differ from those uses tested and approved by the FDA or its equivalent. Such off-label uses are common across medical specialties and are particularly prevalent for cancer treatments. Any off-label sales of other toremifene products may adversely affect our or Ipsen's ability to generate revenue from the sale of any toremifene product candidates that we continue to develop and that are approved for commercial sale.

Even in the event that patents are issued from our pending method of use patent applications, competitors could market and sell toremifene products for uses for which FARESTON® has already been approved. Thus, physicians in such countries would be permitted to prescribe these other toremifene products for indications that are protected by our method of use patents or method of use patents issuing from pending patent applications, even though these other toremifene products would not have been approved for those uses, and in most cases, the physician would not be liable for contributing to the infringement of our patents or potential patents. Moreover, because Orion has licensed and could further license other parties to market, sell and distribute toremifene for breast cancer outside the United States, physicians in such countries could prescribe these products sold pursuant to another Orion license off-label. This further increases the risk of off-label competition developing for toremifene for the indications for which we and Ipsen may continue to develop this product candidate. In addition, if no patents are issued with respect to our pending method of use patent applications related to the use of toremifene in the countries outside of the United States where these applications are currently pending, we would not have as extensive patent coverage to prevent competitors from marketing and selling generic versions of toremifene at doses and in formulations equivalent to our toremifene product candidates for the indications covered by our pending method of use patent applications. Also, regulatory authorities may not recognize marketing and data exclusivity for toremifene in the territory we licensed to Ipsen under our collaboration for the treatment of prostate cancer and estrogen deficiency side effects resulting from ADT. If generic versions of toremifene are able to be sold in countries within the territory we licensed to Ipsen for the indications for which Ipsen could potentially market toremifene, the royalties to be paid to us by Ipsen will be reduced if the total generic sales exceed a certain threshold for a certain period of time.

Our license agreement with Orion excludes the use of toremifene in humans to treat breast cancer outside the United States and may limit our ability to market toremifene for human uses outside the United States.

Our exclusive license and supply agreement from Orion excludes the use of toremifene for the treatment of metastatic breast cancer in postmenopausal women outside the United States. Orion has licensed to other parties the right to market, sell and distribute toremifene for the treatment of advanced breast cancer outside the United States

and could license additional parties to market, sell and distribute toremifene for this indication outside the United States.

Under the terms of our license agreement with Orion, Orion may require us and Ipsen to modify our final toremifene development plans for specified major markets outside the United States if those development plans could adversely affect Orion's or Orion's other licensees' activities related to FARESTON® for breast cancer outside the United States or toremifene-based animal health products. Although we do not believe that our or Ipsen's development plans adversely affect these activities, any future modifications to our or Ipsen's plans imposed by Orion may limit our and Ipsen's ability to maximize the commercial potential of toremifene.

If we infringe intellectual property rights of third parties, it may increase our costs or prevent us from being able to commercialize our product candidates.

There is a risk that we are infringing the proprietary rights of third parties because numerous United States and foreign issued patents and pending patent applications, which are owned by third parties, exist in the fields that are the focus of our drug discovery, development, and manufacture and process synthesis efforts. Others might have been the first to make the inventions covered by each of our or our licensors' pending patent applications and issued patents and might have been the first to file patent applications for these inventions. In addition, because patent applications can take many years to issue, there may be currently pending applications, unknown to us or our licensors, which may later result in issued patents that cover the production, manufacture, synthesis, commercialization, formulation or use of our product candidates. In addition, the production, manufacture, synthesis, commercialization, formulation or use of our product candidates may infringe existing patents of which we are not aware. Defending ourselves against third-party claims, including litigation in particular, would be costly and time consuming and would divert management's attention from our business, which could lead to delays in our development or commercialization efforts. If third parties are successful in their claims, we might have to pay substantial damages or take other actions that are adverse to our business.

As a result of intellectual property infringement claims, or to avoid potential claims, we might:

- be prohibited from selling or licensing any product that we, Ipsen and/or any potential future collaborators may develop unless the patent holder licenses the patent to us, which the patent holder is not required to do;
- be required to pay substantial royalties or other amounts, or grant a cross license to our patents to another patent holder; or
- be required to redesign the formulation of a product candidate so that it does not infringe, which may not be possible or could require substantial funds and time.

In addition, under our collaboration and license agreement with Ipsen, Ipsen may be entitled to offset a portion of any royalties due to us in any calendar year on account of product sales to pay for costs incurred by Ipsen to obtain a license to any dominant intellectual property rights that are infringed by the products at issue.

Risks Related to Regulatory Approval of Our Product Candidates

If we, Ipsen, or any potential future collaborators are not able to obtain required regulatory approvals, we or such collaborators will not be able to commercialize our product candidates, and our ability to generate revenue will be materially impaired.

Our product candidates and the activities associated with their development and commercialization are subject to comprehensive regulation by the FDA, other regulatory agencies in the United States and by comparable authorities in other countries. Failure to obtain regulatory approval for a product candidate will prevent us or any collaborator from commercializing the product candidate. We have not received regulatory approval to market any of our product candidates in any jurisdiction, and we do not expect to obtain FDA or any other regulatory approvals to market any of our product candidates in the near future, if at all. In addition, we will not receive any clinical development milestone or royalty payments associated with our toremifene 80 mg product candidate if we and/or Ipsen determine to discontinue the development of toremifene 80 mg or, if such development continues, if Ipsen is

unable to obtain the necessary regulatory approvals to commercialize toremifene 80 mg within its licensed territory. The process of obtaining regulatory approvals is expensive, often takes many years, if approval is obtained at all, and can vary substantially based upon the type, complexity and novelty of the product candidates involved.

Changes in the regulatory approval policy during the development period, changes in or the enactment of additional regulations or statutes, or changes in regulatory review for each submitted product application, may cause delays in the approval or rejection of an application. For example, the FDA announced in 2008 that, due to staffing and resource limitations, it has given its managers discretion to miss certain timing goals for completing reviews of NDAs set forth under the Prescription Drug User Fee Act, or PDUFA. Although the FDA has since publicly expressed a recommitment to meeting PDUFA deadlines, it remains unclear whether and to what extent the FDA will adhere to PDUFA deadlines in the future. If the FDA were to miss a PDUFA timing goal for one of our product candidates, the development and commercialization of the product candidate could be delayed. In addition, the Food and Drug Administration Amendments Act of 2007, or the FDA Amendments Act, which was enacted in September 2007, expands the FDA's authority to regulate drugs throughout the product life cycle, including enhanced authority to require post-approval studies and clinical trials. Other proposals have been made to impose additional requirements on drug approvals, further expand post-approval requirements and restrict sales and promotional activities. This new legislation, and the additional proposals if enacted, may make it more difficult or burdensome for us or our potential future collaborators to obtain approval of our product candidates. Even if the FDA approves a product candidate, the approval may impose significant restrictions on the indicated uses, conditions for use, labeling, advertising, promotion, marketing and/or production of such product, and may impose ongoing requirements for post-approval studies, including additional research and development and clinical trials. The approval may also impose risk evaluation mitigation strategies, or REMS, on a product if the FDA believes there is a reason to monitor the safety of the drug in the market place. REMS may include requirements for additional training for health care professionals, safety communication efforts and limits on channels of distribution, among other things. The sponsor would be required to evaluate and monitor the various REMS activities and adjust them if need be. The FDA also may impose various civil or criminal sanctions for failure to comply with regulatory requirements, including withdrawal of product approval.

Furthermore, the approval procedure and the time required to obtain approval varies among countries and can involve additional testing beyond that required by the FDA. Approval by one regulatory authority does not ensure approval by regulatory authorities in other jurisdictions.

The FDA has substantial discretion in the approval process and may refuse to accept any application or may decide that our data are insufficient for approval and require additional preclinical, clinical or other studies. For example, in October 2009, we received a Complete Response Letter from the FDA regarding our NDA for toremifene 80 mg to reduce fractures in men with prostate cancer on ADT notifying us that the FDA would not approve our NDA in its present form as a result of certain clinical deficiencies identified in the Complete Response Letter. As a result, FDA approval of toremifene 80 mg, if it occurs, will be substantially delayed Additionally, if our planned TREAT 2 trial of toremifene 80 mg to reduce fractures and treat other estrogen deficiency side effects of ADT in men with prostate cancer is conducted, it could result in varying interpretations of the data obtained from the clinical trial which could delay, limit or prevent regulatory approval of the product candidate. Furthermore, even if we submit an application to the FDA for marketing approval of a product candidate, it may not result in marketing approval from the FDA.

We do not expect to receive regulatory approval for the commercial sale of any of our product candidates that are in development, including toremifene 80 mg, in the near future, if at all. Furthermore, it is not anticipated that Ipsen will receive the appropriate regulatory approvals to market toremifene within its licensed territory any sooner than we will achieve regulatory approval in the United States, and it likely will be thereafter. The inability to obtain FDA approval or approval from comparable authorities in other countries for our product candidates would prevent us, Ipsen, or any potential future collaborators from commercializing these product candidates in the United States or other countries. See the section entitled "Business — Government Regulation" of our Annual Report on Form 10-K, filed with the SEC on March 15, 2010, for additional information regarding risks associated with marketing approval, as well as risks related to post-approval requirements.

Risks Related to Commercialization

The commercial success of any products that we, Ipsen, and/or any potential future collaborators may develop, including any toremifene products, will depend upon the market and the degree of market acceptance among physicians, patients, healthcare payors and the medical community.

Any products that we, Ipsen, and/or any potential future collaborators may develop may not gain market acceptance among physicians, patients, health care payors and the medical community. If these products do not achieve an adequate level of acceptance, we may not generate material product revenues or receive royalties to the extent we currently anticipate, and we may not become profitable. The degree of market acceptance of our product candidates, if approved for commercial sale, will depend on a number of factors, including:

- efficacy and safety results in clinical trials;
- the prevalence and severity of any side effects;
- potential advantages over alternative treatments;
- whether the products we commercialize remain a preferred course of treatment;
- the ability to offer our product candidates for sale at competitive prices;
- relative convenience and ease of administration;
- the strength of marketing and distribution support; and
- sufficient third-party coverage or reimbursement.

We have conducted a number of studies of toremifene in addition to our clinical trials, including a Thorough QT study (toremifene 80 mg and toremifene 20 mg), a bioequivalence study (toremifene 80 mg), a series of drug-drug interaction studies (toremifene 80 mg and toremifene 20 mg), and a semen quality study (toremifene 20 mg) to assess the effect of toremifene. The results of the Thorough QT study of 250 healthy male volunteers, with 5 parallel cohorts receiving 20 mg, 80 mg or 300 mg doses of toremifene, moxifloxacin, or placebo, showed that toremifene prolonged the QT interval in a dose dependent manner. The mean change in QTcB (a measurement of QT interval corrected by Bazett's formula) from baseline relative to placebo for toremifene 20 mg was 5.79 milliseconds, for toremifene 80 mg, it was 22.43 milliseconds, and for moxifloxacin, it was 8.83 milliseconds. Since we market FARESTON® in the United States under a license agreement with Orion, we notified the FDA of the Thorough QT study results and have proposed modifications to the FARESTON® label in the United States. FDA action on the proposed label changes is pending. Separately, Orion recommended label changes to the EMEA. In January 2009, the EMEA recommended that the FARESTON® label within the European Union reflect that toremifene should not be given to patients at risk of prolonged QT intervals or other certain heart problems. The results of these completed studies were included as a part of the NDA submission to the FDA for our toremifene 80 mg product candidate to reduce fractures in men with prostate cancer on ADT and will be included as part of any future NDA submission we make to the FDA for toremifene 80 mg if we and Ipsen determine to conduct the planned TREAT 2 trial and the results of such trial are positive. In addition, the results of these completed studies will be used to update the label for FARESTON®. The study results could lead to the inclusion of restrictions, limitations and/or warnings in the label of FARESTON® or an approved toremifene 80 mg product candidate, which may adversely affect the marketability of the product or limit the patients to whom the product is prescribed.

Our only marketed product generating revenue is FARESTON®, which is subject to a number of risks. These risks may cause sales of FARESTON® to continue to decline.

FARESTON® is currently our only marketed product. FARESTON® is indicated for the treatment of metastatic breast cancer in postmenopausal women. FARESTON® competes against tamoxifen, fulvestrant, and several aromatase inhibitors, including anastrozole, letrozole, and exemestane, for hormonal treatment of breast cancer. Sales of pharmaceuticals for breast cancer in the SERM class have declined in recent years as aromatase inhibitors have gained market share and we believe this trend will continue. Further, the branded competitors have greater resources and generic competitors are preferred by insurers. Continued sales of FARESTON® also could be impacted by many other factors. The occurrence of one or more of the following risks may cause sales of FARESTON® to decline more than we currently anticipate:

- the loss of the availability of Orion's website to market FARESTON®, which is an important source of advertising;
- the loss of one or more of our three largest wholesale drug distributors, which together accounted for approximately 96% of our product sales of FARESTON® for the six months ended June 30, 2010;
- any restrictions, limitations, and/or warnings added to the FARESTON® label as a result of our studies of toremifene, including a Thorough QT study and drug interaction studies, or otherwise;
- the continued success of competing products, including aromatase inhibitors;
- the loss of coverage or reimbursement for FARESTON® from Medicare and Medicaid, private health insurers or other third-party payors;
- exposure to product liability claims related to the commercial sale of FARESTON®, which may exceed our product liability insurance;
- the failure of Orion to maintain regulatory filings or comply with applicable FDA requirements with respect to FARESTON®;
- the introduction of generic toremifene products that compete with FARESTON® for the treatment of breast cancer; and
- the loss of Orion, upon which we rely as a single source, as our supplier of FARESTON®.

If we are unable to expand our sales and marketing capabilities or establish and maintain agreements with third parties to market and sell our product candidates, we may be unable to generate product revenue from such candidates.

We have limited experience as a company in the sales, marketing and distribution of pharmaceutical products, and in any event have only limited company personnel to undertake such activities, and we therefore need to expand our sales and marketing capabilities or establish and maintain agreements with third parties to market and sell our product candidates. We may be unable to build our own sales and marketing capabilities and there are risks involved with entering into arrangements with third parties to perform these services, which could delay the commercialization of any of our product candidates if approved for commercial sale. For example, we would be relying on Ipsen to market and distribute our toremifene product candidates if their development continues and they are approved for commercial sale through Ipsen's established sales and marketing network within its licensed territory. If our collaboration and license agreement with Ipsen is terminated for any reason, our ability to sell any of our toremifene product candidates that may be approved for commercial sale in Ipsen's licensed territory would be adversely affected, and we may be unable to develop or engage an effective sales force to successfully market and sell such toremifene product candidates in Ipsen's licensed territory. Currently, we do not have a partner outside of Ipsen's licensed territory for our toremifene product candidates, and our success in regions other than Ipsen's licensed territory may be dependent on our ability to find suitable partners in other regions of the world. In addition, to the extent that we enter into arrangements with third parties to perform sales, marketing and distribution services, our product revenues are likely to be lower than if we market and sell any products that we develop ourselves.

If we, Ipsen, and/or any potential future collaborators are unable to obtain reimbursement or experience a reduction in reimbursement from third-party payors for products we sell, our revenues and prospects for profitability will suffer.

Sales of products developed by us, Ipsen, and/or any potential future collaborators are dependent on the availability and extent of reimbursement from third-party payors. Changes in the reimbursement policies of these third-party payors that reduce reimbursements for FARESTON® and any other products that we, Ipsen and/or any potential future collaborators may develop and sell could negatively impact our future operating and financial results.

The Medicare Prescription Drug, Improvement and Modernization Act of 2003 established comprehensive Medicare coverage and reimbursement of prescription drugs under Medicare Part D. The prescription drug program

established by this legislation may have the effect of reducing the prices that we, Ipsen, or any potential future collaborators are able to charge for products we, Ipsen, and/or any potential future collaborators develop and sell through the program. This legislation may also cause third-party payors other than the federal government, including the states under the Medicaid program, to discontinue coverage for products that we, Ipsen, and/or any potential future collaborators may develop or to lower the amount that they pay. State Medicaid programs are increasingly requesting manufacturers to pay supplemental rebates and requiring prior authorization for use of drugs where supplemental rebates are not provided.

In March 2010, the United States Congress enacted the Patient Protection and Affordable Care Act and the Health Care and Education Reconciliation Act. This health care reform legislation will increase the number of individuals who receive health insurance coverage and will close a gap in drug coverage under Medicare Part D as established in 2003. However, the newly-enacted legislation also implements cost containment measures that could adversely affect our revenues. These measures include increased drug rebates under Medicaid starting in 2010 for brand name prescription drugs, such as FARESTON®, and extension of these rebates to Medicaid managed care, which would reduce the amount of net reimbursement received for FARESTON® or any other products that we, Ipsen, and/or any potential future collaborators may develop and sell. Also effective for 2010, the legislation extends 340B discounted pricing on outpatient drugs to children's hospitals, critical access hospitals, and rural health centers, which extension reduces the amount of reimbursement received for drugs purchased by these new 340B-covered entities.

Additional provisions of the health care reform legislation, which become effective in 2011, may negatively affect our revenues and prospects for profitability in the future. Along with other pharmaceutical manufacturers and importers of brand name prescription drugs, we will be assessed a fee based on our proportionate share of sales of brand name prescription drugs to certain government programs, including Medicare and Medicaid. As part of the health care reform legislation's provisions closing a funding gap that currently exists in the Medicare Part D prescription drug program (commonly known as the "donut hole"), we will also be required to provide a 50% discount on brand name prescription drugs, including FARESTON®, sold to beneficiaries who fall within the donut hole.

In the aftermath of the 2010 health care reform legislation, private health insurers and managed care plans are likely to continue challenging the prices charged for medical products and services, and many of these third-party payors may limit reimbursement for newly-approved health care products. In particular, third-party payors may limit the indications for which they will reimburse patients who use any products that we, Ipsen, and/or any potential future collaborators may develop or sell. These cost-control initiatives could decrease the price we might establish for products that we, Ipsen, or any potential future collaborators may develop or sell, which would result in lower product revenues or royalties payable to us.

Similar cost containment initiatives exist in countries outside of the United States, particularly in the countries of the European Union, where the pricing of prescription pharmaceuticals is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take six to twelve months or longer after the receipt of regulatory marketing approval for a product. To obtain reimbursement or pricing approval in some countries, we, Ipsen, or any potential future collaborators may be required to conduct a clinical trial that compares the cost effectiveness of our product candidates or products to other available therapies. The conduct of such a clinical trial could be expensive and result in delays in our, Ipsen's or a potential future collaborators' commercialization efforts. Third-party payors are challenging the prices charged for medical products and services, and many third-party payors limit reimbursement for newly-approved health care products. In particular, third-party payors may limit the indications for which they will reimburse patients who use any products that we, Ipsen, and/or any potential future collaborators may develop or sell. Cost-control initiatives could decrease the price we might establish for products that we, Ipsen, or any potential future collaborators may develop or sell, which would result in lower product revenues or royalties payable to us.

Another development that could affect the pricing of drugs would be proposed congressional action regarding drug reimportation into the United States. The Medicare Prescription Drug, Improvement and Modernization Act of 2003 gives discretion to the Secretary of Health and Human Services to allow drug reimportation into the United States under some circumstances from foreign countries, including from countries where the drugs are sold at a lower price than in the United States. Provisions allowing for the direct reimportation of drugs under certain

circumstances were not included in the 2010 health care reform legislation, but could be revisited in the future. If legislation or regulations were passed allowing the reimportation of drugs, they could decrease the price we, Ipsen, or any potential future collaborators receive for any products that we, Ipsen, and/or any potential future collaborators may develop, negatively affecting our revenues and prospects for profitability.

Health care reform measures could hinder or prevent our product candidates' commercial success.

Among policy makers and payors in the United States and elsewhere, there is significant interest in promoting health care reform, as evidenced by the recent enactment in the United States of the Patient Protection and Affordable Care Act and the Health Care and Education Reconciliation Act. It is likely that federal and state legislatures within the United States and foreign governments will continue to consider changes to existing health care legislation. These changes adopted by governments may adversely impact our business by lowering the price of health care products in the United States and elsewhere.

We operate in a highly regulated industry and new laws, regulations or judicial decisions, or new interpretations or existing laws, regulations or decisions, related to health care availability, method of delivery or payment for health care products and services, or sales, marketing and pricing practices could negatively impact our business, operations and financial condition.

If product liability lawsuits are brought against us, we may incur substantial liabilities and may be required to limit commercialization of any products that we may develop.

We face an inherent risk of product liability exposure related to our commercial sale of FARESTON® and the testing of our product candidates in human clinical trials and will face an even greater risk if we commercially sell any product that we may develop. If we cannot successfully defend ourselves against claims that our product candidates or products caused injuries, we will incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in:

- decreased demand for any product candidates or products;
- injury to our reputation;
- withdrawal of clinical trial participants;
- costs to defend the related litigation;
- substantial monetary awards to trial participants or patients;
- loss of revenue; and
- the inability to commercialize any products for which we obtain or hold marketing approvals.

We have product liability insurance that covers our clinical trials and commercial products up to a $25 million annual aggregate limit. Insurance coverage is increasingly expensive. We may not be able to maintain insurance coverage at a reasonable cost and we may not be able to obtain insurance coverage that will be adequate to satisfy any liability that may arise.

If our competitors are better able to develop and market products than any products that we, Ipsen, and/or any potential future collaborators may develop, our commercial opportunity will be reduced or eliminated.

We face competition from commercial pharmaceutical and biotechnology enterprises, as well as from academic institutions, government agencies and private and public research institutions. Our commercial opportunities will be reduced or eliminated if our competitors develop and commercialize products that are safer, more effective, have fewer side effects or are less expensive than any products that we, Ipsen, and/or any potential future collaborators may develop. Competition could result in reduced sales and pricing pressure on our product candidates, if approved, which in turn would reduce our ability to generate meaningful revenue and have a negative impact on our results of operations. In addition, significant delays in the development of our product candidates could allow our competitors to bring products to market before us and impair any ability to commercialize our product candidates.

Various products are currently marketed or used off-label for some of the diseases and conditions that we are targeting in our pipeline, and a number of companies are or may be developing new treatments. These product uses, as well as promotional efforts by competitors and/or clinical trial results of competitive products, could significantly diminish any ability to market and sell any products that we, Ipsen, and/or any potential future collaborators may develop.

We are developing GTx-758 for the treatment of advanced prostate cancer. Currently, there are several products approved to reduce testosterone levels in men with advanced prostate cancer that may compete with GTx-758 if approved for commercial sale, including those marketed by Abbott Laboratories (Lupron®), Sanofi-Aventis (Eligard ®), AstraZeneca (Zoladex®), Ferring Pharmaceuticals (Firmagon®), Endo Pharmaceuticals (Vantas®) and Watson Pharmaceuticals (Trelstar®).

With respect to our SARM program, there are other SARM product candidates in development that may compete with our SARM product candidates if approved. Pfizer Inc., Eli Lilly & Co., and Amgen have myostatin inhibitors in development that may compete with ostarine™ if approved for commercial sale. In addition, Cytokinetics, Inc. is developing a troponin activator with a muscle specific mechanism in a Phase I study. Moreover, there are other categories of drugs in development, including ghrelin receptor agonists and growth hormone secretagogues that may have some muscle activity. Other appetite stimulants such as megestrol acetate and dronabinol are also used off-label for cancer cachexia.

We are also developing toremifene 80 mg for the reduction of fractures and treatment of other estrogen deficiency side effects of ADT. Although there are no products that have been approved by the FDA to reduce fractures or treat estrogen deficiency related side effects of ADT, we are aware of a number of drugs, including drugs marketed by Eli Lilly & Co. (Evista®), Merck (Fosamax®), Sanofi-Aventis and Warner Chilcott (Actonel®), Pfizer Inc. (Effexor®), Boehringer Ingelheim (Catapres®), Novartis (Zometa®) and generic megestrol acetate, that are prescribed to treat single side effects of ADT; that external beam radiation and tamoxifen are used to treat breast pain and enlargement, or gynecomastia. ProliaTM (denosumab), a monoclonal antibody developed by Amgen, is approved in the United States, Europe and Australia for the treatment of osteoporosis in postmenopausal women and additionally in Europe for the treatment of bone loss associated with hormone ablation in men with prostate cancer at increased risk of fractures, and is under regulatory review for cancer specific indications including prostate cancer.

Many of our competitors have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals and marketing approved products than we do. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These third parties compete with us in recruiting and retaining qualified scientific and management personnel, establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies and technology licenses complementary to our programs or advantageous to our business.

Risks Related to Employees and Growth

If we fail to attract and keep senior management and key scientific personnel, we may be unable to successfully develop or commercialize our product candidates.

Our success depends on our continued ability to attract, retain and motivate highly qualified management, clinical and scientific personnel and on our ability to develop and maintain important relationships with leading academic institutions, clinicians and scientists. If we are not able to attract and keep senior management and key scientific personnel, particularly Dr. Mitchell S. Steiner, we may not be able to successfully develop or commercialize our product candidates. All of our employees are at-will employees and can terminate their employment at any time. We do not carry “key person” insurance covering members of senior management, other than $25 million of insurance covering Dr. Steiner.

In December 2009, we announced a reduction of approximately 26% of our workforce in order to reduce our operating expenses in connection with the receipt of the Complete Response Letter regarding our NDA for

toremifene 80 mg and the associated delay in the potential regulatory approval of toremifene 80 mg. This and any future workforce reductions may negatively affect our ability to retain or attract talented employees.

We will need to hire additional employees in order to commercialize our product candidates in the future. Any inability to manage future growth could harm our ability to commercialize our product candidates, increase our costs and adversely impact our ability to compete effectively.

In order to commercialize our product candidates in the future, we will need to expand the number of our managerial, operational, financial and other employees and the competition for qualified personnel in the biotechnology field is intense.

Future growth will impose significant added responsibilities on members of management, including the need to identify, recruit, maintain and integrate additional employees. Our future financial performance and our ability to commercialize our product candidates and to compete effectively will depend, in part, on our ability to manage any future growth effectively.

Risks Related to our Common Stock

Market volatility may cause our stock price and the value of your investment to decline.

The market prices for securities of biotechnology companies in general have been highly volatile and may continue to be so in the future. The following factors, in addition to other risk factors described in this section, may have a significant impact on the market price of our common stock:

- developments with respect to our collaboration with Ipsen, including the results of our negotiations with Ipsen with respect to the planned TREAT 2 trial, any changes to the terms of our collaboration, and any determination by Ipsen to terminate the collaboration;
- adverse results or delays in our clinical trials;
- our ability to enter into additional collaborative arrangements with respect to our product candidates;
- the timing of achievement of, or failure to achieve, our, Ipsen's and any potential future collaborators' clinical, regulatory and other milestones, such as the commencement of clinical development, the completion of a clinical trial or the receipt of regulatory approval;
- announcement of FDA approval or non-approval of our product candidates or delays in the FDA review process;
- actions taken by regulatory agencies with respect to our product candidates or products, our clinical trials or our sales and marketing activities, including regulatory actions requiring or leading to restrictions, limitations and/or warnings in the label of FARESTON® or an approved toremifene product candidate;
- the commercial success of any product approved by the FDA or its foreign counterparts;
- introductions or announcements of technological innovations or new products by us, Ipsen, potential future collaborators, or our competitors, and the timing of these introductions or announcements;
- market conditions for equity investments in general, or the biotechnology or pharmaceutical industries in particular;
- the terms and timing of any future collaborative, licensing or other arrangements that we may establish;
- regulatory developments in the United States and foreign countries;
- changes in the structure or reimbursement policies of health care payment systems;
- any intellectual property infringement lawsuit involving us;
- actual or anticipated fluctuations in our results of operations;

- changes in financial estimates or recommendations by securities analysts;
- sales of large blocks of our common stock;
- sales of our common stock by our executive officers, directors and significant stockholders;
- changes in accounting principles; and
- the loss of any of our key scientific or management personnel.

The stock markets in general, and the markets for biotechnology stocks in particular, have experienced significant volatility that has often been unrelated to the operating performance of particular companies. Recently, the financial markets have faced almost unprecedented turmoil, resulting in a decline in investor confidence and concerns about the proper functioning of the securities markets, which decline in general investor confidence has resulted in depressed stock prices for many companies notwithstanding the lack of a fundamental change in their underlying business models or prospects. These broad market fluctuations may adversely affect the trading price of our common stock.

In the past, class action litigation has often been instituted against companies whose securities have experienced periods of volatility in market price. Any such litigation brought against us could result in substantial costs, which would hurt our financial condition and results of operations and divert management's attention and resources, which could result in delays of our clinical trials or commercialization efforts.

Our executive officers, directors and largest stockholders have the ability to control all matters submitted to stockholders for approval.

As of June 30, 2010, our executive officers, directors and holders of 5% or more of our outstanding common stock beneficially owned approximately 66.0% of our outstanding common stock, and our executive officers and directors alone beneficially owned approximately 48.9% of our outstanding common stock. As a result, these stockholders, acting together, may or will have the ability to control all matters requiring approval by our stockholders, including the election of directors and the approval of mergers or other business combination transactions. The interests of this group of stockholders may not always coincide with our interests or the interests of other stockholders.

Anti-takeover provisions in our charter documents and under Delaware law could make an acquisition of us, which may be beneficial to our stockholders, more difficult and may prevent attempts by our stockholders to replace or remove our current management.

Provisions in our certificate of incorporation and our bylaws may delay or prevent an acquisition of us or a change in our management. In addition, these provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our Board of Directors. Because our Board of Directors is responsible for appointing the members of our management team, these provisions could in turn affect any attempt by our stockholders to replace current members of our management team. These provisions include:

- a classified Board of Directors;
- a prohibition on actions by our stockholders by written consent;

- the ability of our Board of Directors to issue preferred stock without stockholder approval, which could be used to institute a “poison pill” that would work to dilute the stock ownership of a potential hostile acquirer, effectively preventing acquisitions that have not been approved by our Board of Directors; and
- limitations on the removal of directors.

Moreover, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which prohibits a person who owns in excess of 15% of our outstanding voting stock from merging or combining with us for a period of three years after the date of the transaction in which the person acquired in excess of 15% of our outstanding voting stock, unless the merger or combination is approved in a prescribed manner. Finally, these provisions establish advance notice requirements for nominations for election to our Board of Directors or for proposing matters that can be acted upon at stockholder meetings. These provisions would apply even if the offer may be considered beneficial by some stockholders.

If there are substantial sales of our common stock, the market price of our common stock could drop substantially, even if our business is doing well.

For the 12-month period ended June 30, 2010, the average daily trading volume of our common stock on the NASDAQ Global Market was 406,412 shares. As a result, future sales of a substantial number of shares of our common stock in the public market, or the perception that such sales may occur, could adversely affect the then-prevailing market price of our common stock. As of June 30, 2010, we had 36,420,901 shares of common stock outstanding.

Moreover, J.R. Hyde, III, and Oracle Investment Management, Inc., two of our largest stockholders, and their affiliates, have rights, subject to some conditions, to require us to file registration statements covering the approximately 10.8 million shares of common stock they hold in the aggregate which are subject to registration rights or to include these shares in registration statements that we may file for ourselves or other stockholders. If any of these large stockholders were to sell large blocks of shares in a short period of time, the market price of our common stock could drop substantially.

BUSINESS OVERVIEW

We are 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.

We are developing GTx-758, a selective estrogen receptor, or ER, alpha agonist for the treatment of advanced prostate cancer. As a selective ER alpha agonist, GTx-758 has the potential to achieve medical castration by feedback inhibition of the hypothalamic- pituitary-gonadal axis. Because of the mechanism of action of GTx-758, castration is expected to be achieved without concomitant bone loss or the development of hot flashes. In 2009, we evaluated GTx-758 in healthy male volunteers in two Phase I clinical trials. In a single ascending dose study in 96 subjects, GTx-758 was well tolerated and demonstrated a pharmacokinetic profile compatible with daily oral dosing. In a 14 day multiple ascending dose study in 50 subjects, GTx-758 was well tolerated and demonstrated the ability to reduce testosterone and to increase sex hormone binding globulin, or SHBG. In September 2010, we announced that in a Phase II, open label, pharmacokinetic-pharmacodynamic clinical trial in healthy male volunteers, GTx-758 suppressed serum total testosterone to castrate levels, increased serum SHBG, and markedly reduced serum free testosterone, the form of testosterone which is available to prostate cancer cells for growth. Medical castration (levels of serum total testosterone <50 ng/dL) was achieved in subjects receiving both the 1000 mg and 1500 mg treatment. The percentage of treatment compliant subjects receiving 1500 mg of GTx-758 who achieved medical castration was comparable to rates of castration observed with luteinizing hormone releasing hormone treatment, which, along with surgical bilateral orchiectomy, is current standard of care. GTx-758 was well tolerated and no serious adverse events were reported in the study. In 2011, we are planning to initiate an additional clinical trial evaluating GTx-758 for first line treatment in men with advanced prostate cancer.

Additionally, we are developing selective androgen receptor modulators, or SARMs, a new class of drugs with the potential to treat cancer cachexia (cancer induced muscle loss), chronic sarcopenia, which is the loss of skeletal muscle mass resulting in reduced physical strength and ability to perform activities of daily living, and other musculoskeletal wasting or muscle loss conditions. In March 2010, we reacquired full rights to our SARM program, including ostarine™, our lead SARM, following the termination by us and Merck & Co., Inc., or Merck, of our exclusive license and collaboration agreement for SARM compounds and related SARM products. We are currently preparing for an End of Phase II meeting with the U.S. Food and Drug Administration, or FDA, that we anticipate will occur later this year, to gain concurrence from the FDA on the proposed late stage clinical development of ostarine™ for the treatment of cancer cachexia in non-small cell lung cancer patients. Following the FDA's input, we plan to continue our pursuit of a partnership or collaboration for the development and commercialization of SARMs, which includes ostarine™ for the treatment of cancer cachexia, and/or to initiate a pivotal clinical trial in 2011.

We are also developing toremifene 80 mg, a selective estrogen receptor modulator, or SERM, for the reduction of fractures and treatment of other estrogen deficiency side effects of androgen deprivation therapy, or ADT, in men with prostate cancer. In September 2006, we licensed to Ipsen Biopharm Limited, or Ipsen, exclusive rights in the European Union, Switzerland, Norway, Iceland, Lichtenstein and the Commonwealth of Independent States, which we collectively refer to as the European Territory, to develop and commercialize toremifene in all indications that we have licensed from Orion Corporation, or Orion, which include all indications in humans except the treatment and prevention of breast cancer outside of the United States. In December 2008, we submitted a New Drug

Application, or NDA, for toremifene 80 mg to reduce fractures in men with prostate cancer on ADT to the FDA. In October 2009, we received a Complete Response Letter from the FDA regarding our NDA for toremifene 80 mg notifying us that the FDA would not approve our NDA in its present form as a result of certain clinical deficiencies identified in the Complete Response Letter.

In March 2010, we amended our collaboration and license agreement with Ipsen primarily to expand our collaboration for the development and commercialization of toremifene 80 mg to reduce fractures in men with prostate cancer and to potentially fund a second pivotal Phase III clinical trial of toremifene 80 mg. In exchange for Ipsen's commitment, subject to specified conditions, to fund a second Phase III clinical trial of toremifene 80 mg, we granted Ipsen certain additional rights, including an expansion of the territory in which Ipsen has the right to develop and commercialize toremifene beyond the European Territory to include Australia and certain countries in North Africa, the Middle East and Asia (excluding Japan), which we collectively refer to as the Ipsen Territory. In addition, Ipsen received the right to co-promote our toremifene 80 mg product candidate for the ADT indication in the United States or, at Ipsen's election in lieu of co-promotion, the right to receive a double digit royalty on net sales of our toremifene 80 mg product candidate for the ADT indication in the United States, which declines as net sales increase beyond an established base. Additionally, Ipsen was released of the obligation to pay certain potential milestone payments totaling €18.0 million related to the European approval of toremifene 80 mg and pricing approvals and received a reduction in the royalty payable to us on aggregate net sales of our toremifene 80 mg product candidate for the ADT indication. Ipsen also received the right of first negotiation, subject to certain conditions, with respect to development, marketing, sale and distribution in the Ipsen Territory of GTx-758.

In April 2010, we submitted a proposed protocol to the FDA for a second pivotal Phase III clinical trial evaluating toremifene 80 mg to reduce fractures in men with prostate cancer on ADT to address in a single clinical trial the deficiencies identified by the FDA in the Complete Response Letter, which we refer to as the planned TREAT 2 trial. Based on our discussions with the FDA to date, we believe that we have finalized the protocol for the planned TREAT 2 trial. Under our amended agreement with Ipsen, Ipsen agreed to pay us up to €42.0 million in clinical development milestones related to a second pivotal Phase III clinical trial evaluating toremifene 80 mg to reduce fractures in men with prostate cancer on ADT. However, our amended agreement with Ipsen provides that if the projected third-party costs of such second pivotal Phase III clinical trial of toremifene 80 mg (our planned TREAT 2 trial) exceed €42.0 million by a certain amount, then we and Ipsen agreed to discuss whether to initiate such trial or to renegotiate the terms of the collaboration. The projected third-party costs of the planned TREAT 2 trial exceed the threshold in excess of €42.0 million established under our amended agreement with Ipsen, and Ipsen has not agreed to the initiation and funding of the planned TREAT 2 trial. We and Ipsen are in discussions with respect to whether to commence the planned TREAT 2 trial and, if so, the renegotiation of the terms of our collaboration, including in particular each party's respective funding commitments related to the planned TREAT 2 trial. Although we continue to be engaged in discussions intended to resolve the matter, we cannot predict the outcome, including whether we will be able to initiate the planned TREAT 2 trial or, if it is initiated, what our respective funding commitments for the planned TREAT 2 trial would be. If we and Ipsen are able to renegotiate the terms of our collaboration and we and Ipsen agree to initiate the planned TREAT 2 trial as proposed, we expect to initiate the planned TREAT 2 trial in the first quarter of 2011.

In May 2010, we announced that toremifene 20 mg failed to meet the primary efficacy endpoint in a completed Phase III clinical trial evaluating toremifene 20 mg for the prevention of prostate cancer in high risk men with high grade prostatic intraepithelial neoplasia, or high grade PIN. We are reviewing all of the data from the Phase III clinical trial to better understand the trial results and the ability of toremifene 20 mg to reduce cancer among high risk men, but we do not currently expect to conduct additional clinical trials evaluating toremifene 20 mg for the prevention of prostate cancer in high risk men with high grade PIN or to submit a NDA to the FDA for this indication.

We market FARESTON® (toremifene citrate) 60 mg tablets, approved for the treatment of advanced metastatic breast cancer in postmenopausal women in the United States. The active pharmaceutical ingredient in FARESTON® is the same as in our toremifene 80 mg product candidate. In January 2005, we acquired from Orion the right to market FARESTON® tablets in the United States for the metastatic breast cancer indication. We also acquired from Orion a license to toremifene for all indications in humans worldwide, except breast cancer outside of the United States.