

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

FORM S-8

**REGISTRATION STATEMENT UNDER
THE SECURITIES ACT OF 1933**

ADVENTRX PHARMACEUTICALS, INC.

(Exact Name of Registrant as Specified in its Charter)

Delaware
(State or Other Jurisdiction of
Incorporation or Organization)

84-1318182
(I.R.S. Employer
Identification No.)

6725 Mesa Ridge Road, Suite 100, San Diego, CA 92121
(Address of Principal Executive Offices)

**2005 EQUITY INCENTIVE PLAN
2005 EMPLOYEE STOCK PURCHASE PLAN
2008 OMNIBUS INCENTIVE PLAN**
(Full Title of the Plans)

Evan M. Levine
Chief Executive Officer and President
ADVENTRX Pharmaceuticals, Inc.
6725 Mesa Ridge Road, Suite 100
San Diego, CA 92121
(Name and Address of Agent For Service)

(858) 552-0866
(Telephone Number, Including Area Code, of Agent For Service)

Copies to:

Patrick L. Keran
General Counsel, Secretary and
Vice President, Legal
ADVENTRX Pharmaceuticals, Inc.
6725 Mesa Ridge Road, Suite 100
San Diego, CA 92121
Telephone: (858) 552-0866
Facsimile: (858) 552-0876

Michael S. Kagnoff
DLA Piper US LLP
4365 Executive Drive, Suite 1100
San Diego, CA 92121
Telephone: (858) 677-1400
Facsimile: (858) 677-1401

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 o Accelerated filer Non-accelerated filer o Smaller reporting company o
(Do not check if a smaller reporting company)

CALCULATION OF REGISTRATION FEE

Title of securities to be registered	Amount to be registered (1)	Proposed maximum offering price per share (2)	Proposed maximum aggregate offering price (2)	Amount of registration fee
Common Stock, \$0.001 par value per share, to be issued pursuant to the 2005 Equity Incentive Plan	783,376 (3)(4)	\$0.395	\$309,433.52	\$12.16

Common Stock, \$0.001 par value per share, to be issued pursuant to the 2005 Employee Stock Purchase Plan	2,173,634 (5)	\$0.395	\$858,585.43	\$33.74
Common Stock, \$0.001 par value per share, to be issued pursuant to the 2008 Omnibus Incentive Plan	13,097,500	\$0.395	\$5,173,512.50	\$203.32
			Aggregate registration fee:	\$249.22

- (1) Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the "Securities Act"), this registration statement also covers an indeterminate number of additional shares that may be issued in connection with a stock split, stock dividend or similar capital adjustment, as required by the plans.
- (2) This estimate is computed in accordance with Rule 457(h) under the Securities Act solely for the purpose of calculating the registration fee, and is based on the average of the high and low prices of the registrant's common stock on June 20, 2008, as reported by the American Stock Exchange.
- (3) Represents (a) 673,634 shares automatically added to the shares authorized for issuance under the ADVENTRX Pharmaceuticals, Inc. 2005 Equity Incentive Plan (the "2005 EIP") on January 1, 2006, and (b) 109,742 shares automatically added to the shares authorized for issuance under the 2005 EIP on January 1, 2007, all pursuant to the "evergreen" provision contained in the 2005 EIP.
- (4) Shares subject to awards granted under the 2005 EIP that are forfeited or expire or settled for cash may, to the extent of such forfeiture, expiration or cash settlement, become available for issuance under the ADVENTRX Pharmaceuticals, Inc. 2008 Omnibus Incentive Plan (the "2008 OIP") pursuant to the terms of the 2008 OIP.
- (5) Represents (a) 673,634 shares automatically added to the shares authorized for issuance under the ADVENTRX Pharmaceuticals, Inc. 2005 Employee Stock Purchase Plan (the "2005 ESPP") on January 1, 2006, (b) 750,000 shares automatically added to the shares authorized for issuance under the 2005 ESPP on January 1, 2007, and (c) 750,000 shares automatically added to the shares authorized for issuance under the 2005 ESPP on January 1, 2008, all pursuant to the "evergreen" provision contained in the 2005 ESPP.

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EXPLANATORY NOTE

This registration statement is being filed for the purpose of registering (1) additional shares of common stock of ADVENTRX Pharmaceuticals, Inc. (the “Registrant”) issuable pursuant to the Registrant’s 2005 Equity Incentive Plan and 2005 Employee Stock Purchase Plan, and (2) shares of common stock of the Registrant issuable under the Registrant’s 2008 Omnibus Incentive Plan. A registration statement on Form S-8 (File No. 333-126551) was filed with the Securities and Exchange Commission (the “Commission”) on July 13, 2005 (the “2005 Form S-8”) to register shares of common stock initially available for issuance under the Registrant’s 2005 Equity Incentive Plan and 2005 Employee Stock Purchase Plan and it is effective. In accordance with General Instruction E to Form S-8, the contents of the 2005 Form S-8 are incorporated by reference in this registration statement.

The 2008 Omnibus Incentive Plan was approved by the stockholders of the Registrant on May 28, 2008 and became effective on such date. After May 28, 2008, no awards may be granted under the 2005 Equity Incentive Plan. Pursuant to the terms of the 2008 Omnibus Incentive Plan, shares subject to awards granted under the 2005 Equity Incentive Plan that are forfeited or expire or settled for cash may, to the extent of such forfeiture, expiration or cash settlement, become available for issuance under the 2008 Omnibus Incentive Plan pursuant to the terms of the 2008 Omnibus Incentive Plan.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents filed with the Commission by the Registrant are incorporated by reference in this registration statement:

- (a) The Registrant’s Annual Report on Form 10-K for the fiscal year ended December 31, 2007, as filed on March 17, 2008;
- (b) The Registrant’s Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2008, as filed on May 12, 2008;
- (c) The Registrant’s Current Reports on Form 8-K, as filed on January 14, 2008, January 30, 2008, February 25, 2008, March 6, 2008, March 25, 2008, April 4, 2008, April 7, 2008, April 16, 2008, June 2, 2008 and June 3, 2008; and
- (d) The description of the Registrant’s common stock contained in the Registrant’s registration statement on Form 8-A (File No. 001-32157) filed April 27, 2004, including any amendment or report for the purposes of updating such description.

All documents subsequently filed by the Registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Securities Exchange Act of 1934 (the “Exchange Act”), prior to the filing of a post-effective amendment to this registration statement which indicates that all of the shares of common stock offered under this registration statement have been sold or which deregisters all of such shares then remaining unsold, are incorporated by reference in this registration statement and are a part hereof from the date of the filing of such documents, except as to any portion of any future annual, quarterly or current report or document that is not deemed filed with the Commission. Any statement contained 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 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.

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Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

Not applicable.

Item 6. Indemnification of Directors and Officers.

Section 145 of the Delaware General Corporation Law authorizes a corporation to indemnify its directors and officers against liabilities arising out of actions, suits and proceedings to which they are made or threatened to be made a party by reason of the fact of their prior or current service to the Company as a director or officer, in accordance with the provisions of Section 145, which are sufficiently broad to permit indemnification under certain circumstances for liabilities arising under the Securities Act of 1933, as amended (the "Securities Act"). The indemnity may cover expenses (including attorneys' fees) judgments, fines and amounts paid in settlement actually and reasonably incurred by the director or officer in connection with any such action, suit or proceeding. Section 145 permits corporations to pay expenses (including attorneys' fees) incurred by directors and officers in advance of the final disposition of such action, suit or proceeding. In addition, Section 145 provides that a corporation has the power to purchase and maintain insurance on behalf of its directors and officers against any liability asserted against them and incurred by them in their capacity as a director or officer, or arising out of their status as such, whether or not the corporation would have the power to indemnify the director or officer against such liability under Section 145.

The Registrant's certificate of incorporation provides that, to the fullest extent permitted by the Delaware General Corporation Law, (1) a director shall not be personally liable to the Registrant or its stockholders for monetary damages for breach of fiduciary duty as a director, and (2) the Registrant shall indemnify any director or officer made a party to an action or proceeding, whether criminal, civil, administrative or investigative, by reason of the fact of such person's current or prior service as a director or officer of the Registrant, any predecessor of the Registrant or any other enterprise per the Registrant's or any predecessor to the Registrant's request.

The Registrant's bylaws provide that (a) it shall indemnify its directors and officers to the maximum extent and in the manner permitted by the Delaware General Corporation Law against expenses (including attorneys' fees), judgments, fines, ERISA excise taxes, settlements and other amounts actually and reasonably incurred in connection with any proceeding, whether civil, criminal, administrative or investigative, arising by reason of the fact that such person is or was an agent of the corporation, subject to certain limited exceptions, (b) it shall advance expenses incurred by any director or officer prior to the final disposition of any proceeding to which the director or officer was or is or is threatened to be made a party promptly following a request therefore, subject to certain limited exceptions, and (c) the rights conferred in the Registrant's bylaws are not exclusive.

The Registrant has entered into indemnification agreements with each of its directors and executive officers to give such directors and officers additional contractual assurances regarding the scope of the indemnification set forth in the Registrant's certificate of incorporation and bylaws and to provide additional procedural protections. These agreements, among other things, provide that the Registrant will indemnify its directors and executive officers for expenses (including attorneys' fees), judgments, fines, penalties and amounts paid in settlement (including all interest, assessments and other charges paid or payable in connection therewith) actually and reasonably incurred by a director or executive officer in connection with any action or proceeding to which such person was, is or is threatened to be made a party, a witness or other participant by reason of such person's services as a director or executive officer of the Registrant, any of the Registrant's subsidiaries or any other company or enterprise to which the person provides services at the Registrant's request, and any federal, state, local or foreign taxes imposed on the director or executive officer as a result of the actual or deemed receipt of any payments under the indemnification agreements.

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In addition, the indemnification agreements provide that, upon the request of a director or executive officer, the Registrant shall advance expenses (including attorneys' fees) to the director or officer. The Registrant intends to enter into indemnification agreements with any new directors and executive officers in the future.

In addition, Alexander J. Denner, a director of the Registrant, is further indemnified against liabilities arising in connection with his services as a director of the Registrant through his employment arrangement with entities controlled by Mr. Carl C. Icahn. Such indemnification may be broader than the indemnification provided by the Delaware General Corporation Law and includes indemnification for expenses (including attorneys' fees), judgments and fines incurred and amounts paid in settlement by Dr. Denner in connection with any action or proceeding to which Dr. Denner was, is or is threatened to be made a party or participant by reason of his services as a director the Registrant.

The Registrant has also obtained an insurance policy covering its directors and officers with respect to certain liabilities, including liabilities arising under the Securities Act.

Item 7. Exemption from Registration Claimed.

Not Applicable.

Item 8. Exhibits.

<u>Exhibit Number</u>	<u>Description</u>
4.1(1)	Form of Registration Rights Agreement entered into in October and November 2001 (including the original schedule of holders)
4.2(2)	\$2.50 Warrant to Purchase Common Stock issued on April 12, 2002 to Emisphere Technologies, Inc.
4.3(1)	Form of \$0.60 Warrant to Purchase Common Stock issued May 28, 2003 (including the original schedule of holders)
4.4(1)	Form of \$1.25 Warrant to Purchase Common Stock issued between October 15, 2003 and December 29, 2003 (including the original schedule of holders)
4.5(1)	Common Stock and Warrant Purchase Agreement, dated as of April 5, 2004, among the Registrant and the Investors (as defined therein)
4.6(1)	Registration Rights Agreement, dated April 5, 2004, among the Registrant and the Investors (as defined therein)
4.7(1)	Form of \$2.00 A-1 Warrant to Purchase Common Stock issued April 8, 2004 (including the original schedule of holders)
4.8(1)	Form of \$2.50 A-2 Warrant to Purchase Common Stock issued April 8, 2004 (including the original schedule of holders)
4.9(3)	Common Stock and Warrant Purchase Agreement, dated April 8, 2004, between the Registrant and CD Investment Partners, Ltd.
4.10(3)	Registration Rights Agreement, dated April 8, 2004, between the Registrant and CD Investment Partners, Ltd.

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<u>Exhibit Number</u>	<u>Description</u>
4.11(3)	\$2.00 A-1 Warrant to Purchase Common Stock issued on April 8, 2004 to CD Investment Partners, Ltd.
4.12(3)	\$2.00 A-1 Warrant to Purchase Common Stock issued on April 8, 2004 to Burnham Hill Partners
4.13(3)	\$2.00 A-1 Warrant to Purchase Common Stock issued on April 8, 2004 to Ernest Pernet
4.14(3)	\$2.00 A-1 Warrant to Purchase Common Stock issued on April 8, 2004 to W.R. Hambrecht + Co., LLC
4.15(4)	Common Stock and Warrant Purchase Agreement, dated April 19, 2004, between the Registrant and Franklin M. Berger
4.16(4)	Registration Rights Agreement, dated April 19, 2004, between the Registrant and Franklin M. Berger
4.17(4)	\$2.00 A-1 Warrant to Purchase Common Stock issued on April 19, 2004 to Franklin M. Berger
4.18(5)	Securities Purchase Agreement, dated July 21, 2005, among the Registrant and the Purchasers (as defined therein)
4.19(5)	Rights Agreement, dated July 27, 2005, among the Registrant, the Icahn Purchasers and Viking (each as defined therein)
4.20(6)	First Amendment to Rights Agreement, dated September 22, 2006, among the Registrant and the Icahn Purchasers (as defined therein)
4.21(7)	Second Amendment to Rights Agreement, dated February 25, 2008, among the Registrant and the Icahn Purchasers (as defined therein)
4.21(5)	Form of \$2.26 Common Stock Warrant issued on July 27, 2005 (including the original schedule of holders)
4.22(5)	Form of \$2.26 Common Stock Warrant issued on July 27, 2005 (including the original schedule of holders)
4.23(8)	\$0.50 Warrant (WC-291) to Purchase Common Stock transferred on June 15, 2005 to S. Neborsky and R Neborsky TTEE Robert J. Neborsky MD Inc Comb Retirement Trust
4.24(9)	\$0.50 Warrant (WC-292) to Purchase Common Stock transferred on June 15, 2005 to S. Neborsky and R Neborsky TTEE Robert J. Neborsky MD Inc Comb Retirement Trust
4.25(9)	\$2.50 Warrant to Purchase Common Stock issued on October 22, 2004 to Thomas J. DePetrillo
5.1	Opinion of DLA Piper US LLP
23.1	Consent of DLA Piper US LLP (included in Exhibit 5.1)
23.2	Consent of J.H. Cohn LLP, Independent Registered Public Accounting Firm
24.1	Powers of Attorney (included on signature page)

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<u>Exhibit Number</u>	<u>Description</u>
99.1#(8)	2005 Equity Incentive Plan
99.2#(10)	Form of Stock Option Agreement under the 2005 Equity Incentive Plan
99.3#(11)	Form of Stock Option Agreement under the 2005 Equity Incentive Plan (for director option grants beginning in 2008)
99.4#(12)	Form of Restricted Share Award Agreement under the 2005 Equity Incentive Plan
99.5#(13)	Form of Stock Option Agreement under the 2005 Equity Incentive Plan (for option grants to employees approved in March 2008)
99.6#(10)	2005 Employee Stock Purchase Plan
99.7#(10)	Form of Subscription Agreement under the 2005 Employee Stock Purchase Plan
99.8#(14)	2008 Omnibus Incentive Plan

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- (1) Filed with the Registrant's Registration Statement on Form S-3 on June 30, 2004 (SEC file number 333-117022-03848890).
 - (2) Filed with the Registrant's Amendment No. 1 to Quarterly Report on Form 10-Q/A on October 30, 2006 (SEC file number 001-32157-061170484).
 - (3) Filed with the Registrant's Current Report on Form 8-K/A on April 13, 2004 (SEC file number 000-33219-04730584).
 - (4) Filed with the Registrant's Quarterly Report on Form 10-QSB on May 12, 2004 (001-32157-04797806).
 - (5) Filed with the Registrant's Quarterly Report on Form 10-Q on August 12, 2005 (SEC file number 001-32157-051022046).
 - (6) Filed with the Registrant's Current Report on Form 8-K on September 22, 2006 (SEC file number 001-32157-061103268).
 - (7) Filed with the Registrant's Current Report on Form 8-K on February 25, 2008 (SEC file number 001-32157-08638638).
 - (8) Filed with the Registrant's Annual Report on Form 10-K on March 15, 2007 (SEC file number 001-32157-07697283).
 - (9) Filed with the Registrant's Registration Statement on Form S-3 on August 26, 2005 (SEC file number 333-127857-051050073).
 - (10) Filed with the Registrant's Registration Statement on Form S-8 on July 13, 2005 (SEC file number 333-126551-05951362).

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- (11) Filed with the Registrant's Annual Report on Form 10-K on March 17, 2008 (SEC file number 001-32157-08690952).
 - (12) Filed with the Registrant's Annual Report on Form 10-K on March 16, 2006 (SEC file number 001-32157-06693266).
 - (13) Filed with the Registrant's Quarterly Report on Form 10-Q on May 12, 2008 (SEC file number 001-32157-08820541).
 - (14) Filed with the Registrant's Current Report on Form 8-K on June 2, 2008 (SEC file number 001-32157- 08874724).
- # Indicates management contract or compensatory plan.

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 this registration statement (or the most recent post-effective amendment thereof) which, individually or in aggregate, represent a fundamental change in the information set forth in this 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 20 percent change in the maximum aggregate offering price set forth in the Calculation of Registration Fee table in the effective registration statement; and

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

Provided, however, that paragraphs (a)(1)(i) and (a)(1)(ii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in 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 this 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.

(4) That, for the purpose of determining liability of the Registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities: The undersigned Registrant undertakes that in a primary offering of securities of the undersigned Registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser

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by means of any of the following communications, the undersigned Registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

- (i) Any preliminary prospectus or prospectus of the undersigned Registrant relating to the offering required to be filed pursuant to Rule 424;
- (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned Registrant or used or referred to by the undersigned Registrant;
- (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned Registrant or its securities provided by or on behalf of the undersigned Registrant; and
- (iv) Any other communication that is an offer in the offering made by the undersigned Registrant to the purchaser.

(b) The undersigned Registrant hereby further 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 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of any employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in this registration statement shall be deemed to be a new registration statement relating to the securities offered herein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(c) 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 provisions summarized in Item 6 above, 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 Securities Act of 1933 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 of 1933 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 the City of San Diego, State of California, on this 25th day of June, 2008.

ADVENTRX PHARMACEUTICALS, INC.

By: /s/ Evan M. Levine
Evan M. Levine
Chief Executive Officer and President

POWER OF ATTORNEY

We, the undersigned directors and/or officers of ADVENTRX Pharmaceuticals, Inc. (the "Registrant"), hereby severally constitute and appoint Evan M. Levine, Chief Executive Officer and President, and Mark N.K. Bagnall, Chief Financial Officer and Executive Vice President, and each of them individually, with full powers of substitution and resubstitution, our true and lawful attorneys, with full powers to them and each of them to sign for us, in our names and in the capacities indicated below, any and all amendments to this registration statement on Form S-8 filed (including post-effective amendments), together with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as each of them might or could do in person, and hereby ratifying and confirming all that said attorneys, and each of them, or their substitute or substitutes, shall do or cause to be done by virtue of this Power of Attorney.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed below by the following persons in the capacities and on the date indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Evan M. Levine</u> Evan M. Levine	Chief Executive Officer and President and Director (Principal Executive Officer)	June 25, 2008
<u>/s/ Mark N.K. Bagnall</u> Mark N.K. Bagnall	Chief Financial Officer and Executive Vice President and Director (Principal Financial and Accounting Officer)	June 25, 2008
<u>/s/ Jack Lief</u> Jack Lief	Chair of the Board	June 25, 2008
<u>/s/ Alexander J. Denner</u> Alexander J. Denner	Director	June 25, 2008
<u>/s/ Michael M. Goldberg</u> Michael M. Goldberg	Director	June 25, 2008

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<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Mark J. Pykett</u> Mark J. Pykett	Director	June 25, 2008
<u>/s/ Eric K. Rowinsky</u> Eric K. Rowinsky	Director	June 25, 2008

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99.5#(13)	Form of Stock Option Agreement under the 2005 Equity Incentive Plan (for option grants to employees approved in March 2008)
99.6#(10)	2005 Employee Stock Purchase Plan
99.7#(10)	Form of Subscription Agreement under the 2005 Employee Stock Purchase Plan
99.8#(14)	2008 Omnibus Incentive Plan

(1) Filed with the Registrant's Registration Statement on Form S-3 on June 30, 2004 (SEC file number 333-117022-03848890).

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- (2) Filed with the Registrant's Amendment No. 1 to Quarterly Report on Form 10-Q/A on October 30, 2006 (SEC file number 001-32157-061170484).
 - (3) Filed with the Registrant's Current Report on Form 8-K/A on April 13, 2004 (SEC file number 000-33219-04730584).
 - (4) Filed with the Registrant's Quarterly Report on Form 10-QSB on May 12, 2004 (001-32157-04797806).
 - (5) Filed with the Registrant's Quarterly Report on Form 10-Q on August 12, 2005 (SEC file number 001-32157-051022046).
 - (6) Filed with the Registrant's Current Report on Form 8-K on September 22, 2006 (SEC file number 001-32157-061103268).
 - (7) Filed with the Registrant's Current Report on Form 8-K on February 25, 2008 (SEC file number 001-32157-08638638).
 - (8) Filed with the Registrant's Annual Report on Form 10-K on March 15, 2007 (SEC file number 001-32157-07697283).
 - (9) Filed with the Registrant's Registration Statement on Form S-3 on August 26, 2005 (SEC file number 333-127857-051050073).
 - (10) Filed with the Registrant's Registration Statement on Form S-8 on July 13, 2005 (SEC file number 333-126551-05951362).
 - (11) Filed with the Registrant's Annual Report on Form 10-K on March 17, 2008 (SEC file number 001-32157-08690952).
 - (12) Filed with the Registrant's Annual Report on Form 10-K on March 16, 2006 (SEC file number 001-32157-06693266).
 - (13) Filed with the Registrant's Quarterly Report on Form 10-Q on May 12, 2008 (SEC file number 001-32157-08820541).
 - (14) Filed with the Registrant's Current Report on Form 8-K on June 2, 2008 (SEC file number 001-32157- 08874724).
- # Indicates management contract or compensatory plan.

June 25, 2008

ADVENTRX Pharmaceuticals, Inc.
6725 Mesa Ridge Road, Suite 100
San Diego, California 92121

Ladies and Gentlemen:

We have acted as legal counsel for ADVENTRX Pharmaceuticals, Inc., a Delaware corporation (the "Company"), in connection with a registration statement on Form S-8 (the "Registration Statement") to register under the Securities Act of 1933, as amended (the "Securities Act"), a total of 16,054,510 shares of the Company's common stock, \$0.001 par value per share (the "Shares"), (i) up to 783,376 of which may be issued pursuant to the Company's 2005 Equity Incentive Plan (the "2005 EIP"), (ii) up to 2,173,634 of which may be issued pursuant to the Company's 2005 Employee Stock Purchase Plan (the "2005 ESPP"), and (iii) up to 13,097,500 of which may be issued pursuant to the Company's 2008 Omnibus Incentive Plan (the "2008 OIP").

We have examined all instruments, documents and records which we deemed relevant and necessary for the basis of our opinion hereinafter expressed. In such examination, we have assumed the genuineness of all signatures and the authenticity of all documents submitted to us as originals and the conformity to the originals of all documents submitted to us as copies. We express no opinion concerning any law other than the corporation law of the State of Delaware and the federal law of the United States. As to matters of Delaware corporation law, we have based our opinion solely upon our examination of such laws and the rules and regulations of the authorities administering such laws, all as reported in standard, unofficial compilations.

Based on such examination, we are of the opinion that the Shares, which may be issued pursuant to awards granted under the 2005 EIP or 2008 OIP or in connection with participation in the 2005 ESPP, are duly authorized and, when issued against receipt of the consideration therefor in accordance with the provisions of the 2005 EIP, the 2005 ESPP or the 2008 OIP, as applicable, will be validly issued, fully paid and nonassessable.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement and the use of our name wherever it appears in the Registration Statement. In giving this consent, we do not admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act, the rules and regulations of the Securities and Exchange Commission promulgated thereunder or Item 509 of Regulation S-K.

This opinion letter is given to you solely for use in connection with the issuance of the Shares in accordance with the Registration Statement and is not to be relied upon for any other purpose. Our opinion is expressly limited to the matters set forth above, and we render no opinion, whether by implication or otherwise, as to any other matters relating to the Company, the Shares or the Registration Statement.

Respectfully submitted,

/s/ DLA Piper US LLP

DLA PIPER US LLP

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in this Registration Statement on Form S-8 of our reports dated March 14, 2008 (which express an unqualified opinion and include an explanatory paragraph related to the adoption of Financial Accounting Standards Board Staff Position on No. EITF 00-19-2, Accounting for Registration Payment Arrangements) with respect to our audits of the consolidated financial statements of ADVENTRX Pharmaceuticals, Inc. and Subsidiaries and the effectiveness of ADVENTRX Pharmaceuticals, Inc. and Subsidiaries' internal control over financial reporting as of December 31, 2007, included in its Annual Report (Form 10-K) for the year ended December 31, 2007 filed with the Securities and Exchange Commission. This Registration Statement relates to the registration of a total of 16,054,510 shares of common stock of ADVENTRX Pharmaceuticals, Inc.

/s/ J.H. Cohn LLP

San Diego, California
June 23, 2008