Prospectus Supplement

(To prospectus dated February 14, 2007)

\$25,000,000 shares of Common Stock

Titan Pharmaceuticals, Inc.

Pursuant to this prospectus supplement and the accompanying prospectus, we are offering up to \$25,000,000 of shares of our common stock to Azimuth Opportunity Ltd., or Azimuth, pursuant to a Common Stock Purchase Agreement, dated March 14, 2007, between us and Azimuth. The offering price, net of discounts and commissions payable by us, will be at a discount of between 4.5% and 7.0% from the prevailing market price for our common stock, as reported on the American Stock Exchange. Upon each sale of our common stock to Azimuth under the Purchase Agreement, we have also agreed to pay Trout Capital LLC, a placement fee equal to 1% of the aggregate dollar amount of common stock purchased by Azimuth. The specific terms of any offering will be provided by way of a supplement to this prospectus supplement.

This prospectus supplement and the accompanying prospectus also cover the sale of these shares by Azimuth to the public. Azimuth is an "underwriter" within the meaning of Section 2(a)(11) of the Securities Act of 1933, as amended, or the Securities Act, and any profits on the sales of shares of our common stock by Azimuth and any discounts, commissions or concessions received by Azimuth may be deemed to be underwriting discounts and commissions under the Securities Act.

Our common stock is traded on the American Stock Exchange under the symbol "TTP." The closing price of the common stock on the American Stock Exchange on March 13, 2007 was \$2.31.

INVESTING IN OUR COMMON STOCK INVOLVES A HIGH DEGREE OF RISK. THESE RISKS ARE DESCRIBED UNDER THE CAPTION "RISK FACTORS" IN THE ACCOMPANYING PROSPECTUS AND THE DOCUMENTS INCORPORATED BY REFERENCE THEREIN.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus supplement or the accompanying prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus supplement is March 14, 2007

About This Prospectus Supplement

This prospectus supplement is a supplement to the accompanying prospectus that is also a part of this document. This prospectus supplement and the accompanying prospectus are part of a registration statement that we filed with the Securities and Exchange Commission using a "shelf" registration process. Under the shelf registration process, we may sell any combination of the securities described in the accompanying prospectus up to a total dollar amount of \$50,000,000, of which this offering is a part.

In the prospectus, we provide you with a general description of the shares of our common stock that we are offering and specific information about the terms of this offering. Both this prospectus supplement and the accompanying prospectus include important information about us and about our common stock and other information you should know before investing. This prospectus supplement also adds, updates and changes information contained in the accompanying prospectus. To the extent that any statement that we make in this prospectus supplement is inconsistent with the statements made in the accompanying prospectus or our previously filed prospectus supplement, the statements made in the accompanying prospectus supplement are deemed modified or superseded by the statements made in this prospectus supplement.

You should read both this prospectus supplement and the accompanying prospectus as well as the additional information described under the heading "Incorporation of Certain Documents by Reference" on page 14 of the accompanying prospectus before investing in our common stock and warrants. In addition to the documents listed on page 14 of the accompanying prospectus we are incorporating by reference any future filings made with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934.

You should rely only on the information contained or incorporated by reference in this prospectus supplement and the accompanying prospectus that is also part of this document. We have not authorized anyone to provide information different from that contained or incorporated in this prospectus supplement and the accompanying prospectus. We are offering to sell shares of common stock only in jurisdictions where offers and sales are permitted. The information contained or incorporated in this prospectus supplement and the accompanying prospectus is accurate only as of the date of such information, regardless of the time of delivery of this prospectus supplement and the accompanying prospectus or of any sale of our common stock.

In this prospectus supplement, "we," "us," and "our company" refer to Titan Pharmaceuticals, Inc., together with its subsidiaries, unless the context otherwise requires.

Use Of Proceeds

The proceeds from this offering will vary depending on the number of shares that we offer, the offering price per share and the applicable offering discount rate. Assuming that we sell the full amount of securities offered by this prospectus supplement, we expect that our net proceeds, after underwriter discounts and placement agent commissions, will be between \$10,587,124 and \$23,440,000, depending on the offering price and the applicable offering discount. We may sell fewer than all of the shares offered by this prospectus supplement, in which case our net offering proceeds will be less. We may raise less than the maximum \$25,000,000 in gross offering proceeds permitted by this prospectus supplement, depending on our prevailing stock price.

We plan to use the net proceeds we raise for general corporate purposes and for research and product development activities.

Pending application of the proceeds of the sale of securities, we intend to divest the net proceeds of the sale in short-term, investmentgrade, interest-bearing instruments.

Dilution

The net tangible book value of our issued and outstanding common stock on December 31, 2006 was \$10,405,000, or approximately \$0.27 per share. Net tangible book value per share represents the amount of our total tangible assets, less our total liabilities, divided by the total number of shares of our common stock outstanding. Dilution in net tangible book value per share to new investors represents the difference between the amount per share paid by purchasers of shares of our common stock in this offering and the net tangible book value per share of our common stock immediately afterwards. Without taking into account any other changes in net tangible book value after December 31, 2006, other than the sale of \$11,708,830 of common stock offered by us under this prospectus supplement at a price of \$1.50 per share (which would result in us issuing the maximum number of shares of common stock under the agreement of 7,805,887) and after deducting the underwriter discounts and placement agent's fee of \$1,071,706 and other offering expenses payable by us estimated at \$50,000, our net tangible book value would have been \$20,992,124, or approximately \$0.45 per share. This represents an immediate accretion in net tangible book value of approximately \$0.18 per share to existing stockholders and an immediate dilution in net tangible book value of approximately \$1.05 per share to new investors.

Plan of Distribution

On March 14, 2007, we entered into what is sometimes termed an equity line of credit arrangement with Azimuth Opportunity Ltd., or Azimuth. Specifically, we entered into a Common Stock Purchase Agreement, or the Purchase Agreement, with Azimuth which provides that, upon the terms and subject to the conditions set forth therein, Azimuth is committed to purchase up to the lesser of (a) \$25,000,000 of our common stock, or (b) 7,805,887 shares of common stock, which was equal to the number of shares that is one less than 20% of the issued and outstanding shares of our common stock as of March 13, 2007, over the 24 month term of the Purchase Agreement. From time to time over the term of the Purchase Agreement, at our sole discretion, we may present Azimuth with draw down notices requiring Azimuth to purchase a specified dollar amount of shares of our common stock, subject to certain limits and so long as specified conditions are met. The price per share at which the shares will be sold, and therefore the number of shares to be sold pursuant to the draw down notice, is determined over a pricing period (which is usually a ten consecutive trading day period that may be reduced by us pursuant to the terms of the Purchase Agreement). We are able to present Azimuth with up to 30 draw down notices during the 24 month term of the Purchase Agreement, with a minimum of five trading days required between each draw down pricing period.

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Once presented with a draw down notice, Azimuth is required to purchase a pro rata portion of the dollar amount of shares specified in the notice for each trading day during the pricing period on which the daily volume weighted average price for our common stock exceeds a threshold price specified by us in the draw down notice (which in no event may be less than \$1.50). The per share purchase price for the shares sold on any particular trading day during the pricing period will equal the daily volume weighted average price of our common stock for that day, less a discount ranging from 4.5% and 7.0%. The amount of the discount varies based on the threshold price specified by us. If the daily volume weighted average price of our common stock falls below the threshold price on any trading day during a draw down period, the Purchase Agreement provides that Azimuth will not be required to purchase the pro-rata portion of shares of common stock allocated to that day. However, at its election, Azimuth may buy the pro-rata portion of shares allocated to that day at the threshold price less the discount described above. The total number of shares sold to Azimuth during each draw down will be the sum of the number of shares required and/or elected to be purchased on each day of the pricing period.

The Purchase Agreement also provides that from time to time and at our sole discretion we may grant Azimuth the right to exercise one or more options to purchase additional shares of our common stock up to an aggregate amount specified by us during each draw down pricing period. Upon Azimuth's exercise of the option, we would sell to Azimuth the shares of our common stock subject to the option at a price equal to the greater of the daily volume weighted average price of our common stock on the day Azimuth notifies us of its election to exercise its option or the threshold price for the option determined by us, less a discount calculated in the same manner as for the fixed amount of the draw down notices.

Any sale of our shares of common stock to Azimuth will be registered on our registration statement of which this prospectus is a part, which also covers the sale of those shares from time to time by Azimuth to the public. Azimuth is an "underwriter" within the meaning of Section 2(a)(11) of the Securities Act of 1933, as amended.

Azimuth shall use an unaffiliated broker-dealer to effectuate all sales, if any, of common stock that it may purchase from us pursuant to the Purchase Agreement. Such sales will be made on the American Stock Exchange at prices and at terms then prevailing or at prices related to the then current market price. Each such unaffiliated broker-dealer will be an underwriter within the meaning of Section 2(a)(11) of the Securities Act. Azimuth shall be responsible for any broker-dealer commissions and all other expenses associated with the sale of the common stock it acquires pursuant to the Purchase Agreement. The shares of common stock may be sold in one or more of the following manners:

- ordinary brokerage transactions and transactions in which the broker solicits purchasers; or
- a block trade in which the broker or dealer so engaged will attempt to sell the shares as agent, but may position and resell a portion of the block as principal to facilitate the transaction.

Azimuth has agreed that during the term of the Purchase Agreement and for a period of 90 days after the termination of the Purchase Agreement, neither Azimuth nor any of its affiliates will, directly or indirectly, sell any of our securities except the shares that it owns or has the right to purchase pursuant to the provisions of a draw down notice. Azimuth has agreed that during the periods listed above it will not enter into a short position with respect to shares of our common stock except that Azimuth may sell shares that it is obligated to purchase under a pending draw down notice but has not yet taken possession of so long as Azimuth covers any such sales with the shares purchased pursuant to such draw down notice. Azimuth has further agreed that during the periods listed above it will not grant any option to purchase or acquire any right to dispose or otherwise dispose for value of any shares of our common stock, or enter into any swap, hedge or other agreement that transfers, in whole or in part, the economic risk of ownership of our common stock, except for the sales permitted by the prior two sentences.

In addition, Azimuth and any unaffiliated broker-dealer will be subject to liability under the federal securities laws and must comply with the requirements of the Securities Act and Securities Exchange Act of 1934, as amended, or the Exchange Act, including without limitation, Rule 10b-5 and Regulation M under the Exchange Act. These rules and regulations may limit the timing of purchases and sales of shares of common stock by Azimuth or any unaffiliated broker-dealer. Under these rules and regulations, Azimuth and any unaffiliated broker-dealer:

- may not engage in any stabilization activity in connection with our securities;
- must furnish each broker which offers shares of our common stock covered by the prospectus that is a part of our Registration Statement with the number of copies of such prospectus and any prospectus supplement which are required by each broker; and
- may not bid for or purchase any of our securities or attempt to induce any person to purchase any of our securities other than as permitted under the Exchange Act.

These restrictions may affect the marketability of the shares of common stock by Azimuth and any unaffiliated broker-dealer.

We have agreed to indemnify and hold harmless Azimuth, any unaffiliated broker-dealer and each person who controls Azimuth or any unaffiliated broker-dealer against certain liabilities, including liabilities under the Securities Act. We have agreed to pay up to \$35,000 of Azimuth's reasonable attorneys' fees and expenses (exclusive of disbursements and out-of-pocket expenses) incurred by Azimuth in connection with the preparation, negotiation, execution and delivery of the Purchase Agreement. We have also agreed to pay up to \$12,500 per quarter during the term of the agreement for reasonable fees and expenses incurred by Azimuth in connection with any amendments, modifications or waivers of the Purchase Agreement, and ongoing due diligence, provided that this amount will not be due in a quarter in which we place shares to Azimuth on the applicable settlement date, and such failure continues for 10 trading days, we will pay Azimuth liquidated damages in cash or restricted shares of our common stock, at the option of Azimuth.

Azimuth has agreed to indemnify and hold harmless us and each of our directors, officers and persons who control us against certain liabilities, including liabilities under the Securities Act, which may be based upon written information furnished by Azimuth to us for inclusion in a prospectus or prospectus supplement related to this transaction.

Upon each sale of our common stock to Azimuth under the Purchase Agreement, we have also agreed to pay Trout Capital LLC, member NASD/SIPC, a placement fee equal to 1% of the aggregate dollar amount of common stock purchased by Azimuth. We have agreed to indemnify and hold harmless Trout Capital LLC against certain liabilities, including liabilities under the Securities Act.

Incorporation By Reference

We incorporate herein by reference the Current Report on Form 8-K dated March 14, 2007.

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