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

FORM S-8
REGISTRATION STATEMENT
Under
THE SECURITIES ACT OF 1933

PRO-PHARMACEUTICALS, INC.

(Exact name of registrant as specified in its charter)

Nevada
(State or other jurisdiction
of incorporation or organization)

04-3562325
(IRS Employer
Identification Number)

7 Wells Avenue
Newton, Massachusetts 02459
(617) 559-0033
(Address of Principal Executive Offices, Zip Code)

2009 INCENTIVE COMPENSATION PLAN
(Full Title of Plan)

Theodore D. Zucconi, Ph.D.
Chief Executive Officer and President
Pro-Pharmaceuticals, Inc.
7 Wells Avenue
Newton, Massachusetts 02459
(617) 559-0033
(Name, address and telephone number of agent for service)

With a copy to:
Adam Eilenberg, Esq.
Eilenberg & Krause LLP
11 East 44th Street
New York, New York 10017
(212) 986-9700

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company

CALCULATION OF REGISTRATION FEE

| Title of Securities to be registered | Amount to be registered (1) | Proposed maximum offering price per share | Proposed maximum aggregate offering price | Amount of registration fee |
|---|------------------------------------|--|--|-----------------------------------|
| Common Stock, par value \$.001 per share | 2,000,000(2) | \$ 0.57(3) | \$1,140,000 | |
| Common Stock, par value \$.001 per share | 3,000,000(4) | \$0.205(5) | \$ 615,000 | |
| Common Stock, par value \$.001 per share | 5,000,000(6) | \$ 0.57(3) | \$2,850,000 | |
| Total | 10,000,000 | | \$4,605,000 | \$257 |

- (1) This Registration Statement shall also cover any additional shares of Common Stock which become issuable under the Registrant's 2009 Incentive Compensation Plan by reason of any stock dividend, stock split, recapitalization or other similar transaction effected without the Registrant's receipt of consideration which results in an increase in the number of outstanding shares of the Registrant's Common Stock.
- (2) Shares of restricted Common Stock previously granted under the Registrant's 2009 Incentive Compensation Plan.
- (3) Based on the average of the high and low price of the Registrant's Common Stock on May 11, 2009 as reported on the OTCBB, used solely for the purpose of calculating the registration fee pursuant to Rules 457(h) and (c) under the Securities Act of 1933.
- (4) Shares of Common Stock that may be issued pursuant to the exercise of options previously granted under the Registrant's 2009 Incentive Compensation Plan.
- (5) Based on the weighted average exercise price of options previously granted under the Registrant's 2009 Incentive Compensation Plan
- (6) Shares of Common Stock that may hereafter be granted or issued upon the exercise or other settlement of awards made under the Registrant's 2009 Incentive Compensation Plan.

PART I
INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS
EXPLANATORY NOTE

As permitted by the instructions to Form S-8, this Registration Statement omits the information set forth in Part I of that Form.

PART II
INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents filed with the Securities and Exchange Commission (the "Commission") by the Registrant, Pro-Pharmaceuticals, Inc., a Nevada corporation (the "Company"), pursuant to the Securities Exchange Act of 1934, as amended (the "Exchange Act"), are incorporated by reference in this registration statement:

- Our Annual Report on Form 10-K for the fiscal year ended December 31, 2008 filed on March 30, 2009;
- Our Current Reports on Form 8-K filed on January 5, 2009, January 23, 2009, January 30, 2009, February 18, 2009 (as amended on Form 8-K/A filed on March 30, 2009) and March 30, 2009; and
- The description of our common stock contained in our Registration Statement on Form 8-A filed with the SEC on September 9, 2003, including any amendments or reports filed for the purpose of updating that description.

All documents subsequently filed by the Company pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act, prior to the filing of a post-effective amendment which indicates that all shares offered hereby have been sold or which deregisters all shares then remaining unsold, shall be deemed to be incorporated by reference in this registration statement and to be a part hereof from the date of filing of such documents. Any statement contained in a previously filed document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this registration statement to the extent that a statement contained herein or in any other subsequently filed document which also is incorporated or deemed to be incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this registration statement.

Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

Not applicable.

Item 6. Indemnification of Directors and Officers.

The registrant's By-laws, as amended to date, provide for indemnification of officers and directors to the fullest extent permitted by Section 7502 of Chapter 78 of the Nevada Revised Statutes ("NRS") (as from time to time amended), provided such officer or director acts in good faith and in a manner which such person reasonably believes to be in or not opposed to the best interests of the registrant, and with respect to any criminal matter, had no reasonable cause to believe such person's conduct was unlawful.

NRS 78.7502 states:

"1. A corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, except an action by or in the right of the corporation, by reason of the fact that he is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses, including attorneys' fees, judgments, fines and amounts paid in settlement actually and reasonably incurred by him in connection with the action, suit or proceeding if he:

(a) Is not liable pursuant to NRS 78.138; or

(b) Acted in good faith and in a manner which he reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful.

The termination of any action, suit or proceeding by judgment, order, settlement, conviction or upon a plea of nolo contendere or its equivalent, does not, of itself, create a presumption that the person is liable pursuant to NRS 78.138 or did not act in good faith and in a manner which he reasonably believed to be in or not opposed to the best interests of the corporation, or that, with respect to any criminal action or proceeding, he had reasonable cause to believe that his conduct was unlawful.

2. A corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor by reason of the fact that he is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against expenses, including amounts paid in settlement and attorneys' fees actually and reasonably incurred by him in connection with the defense or settlement of the action or suit if he:

(a) Is not liable pursuant to NRS 78.138; or

(b) Acted in good faith and in a manner which he reasonably believed to be in or not opposed to the best interests of the corporation.

Indemnification may not be made for any claim, issue or matter as to which such a person has been adjudged by a court of competent jurisdiction, after exhaustion of all appeals therefrom, to be liable to the corporation or for amounts paid in settlement to the corporation, unless and only to the extent that the court in which the action or suit was brought or other court of competent jurisdiction determines upon application that in view of all the circumstances of the case, the person is fairly and reasonably entitled to indemnity for such expenses as the court deems proper.

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3. To the extent that a director, officer, employee or agent of a corporation has been successful on the merits or otherwise in defense of any action, suit or proceeding referred to in subsections 1 and 2, or in defense of any claim, issue or matter therein, the corporation shall indemnify him against expenses, including attorneys' fees, actually and reasonably incurred by him in connection with the defense."

The registrant's By-laws also provide that to the fullest extent permitted by NRS 78.751 (as from time to time amended), the registrant shall pay the expenses of officers and directors of the Corporation incurred in defending a civil or criminal action, suit or proceeding, as they are incurred and in advance of the final disposition of such matter, upon receipt of an undertaking in form and substance acceptable to the Board of Directors for the repayment of such advances if it is ultimately determined by a court of competent jurisdiction that the officer or director is not entitled to be indemnified.

NRS 78.751 states:

"1. Any discretionary indemnification pursuant to NRS 78.7502, unless ordered by a court or advanced pursuant to subsection 2, may be made by the corporation only as authorized in the specific case upon a determination that indemnification of the director, officer, employee or agent is proper in the circumstances. The determination must be made:

(a) By the stockholders;

(b) By the board of directors by majority vote of a quorum consisting of directors who were not parties to the action, suit or proceeding;

(c) If a majority vote of a quorum consisting of directors who were not parties to the action, suit or proceeding so orders, by independent legal counsel in a written opinion; or

(d) If a quorum consisting of directors who were not parties to the action, suit or proceeding cannot be obtained, by independent legal counsel in a written opinion.

2. The articles of incorporation, the bylaws or an agreement made by the corporation may provide that the expenses of officers and directors incurred in defending a civil or criminal action, suit or proceeding must be paid by the corporation as they are incurred and in advance of the final disposition of the action, suit or proceeding, upon receipt of an undertaking by or on behalf of the director or officer to repay the amount if it is ultimately determined by a court of competent jurisdiction that he is not entitled to be indemnified by the corporation. The provisions of this subsection do not affect any rights to advancement of expenses to which corporate personnel other than directors or officers may be entitled under any contract or otherwise by law.

3. The indemnification pursuant to NRS 78.7502 and advancement of expenses authorized in or ordered by a court pursuant to this section:

(a) Does not exclude any other rights to which a person seeking indemnification or advancement of expenses may be entitled under the articles of incorporation or any bylaw, agreement, vote of stockholders or disinterested directors or otherwise, for either an action in his official capacity or an action in another capacity while holding his office, except that indemnification, unless ordered by a court pursuant to NRS 78.7502 or for the advancement of expenses made pursuant to subsection 2, may not be made to or on behalf of any director or officer if a final adjudication establishes that his acts or omissions involved intentional misconduct, fraud or a knowing violation of the law and was material to the cause of action.

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(b) Continues for a person who has ceased to be a director, officer, employee or agent and inures to the benefit of the heirs, executors and administrators of such a person.”

In addition, the registrant maintains directors’ and officers’ liability insurance which insures against liabilities that its directors and officers may incur in such capacities.

Reference is made to “Undertakings,” below, for the registrant’s undertakings in this registration statement with respect to indemnification of liabilities arising under the Securities Act of 1933, as amended (the “Securities Act”).

Item 7. Exemption from Registration Claimed.

Not Applicable.

Item 8. Exhibits.

The Exhibit Index immediately preceding the exhibits is incorporated herein by reference.

Item 9. Undertakings.

The undersigned registrant hereby undertakes:

(1) To file, during any period in which it offers or sells securities, a post-effective amendment to this registration statement:

(a) To include any prospectus required by Section 10(a)(3) of the Securities Act;

(b) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in the volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the “Calculation of Registration Fee” table in the effective registration statement; and

(c) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that paragraphs (a) and (b) above do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the Commission pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of the securities at that time shall be deemed to be the initial bona fide offering thereof.

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(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act that is incorporated by reference in this registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Newton, State of Massachusetts on May 13, 2009.

PRO-PHARMACEUTICALS, INC.

By: /S/ THEODORE D. ZUCCONI
Name: Theodore D. Zucconi, Ph.D.
Title: Chief Executive Officer and
 President

POWER OF ATTORNEY

Each person whose signature appears below hereby constitutes and appoints Anthony D. Squeglia as his true and lawful attorney-in-fact and agent, with full power of substitution and revocation, to sign on his behalf, individually and in each capacity stated below, all amendments and post-effective amendments to this Registration Statement and to file the same, with all exhibits thereto and any other documents in connection therewith, with the Securities and Exchange Commission under the Securities Act of 1933, granting unto each such attorney-in-fact and agent full power and authority to do an perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as such person might or could do in person, hereby ratifying and confirming each act that said attorney-in-fact and agent may lawfully do or cause to be done by virtue thereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates stated.

| <u>Signature</u> | <u>Title</u> | <u>Date</u> |
|--|--|--------------|
| <u> /S/ THEODORE D. ZUCCONI </u> Theodore D. Zucconi, Ph.D. | Chief Executive Officer, President and Director (Principal Executive Officer) | May 13, 2009 |
| <u> /S/ ANTHONY D. SQUEGLIA </u> Anthony D. Squeglia | Chief Financial Officer (Principal Financial and Accounting Officer) | May 13, 2009 |
| <u> /S/ GILBERT AMELIO </u> Gilbert Amelio, Ph.D. | Director | May 13, 2009 |
| <u> /S/ JAMES C. CZIRR </u> James C. Czirr | Director | May 13, 2009 |
| <u> /S/ ROD D. MARTIN </u> Rod D. Martin | Director | May 13, 2009 |
| <u> /S/ S. COLIN NEILL </u> S. Colin Neill | Director | May 13, 2009 |

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| <u>Signature</u> | <u>Title</u> | <u>Date</u> |
|---|--------------|--------------|
| <u>/S/ STEVEN PRELACK</u> Steven Prelack | Director | May 13, 2009 |
| <u>/S/ JERALD K. ROME</u> Jerald K. Rome | Director | May 13, 2009 |
| <u>/S/ PETER TRABER</u> Peter Traber, M.D. | Director | May 13, 2009 |

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This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

PROSPECTUS



4,000,000 SHARES OF COMMON STOCK

This prospectus relates to the offer and sale from time to time of up to 4,000,000 shares of our common stock by the selling stockholders named in this prospectus. These shares include shares issuable upon the exercise of options and shares of restricted common stock, all previously granted to the selling stockholders under the 2009 Incentive Compensation Plan.

Our common stock trades on the OTCBB under the symbol "PRWP.OB." On May 11, 2009, the closing sale price of the common stock was \$0.55 per share.

Investing in our securities involves certain risks. You should consider the "Risk Factors" beginning on page 1 in deciding whether to buy any shares of our common stock.

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

The date of this prospectus is May 12, 2009

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The terms the “Company,” “we,” “our” and “us” refer to Pro-Pharmaceuticals, Inc. and its subsidiaries unless the context suggests otherwise. The term “you” refers to a prospective purchaser of our common stock.

SPECIAL NOTE REGARDING FORWARD LOOKING STATEMENTS

Certain statements contained in, or incorporated by reference in, this prospectus are forward-looking in nature. These statements can be identified by the use of forward-looking terminology such as “believes,” “expects,” “may,” “will,” “should,” or “anticipates,” or the negatives thereof or comparable terminology, or by discussions of strategy. You are cautioned that our business and operations are subject to a variety of risks and uncertainties and, consequently, our actual results may materially differ from those projected by any forward-looking statements. Certain of these risks and uncertainties are discussed below under the heading “Risk Factors.” We make no commitment to revise or update any forward-looking statements in order to reflect events or circumstances after the date any such statement is made.

RISK FACTORS

An investment in our common stock involves a high degree of risk. You should carefully consider the risks described under the heading “Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2008, which is incorporated by reference into this prospectus, and the other information contained in, and incorporated by reference into, this prospectus before deciding to invest in our common stock. The risks described are not the only ones facing our company. Additional risks not presently known to us or that we currently consider immaterial may also adversely affect our business. We have attempted to identify the major factors that could cause differences between actual and planned or expected results, but we cannot assure you that we have identified all of those factors.

If any of the risks actually happen, our business, financial condition and operating results could be materially adversely affected, the trading price of our common stock could decline, and you could lose all or part of your investment.

USE OF PROCEEDS

We will not receive any proceeds from the sale of the shares by the selling stockholders. We will receive proceeds upon exercise of the options by the selling stockholders. All proceeds received by us through option exercises will be used for working capital.

SELLING STOCKHOLDERS

This prospectus relates to the offer and sale from time to time of up to 4,000,000 shares of our common stock by the selling stockholders named in this prospectus. These shares include shares issuable upon the exercise of options and shares of restricted common stock, all previously granted to the selling stockholders under the 2009 Incentive Compensation Plan. As permitted by Form S-8, as further selling stockholders become known to the Company they will be added by prospectus supplement(s) pursuant to Rule 424(b) under the Securities Act of 1933.

The table below (1) identifies each selling stockholder, (2) shows the number of shares beneficially owned by selling stockholder prior to the offering (as of the date of this prospectus), (3) shows the number of shares that the selling stockholder may sell in this offering pursuant to this prospectus, and (4) shows the number and percentage of shares that the selling stockholder will beneficially own upon completion of the offering.

| Selling Stockholder | No. of Shares Beneficially Owned Before Offering (1) | No. of Shares Being Offered | No. of Shares Beneficially Owned Upon Completion of Offering (1) | Percentage of Shares Beneficially Owned After Completion of Offering (2) |
|-------------------------|---|-----------------------------------|---|---|
| Theodore Zucconi, Ph.D. | 946,343 | 500,000 | 446,343 | * |
| Gilbert Amelio, Ph.D. | 500,000 | 500,000 | 0 | — |
| James C. Czirr | 53,158,368(3) | 500,000 | 52,658,368 | 53.9% |
| Rod D. Martin | 48,518,926(4) | 500,000 | 48,018,926 | 49.3% |
| S. Colin Neill | 511,500 | 500,000 | 11,500 | * |
| Steven Prelack | 537,000 | 500,000 | 37,000 | * |
| Jerald K. Rome | 729,844 | 500,000 | 229,844 | * |
| Peter Traber, M.D. | 500,000 | 500,000 | 0 | — |

* Less than 1%

(1) Beneficial ownership is determined in accordance with Rule 13d-3 under the Securities Exchange Act of 1934.

(2) Based upon 50,356,709 shares outstanding on May 11, 2009.

(3) Includes (i) 33,200 shares of our common stock owned by a minor child of Mr. Czirr as to which Mr. Czirr disclaims beneficial ownership; (ii) 100,000 shares of our common stock issuable upon conversion of Series A preferred stock; (iii) 200,000 shares of our common stock underlying warrants to purchase shares of our common stock; (iv) 500,000 shares of restricted stock, all of which are subject to forfeiture pursuant to the terms of the restricted stock grant; (v) 3,600,000 shares of our common stock issuable upon conversion of 900,000 shares of Series B-1 preferred stock held of record by 10X Fund, as to which Mr. Czirr, in his capacity as a managing member of 10X Capital Management Fund, LLC, a Florida limited liability company and general partner of 10X Fund, which we refer to as 10X Management, has shared voting and investment power, and disclaims beneficial ownership; (vi) 10,800,000 shares of our common stock underlying warrants to purchase shares of our common stock held of record by 10X Fund as to which Mr. Czirr in his capacity a managing member of 10X Management has shared voting and investment power, and disclaims beneficial ownership; (vii) 8,400,000 shares of our common stock issuable upon conversion of 2,100,000 shares of Series B-2 preferred stock that we have agreed to sell to 10X Fund pursuant to the 10X Purchase Agreement; and (viii) 25,200,000 shares of our common stock underlying warrants to purchase shares of our common stock that we have agreed to sell to 10X Fund pursuant to the 10X Purchase Agreement in connection with the sale of the Series B-2 preferred stock.

- (4) Includes (i) 500,000 shares of restricted stock, all of which are subject to forfeiture pursuant to the terms of the restricted stock grant; (ii) 3,600,000 shares of our common stock issuable upon conversion of 900,000 shares of Series B-1 preferred stock held of record by 10X Fund as to which Mr. Martin, in his capacity as a managing member of 10X Management, its general partner, has shared voting and investment power, and disclaims beneficial ownership; (iii) 10,800,000 shares of our common stock underlying warrants to purchase shares of our common stock held of record by 10X Fund as to which Mr. Martin, in his capacity as a managing member of 10X Management, has shared voting and investment power, and disclaims beneficial ownership; (iv) 8,400,000 shares of our common stock issuable upon conversion of 2,100,000 shares of Series B-2 preferred stock that we have agreed to sell to 10X Fund pursuant to the 10X Purchase Agreement; and (v) 25,200,000 shares of our common stock underlying warrants to purchase shares of our common stock that we have agreed to sell to 10X Fund pursuant to the 10X Purchase Agreement in connection with the sale of the Series B-2 preferred stock.

PLAN OF DISTRIBUTION

On and after the date of this prospectus, the selling stockholders may, from time to time, sell any or all of their shares of common stock on any stock exchange, market or trading facility on which shares of our common stock are traded or in private transactions. These sales may be at fixed or negotiated prices. The selling stockholders may use any one or more of the following methods when selling shares:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits a purchaser;
- block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- short sales;
- broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;
- a combination of any such methods of sale; and
- any other method permitted pursuant to applicable law.

The selling stockholders may also sell shares under Rule 144 under the Securities Act, if available, rather than under this prospectus.

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Broker-dealers engaged by the selling stockholders may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the selling stockholders (or, if any broker-dealer acts as agent for the purchaser of shares, from the purchaser) in amounts to be negotiated. The selling stockholders do not expect these commissions and discounts to exceed what is customary in the types of transactions involved.

The selling stockholders and any broker-dealers or agents that are involved in selling the shares of our common stock may be deemed to be “underwriters” within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the shares of our common stock purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. The selling stockholders have informed us that it does not have any agreement or understanding, directly or indirectly, with any person to distribute our common stock.

The selling stockholders may from time to time pledge or grant a security interest in some or all of the shares of common stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of common stock from time to time under this prospectus, or under an amendment to this prospectus under Rule 424(b) or other applicable provision in or under the Securities Act of 1933 amending the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus.

The selling stockholders and any other person participating in the sale of common stock will be subject to the Securities Exchange Act of 1934. The Securities Exchange Act of 1934 rules include, without limitation, Regulation M, which may limit the timing of purchases and sales of any of the common stock by the selling stockholders and any other such person. In addition, Regulation M may restrict the ability of any person engaged in the distribution of the common stock and the ability of any person or entity to engage in the market-making activities with respect to the common stock.

We have agreed to pay substantially all expense incidental to the registration, offering and sale of the common stock offered pursuant to this prospectus to the public, other than commissions, fees and discounts of underwriters, brokers, dealers and agents.

LEGAL MATTERS

The validity of the shares of common stock being offered by this prospectus has been passed upon for Pro-Pharmaceuticals, Inc. by Eilenberg & Krause LLP of New York, New York.

INFORMATION INCORPORATED BY REFERENCE

The following documents filed with the Securities and Exchange Commission (the “Commission”) by the Registrant, Pro-Pharmaceuticals, Inc., a Nevada corporation (the “Company”), pursuant to the Securities Exchange Act of 1934, as amended (the “Exchange Act”), are incorporated by reference in this registration statement:

- Our Annual Report on Form 10-K for the fiscal year ended December 31, 2008 filed on March 30, 2009;
- Our Current Reports on Form 8-K filed on January 5, 2009, January 23, 2009, January 30, 2009, February 18, 2009 (as amended on Form 8-K/A filed on March 30, 2009) and March 30, 2009; and
- The description of our common stock contained in our Registration Statement on Form 8-A filed with the SEC on September 9, 2003, including any amendments or reports filed for the purpose of updating that description.

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All documents subsequently filed by the Company pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act, prior to the filing of a post-effective amendment which indicates that all shares offered hereby have been sold or which deregisters all shares then remaining unsold, shall be deemed to be incorporated by reference in this registration statement and to be a part hereof from the date of filing of such documents. Any statement contained in a previously filed document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this registration statement to the extent that a statement contained herein or in any other subsequently filed document which also is incorporated or deemed to be incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this registration statement.

You may request, orally or in writing, a copy of these documents, which will be provided to you at no cost, by contacting us at:

Pro-Pharmaceuticals, Inc.
7 Wells Avenue
Newton, Massachusetts 02459
Attention: Anthony D. Squeglia, Chief Financial Officer
Tel.: (617) 559-0033
E-mail: squeglia@pro-pharmaceuticals.com

The incorporated reports may also be accessed at our website, www.pro-pharmaceuticals.com. Point to “Investor Relations” and then click on “SEC Filings.”

WHERE YOU CAN FIND MORE INFORMATION

We are a reporting company and file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy any document we file with the SEC at the Public Reference Room (Room 1580), 100 F Street, N.E., Washington, D.C. 20549. You may also obtain information on the operations of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains a website (www.sec.gov) that contains the reports, proxy and information statements, and other information that we file electronically with the SEC.

This prospectus is part of a registration statement that we filed with the SEC. The registration statement contains more information than this prospectus regarding us and the securities, including exhibits and schedules. You can obtain a copy of the registration statement from the SEC at the above address or from the SEC’s Internet site.

Our internet address is www.pro-pharmaceuticals.com. We have not incorporated by reference into this prospectus the information on our website, and you should not consider it to be a part of this document. Our web address is included in this document as an inactive textual reference only.

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Exhibit Index

Exhibit No.

| | |
|------|--|
| 4.1 | 2009 Incentive Compensation Plan (incorporated by reference to Exhibit A to the Registrant's Definitive Proxy Statement on Schedule 14A filed on April 21, 2009) |
| 5.1 | Opinion of Eilenberg & Krause LLP (including the consent of such firm) regarding the legality of the securities being offered. |
| 23.1 | Consent of Caturano and Company, P.C., an independent registered public accounting firm. |
| 23.2 | Consent of Deloitte & Touche LLP, an independent registered public accounting firm. |
| 23.3 | Consent of Eilenberg & Krause LLP (included as part of Exhibit 5.1 hereto). |
| 24.1 | Powers of Attorney (included on the signature page to this registration statement). |

[Letterhead of Eilenberg & Krause LLP]

May 13, 2009

Pro-Pharmaceuticals, Inc.
7 Wells Avenue
Newton, Massachusetts 02459

Re: Registration Statement on Form S-8

Ladies and Gentlemen:

We have acted as counsel for Pro-Pharmaceuticals, Inc., a Nevada corporation (the "Company"), in connection with the Registration Statement on Form S-8 (the "Registration Statement") filed by the Company, on the date hereof, under the Securities Act of 1933 for the purpose of registering 10,000,000 shares of its common stock, par value \$.001 per share (the "Shares"), that have previously been issued, or that may be hereafter be issued, pursuant to awards under the Company's 2009 Incentive Compensation Plan.

On the basis of such investigation as we have deemed necessary, we are of the opinion that the Shares have been duly authorized for issuance and, when the Shares are issued and paid for in accordance with the terms and conditions of the Plan, the Shares will be validly issued, fully paid and non-assessable.

We hereby consent to the filing of this opinion as an Exhibit to the Registration Statement. In giving this consent, we do not thereby admit that we come within the category of persons whose consent is required under Section 7 of the Securities Act of 1933 or the Rules and Regulations of the Securities and Exchange Commission thereunder.

Very truly yours,

/s/ Eilenberg & Krause LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

As independent registered public accountants, we hereby consent to the use of the report of Vitale, Caturano & Company, P.C. (whose name has been changed to Caturano and Company, P.C. effective May 1, 2009) dated March 30, 2009 relating to the financial statements of Pro-Pharmaceuticals, Inc. as of and for the year ended December 31, 2008 and for the period from inception (July 10, 2000) to December 31, 2008 (which report expresses an unqualified opinion and includes explanatory paragraphs relating to the adoption of Statement of Financial Accounting Standards No. 157, *Fair Value Measurements*, on January 1, 2008, and to the substantial doubt about the Company's ability to continue as a going concern) incorporated by reference in, and to all references to our Firm included in or made a part of, this Registration Statement on Form S-8.

Caturano and Company, P.C.
May 14, 2009

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on Form S-8 of our report dated March 28, 2008, relating to the consolidated financial statements of Pro-Pharmaceuticals, Inc. for the year ended December 31, 2007 (which report expresses an unqualified opinion and includes explanatory paragraphs relating to the adoption of Financial Accounting Standards Board (“FASB”) Interpretation (“FIN”) No. 48, “Accounting For Uncertainty in Income Taxes” on January 1, 2007, and to the substantial doubt about the Company’s ability to continue as a going concern) appearing in the Annual Report on Form 10-K of Pro-Pharmaceuticals, Inc. for the year ended December 31, 2008.

/s/ DELOITTE & TOUCHE LLP

Boston, Massachusetts

May 14, 2009