

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM S-8

REGISTRATION STATEMENT
UNDER THE SECURITIES ACT OF 1933

ACCESS PHARMACEUTICALS, INC.

(Exact Name of Registrant as Specified in Its Charter)

DELAWARE

(State or Other Jurisdiction of Incorporation or Organization)

83-0221517

(I.R.S. Employer Identification No.)

2600 Stemmons Freeway Suite 176, Dallas, TX

75207

(Address of Principal Executive Offices)

(Zip Code)

ACCESS PHARMACEUTICALS 2005 EQUITY INCENTIVE PLAN AND
2007 SPECIAL STOCK OPTION PLAN AND AGREEMENT

(Full Title of the Plan)

Stephen B. Thompson
Chief Financial Officer
Access Pharmaceuticals, Inc.
2600 Stemmons Freeway, Suite 176
Dallas, TX 75207

with copies to:

John J. Concannon III, Esq.
Bingham McCutchen LLP
One Federal Street
Boston, MA 02110

(Name and address of agent for service)

(214) 905-5100

(617) 951-8000

(Telephone Number, Including Area Code, of Agent For Service)

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 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
(Do not check if a smaller
reporting company)

Smaller reporting company

CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Amount to be Registered	Proposed Maximum Offering Price Per Share*	Proposed Maximum Aggregate Offering Price*	Amount of Registration Fee
Common Stock, par 3,510,000** value \$0.01 per share		\$3.25	\$11,407,500	\$636.54

* Estimated solely for the purpose of computing the registration fee pursuant to Rule 457(h) under the Securities Act of 1933, as amended. For the purposes of this table we have used the average of the bid and asked price of the Registrant's Common Stock, par value \$0.01 per share, as reported on the Over-the-Counter Bulletin Board on August 28, 2009.

** Consists of 3,010,000 shares of Common Stock being registered under the Access Pharmaceuticals 2005 Equity Incentive Plan, and

500,000 shares of Common Stock being registered under the 2007 Special Stock Option Plan and Agreement. The number of shares to be registered takes into account a one-for-five reverse stock split effected June 5, 2006.

ACCESS PHARMACEUTICALS, INC.
REGISTRATION STATEMENT ON FORM S-8

PART I

INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

Item 1. Plan Information

The documents containing the information specified in this Item 1 will be sent or given to employees, officers, directors or others as specified by Rule 428(b)(1). In accordance with the rules and regulations of the Securities and Exchange Commission (the "Commission") and the instructions to Form S-8, such documents are not being filed with the Commission either as part of this Registration Statement or as prospectuses or prospectus supplements pursuant to Rule 424

Item 2. Registration Information and Employee Plan Annual Information

The documents containing the information specified in this Item 2 will be sent or given to employees, officers, directors or others as specified by Rule 428(b)(1). In accordance with the rules and regulations of the Commission and the instructions to Form S-8, such documents are not being filed with the Commission either as part of this Registration Statement or as prospectuses or prospectus supplements pursuant to Rule 424

PART II

Item 3. Incorporation Of Documents By Reference.

The following documents filed by Access Pharmaceuticals, Inc. (the "Registrant") with the Securities and Exchange Commission (the "SEC") are hereby incorporated by reference into this Registration Statement:

(1) the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2008, as filed by the Registrant with the SEC on March 31, 2009;

(2) all other reports filed by the Registrant pursuant to Sections 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), since December 31, 2008; and

(3) the description of the Common Stock of the Registrant, \$0.01 par value per share (the "Common Stock"), contained in the Registrant's registration statement on Form 8-A filed with the SEC on March 29, 2000, including any amendment or report filed for the purpose of updating such description.

In addition, all documents filed by the Registrant subsequent to the date of this Registration Statement 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 securities registered hereby have been sold or which deregisters all of such securities then remaining unsold under this Registration Statement (other than Current Reports on Form 8-K containing Regulation FD Disclosure furnished under Item 7.01 or Results of Operations and Financial Condition disclosure furnished under Item 2.02 and exhibits relating to such disclosures, unless otherwise specifically stated in such Current Report on Form 8-K), shall be deemed to be incorporated by reference in this Registration Statement and to be part hereof from the date of filing of such documents. Any statement contained herein or in a 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 or is deemed to be incorporated by reference herein modifies or supersedes such earlier statement. Any 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.

The validity of the securities registered hereby is being passed upon for us by Bingham McCutchen LLP (150 Federal Street, Boston, MA 02110). Several partners of Bingham McCutchen LLP may beneficially own shares of our common stock.

Item 6. Indemnification Of Directors And Officers.

Section 145 of the Delaware General Corporation Law (the "DGCL") empowers a Delaware corporation to indemnify any person who was or is, or is threatened to be made, a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of such corporation) by reason of the fact that such person is or was a director, officer, employee or agent of such corporation, or is or was serving at the request of such corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, provided that such person acted in good faith and in a manner that such person reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, such person had no reasonable cause to believe his conduct was unlawful. The indemnity may include expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection

with such action, suit or proceeding. A Delaware corporation may also indemnify such persons against expenses (including attorneys' fees) in actions brought by or in the right of the corporation to procure a judgment in its favor, subject to the same conditions set forth in the immediately preceding sentences, except that no indemnification is permitted in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and to the extent the Court of Chancery of the State of Delaware or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses as the Court of Chancery or other such court shall deem proper. To the extent such person has been successful on the merits or otherwise in defense of any action to above, or in defense of any claim, issue or matter therein, the corporation must indemnify such person against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection therewith. The indemnification and advancement of expenses provided for in, or granted pursuant to, Section 145 is not exclusive of any other rights to which those seeking indemnification or advancement of expenses may be entitled under any by-law, agreement, vote of stockholders or disinterested directors or otherwise.

Section 145 of the DGCL also provides that a corporation may maintain insurance against liabilities for which indemnification is not expressly provided by the statute. The Registrant is insured against liabilities which it may incur by reason of its indemnification obligations under its Certificate of Incorporation, Bylaws and indemnification agreements.

Section 102 of the DGCL allows a Delaware corporation to eliminate or limit the personal liability of a director to the corporation or to any of its stockholders for monetary damage for a breach of fiduciary duty as a director, except in the case where the director (i) breaches such person's duty of loyalty to the corporation or its stockholders, (ii) acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) authorizes the unlawful payment of a dividend or approves unlawful repurchase or redemption in violation of Section 174 of the DGCL or (iv) obtains an improper personal benefit. In accordance with the DGCL, Article X of the Registrant's Certificate of Incorporation provides that, to the fullest extent permitted by the DGCL as it may be amended, no director shall be personally liable to the Registrant or its stockholders for monetary damages for breach of fiduciary duty as a director.

Article X of the Registrant's Certificate of Incorporation provides that the Registrant will indemnify, defend and hold harmless directors, officers, employees and agents of the Registrant to the fullest extent currently permitted under the DGCL.

The Registrant has entered into indemnification agreements with certain of its directors and executive officers. These agreements provide rights of indemnification to the full extent allowed and provided for by Section 145 of the DGCL and the Certificate of Incorporation and Bylaws of Access.

Item 7. Exemption From Registration Claimed.

Not applicable.

Item 8. Exhibits.

The following exhibits are filed as part of or incorporated by reference into this Registration Statement:

Exhibit No.	Description of Document
4.1*	Access Pharmaceuticals, Inc. 2005 Equity Incentive Plan.
4.2	Amendment to Access Pharmaceuticals, Inc. 2005 Equity Incentive Plan.
4.3**	2007 Special Stock Option Plan and Agreement.
5	Opinion of Bingham McCutchen LLP.
23.1	Consent of Whitley Penn LLP.
23.2	Consent of Whitley Penn LLP.
23.3	Consent of Bingham McCutchen LLP (included in Exhibit 5).
24	Power of Attorney (included on the signature page).

* Filed with the SEC on April 18, 2005 as Exhibit 1 to Proxy Statement filed pursuant to Rule 14a-6 of the Exchange Act, File No. 001-15771, and incorporated herein by reference.

** Filed with the SEC on May 18, 2007 as Exhibit 10.35 to our Form 10-QSB, and incorporated herein by reference.

Item 9. Undertakings.

(a) The undersigned Registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii) 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 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;

(iii) 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)(1)(i) and (a)(1)(ii) do not apply if the Registration Statement is on Form S-8, and 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 by the Registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment 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.

(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.

(b) The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the Registrant’s annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan’s annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the 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.

(h) Insofar as indemnification for liabilities arising under the Securities Act of 1933 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 Securities and Exchange Commission such indemnification is against public policy as expressed in the 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 Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, 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 Dallas, Texas, on the 31st day of August, 2009.

ACCESS PHARMACEUTICALS, INC.

By: /s/ Jeffrey B. Davis

Jeffrey B. Davis
Chief Executive Officer

By: /s/ Stephen B. Thompson

Stephen B. Thompson
Vice President, Chief Financial Officer and Treasurer

POWER OF ATTORNEY

Each person whose signature appears below hereby appoints Jeffrey B. Davis and Stephen B. Thompson, and each of them severally as such person's true and lawful attorney-in-fact with the authority to execute in the name of each such person, and to file with the SEC, together with any exhibits thereto and other documents therewith, any and all amendments (including, without limitation, post-effective amendments) to this Registration Statement on Form S-8 necessary or advisable to enable the Registrant to comply with the Securities Act of 1933, as amended, and any rules, regulations, and requirements of the SEC in respect thereof, which amendments may make such other changes in the Registration Statement as the aforesaid attorney-in-fact executing the same deems appropriate.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed by the following persons in the capacities indicated as of the dates set forth below.

Signature	Title	Date
<u>/s/ Jeffrey B. Davis</u> Jeffrey B. Davis	Chief Executive Officer, and Director (Principal Executive Officer)	August 31, 2009
<u>/s/ Stephen B. Thompson</u>	Vice President, Chief Financial Officer, Treasurer	August 31, 2009

Stephen B. Thompson

and Secretary (Principal Financial and Accounting
Officer)

/s/ Mark J. Ahn
Mark J. Ahn

Director

August 31, 2009

/s/ Mark J. Alvino
Mark J. Alvino

Director

August 31, 2009

/s/ Estaban Cvitkovic
Estaban Cvitkovic

Director

August 31, 2009

/s/ Stephen B. Howell
Stephen B. Howell

Director

August 31, 2009

/s/ David P. Luci
David P. Luci

Director

August 31, 2009

/s/ Steven H. Rouhandeh
Steven H. Rouhandeh

Director

August 31, 2009

EXHIBIT INDEX

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ACCESS PHARMACEUTICALS, INC.

Amendment to Access Pharmaceuticals, Inc. 2005 Equity Incentive Plan

The Board of Directors of Access Pharmaceuticals, Inc. (the "Company"), pursuant to authority reserved in Section 15 of the 2005 Equity Incentive Plan of the Company (the "2005 Plan"), authorized an amendment to the 2005 Plan as follows, which amendment was approved by the stockholders of the Company on May 21, 2008, May 17, 2007 and May 19, 2006:

Sections 4 and 8.1 of the 2005 Plan are deleted in their entirety and replaced with the following:

4. Stock Subject to the Plan. At no time shall the number of shares of Stock issued pursuant to or subject to outstanding Awards granted under the Plan (including pursuant to Incentive Options), nor the number of shares of Stock issued pursuant to Incentive Options, exceed 3,150,000¹ shares of Stock; subject, however, to the provisions of Section 8 of the Plan. For purposes of applying the foregoing limitation, (a) if any Option or Stock Appreciation Right expires, terminates, or is cancelled for any reason without having been exercised in full, or if any other Award is forfeited by the recipient, the shares not purchased by the Optionee or which are forfeited by the recipient shall again be available for Awards to be granted under the Plan and (b) if any Option is exercised by delivering previously owned shares in payment of the exercise price therefor, only the net number of shares, that is, the number of shares issued minus the number received by the Company in payment of the exercise price, shall be considered to have been issued pursuant to an Award granted under the Plan. In addition, settlement of any Award shall not count against the foregoing limitations except to the extent settled in the form of Stock. Shares of Stock issued pursuant to the Plan may be either authorized but unissued shares or shares held by the Company in its treasury.

8.1. Adjustment for Corporate Actions. All of the share numbers set forth in the Plan reflect the capital structure of the Company as of June 5, 2006. Subject to Section 8.2, if subsequent to that date the outstanding shares of Stock (or any other securities covered by the Plan by reason of the prior application of this Section) are increased, decreased, or exchanged for a different number or kind of shares or other securities, or if additional shares or new or different shares or other securities are distributed with respect to shares of Stock, through merger, consolidation, sale of all or substantially all the property of the Company, reorganization, recapitalization, reclassification, stock dividend, stock split, reverse stock split, or other similar distribution with respect to such shares of Stock, an appropriate and proportionate adjustment will be made in (i) the maximum numbers and kinds of shares provided in Section 4, (ii) the numbers and kinds of shares or other securities subject to the then outstanding Awards, (iii) the exercise price for each share or other unit of any other securities subject to then outstanding Options and Stock Appreciation Rights (without change in the aggregate purchase price as to which such Options or Rights remain exercisable), and (iv) the repurchase price of each share of Restricted Stock then subject to a Risk of Forfeiture in the form of a Company repurchase right.

¹ Such number equates to amounts approved by stockholders on: May 21, 2008 – 3,150,000 shares of Stock; on May 17, 2007 – 1,675,000 shares of Stock; and May 19, 2006 - 1,000,000 shares of Stock (originally 5,000,000 shares of Stock adjusted as a result of the one-for-five reverse stock split effected on June 5, 2006).

IN WITNESS WHEREOF, the Company has adopted this Amendment, effective as of the 21st day of May, 2008.

ACCESS PHARMACEUTICALS

By: /s/ Stephen B. Thompson
Stephen B. Thompson
Chief Financial Officer

[BINGHAM McCUTCHEN LLP LETTERHEAD]

August 31, 2009

Access Pharmaceuticals, Inc.
2600 Stemmons Freeway, Suite 176
Dallas, TX 75207

Re: Registration Statement on Form S-8

Ladies and Gentleman:

This opinion is furnished in connection with the registration, pursuant to a Registration Statement on Form S-8 under the Securities Act of 1933, as amended (the "Securities Act"), to be filed with the Securities and Exchange Commission on or about August 31, 2009 (the "Registration Statement"), of 3,510,000 shares (the "Shares") of common stock, par value \$0.01 per share (the "Common Stock"), of Access Pharmaceuticals, Inc., a Delaware corporation (the "Company"), (i) 3,010,000 of which are or will be issuable to employees, directors, consultants and advisors of the Company upon the exercise of options granted pursuant to the Company's 2005 Equity Incentive Plan, as amended (the "2005 Plan"), or which the Company may sell or grant as restricted stock pursuant to the 2005 Plan and (ii) 500,000 upon exercise of options granted pursuant to the Company's 2007 Special Stock Option Plan (the "2007 Plan").

We have acted as counsel to the Company in connection with the foregoing registration of the Shares. We have examined and relied upon originals or copies of such records, instruments, certificates, memoranda, and other documents as we have deemed necessary or advisable for purposes of this opinion and have assumed, without independent inquiry, the accuracy of those documents. In that examination, we have assumed the genuineness of all signatures, the conformity to the originals of all documents reviewed by us as copies, the authenticity and completeness of all original documents reviewed by us in original or copy form, and the legal competence of each individual executing such documents. We have further assumed that all options granted or to be granted pursuant to the 2005 Plan and the 2007 Plan, as applicable, were or will be validly granted in accordance with the terms of the 2005 Plan or the 2007 Plan, as applicable, that all Shares to be issued upon exercise of such options will be issued in accordance with the terms of such options and the 2005 Plan and 2007 Plan, as applicable, and that all Shares sold or granted as restricted stock will be sold or granted in accordance with the terms of the 2005 Plan or the 2007 Plan, as applicable.

This opinion is limited solely to the Delaware General Corporation Law (the "DGCL"), as applied by courts located in Delaware, the applicable provisions of the Delaware Constitution and the reported judicial decisions interpreting those laws.

Based upon and subject to the foregoing, we are of the opinion that:

1. Upon the issuance and the delivery of the Shares upon the exercise of options granted pursuant to the 2005 Plan and the 2007 Plan, as applicable, in accordance with the terms of such options and the 2005 Plan and 2007 Plan, as applicable, and upon the Company's receipt of the full exercise price therefore, as determined by the Board of Directors of the Company and as specified in the documents governing such grants and the 2005 Plan and 2007 Plan, as applicable, the Shares will be validly issued, fully paid, and nonassessable shares of Common Stock.
2. Upon the issuance and delivery of the 2005 Plan Shares in the form of restricted stock in accordance with the terms of the awards of such restricted stock and the 2005 Plan, and upon the Company's receipt of lawful consideration in accordance with the DGCL, the Shares will be validly issued, fully paid, and nonassessable shares of Common Stock.

We consent to the filing of a copy of this opinion as an exhibit to the Registration Statement.

Very truly yours,

/s/ Bingham McCutchen LLP
Bingham McCutchen LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We have issued our report dated March 31, 2009, accompanying the consolidated financial statements of Access Pharmaceuticals, Inc. included in the Annual Report on Form 10-K for the year ended December 31, 2008, which are incorporated by reference in this Registration Statement. We consent to the incorporation by reference in the Registration Statement of Access Pharmaceuticals, Inc. on Form S-8 of the aforementioned report.

/s/ Whitley Penn LLP

Dallas, Texas
August 31, 2009

CONSENT OF INDEPENDENT PUBLIC ACCOUNTING FIRM

We have issued our report dated August 25, 2009, with respect to the consolidated financial statements of MacroChem Corporation as of December 31, 2008 and for the year then ended included in the Current Report on Form 8-K/A of Access Pharmaceuticals, Inc. filed August 26, 2009. We consent to the incorporation by reference in the Registration Statement of Access Pharmaceuticals, Inc. on Form S-8 of the aforementioned report.

/s/ Whitley Penn LLP

Dallas, Texas
August 31, 2009