

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

FORM 10-K/A
Amendment No. 1

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2006

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission File No. 001-32157

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

(Address of principal executive offices)

92121

(Zip Code)

(858) 552-0866

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class:

Common Stock, par value \$0.001 per share

Name of each exchange on which registered:

The American Stock Exchange

Securities registered pursuant to Section 12(g) of the Act:

None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter periods that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. YES NO

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statement incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

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

Large accelerated filer Accelerated filer Non-accelerated filer

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). YES NO

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant as of June 30, 2006 was approximately \$189,214,000, based upon the closing price on the American Stock Exchange reported for such date. Shares of common stock held by each officer and director and by each person who is known to own 5% or more of the outstanding common stock have been excluded in that such persons may be deemed to be affiliates of the Company. This determination of affiliate status is not necessarily a conclusive determination for other purposes. 89,676,739 shares of the registrant's common stock were issued and outstanding as of March 12, 2007.

DOCUMENTS INCORPORATED BY REFERENCE

Not applicable.

EXPLANATORY NOTE

This amendment (“Amendment No. 1”) to the Annual Report on Form 10-K for the year ended December 31, 2006 of ADVENTRX Pharmaceuticals, Inc. (the “Company”), which was filed on March 15, 2007 (the “Annual Report”), is being filed for the purpose of amending Item 15 of Part IV of the Annual Report. Pursuant to Securities and Exchange Commission staff comments, the report of the independent registered public accounting firm (the “Report”) has been amended solely to exclude any reference to the report of the Company’s other auditors and the Company’s consolidated statements of operations, stockholders’ equity (deficit) and cash flows for the period from June 12, 1996 (date of inception) to December 31, 2001. The financial statements of the Company and subsidiaries (a development stage enterprise) to which the Report relates are not being amended or restated and do not appear in this Amendment No. 1. They can be found in the Annual Report.

Table of Contents

	<u>Page</u>
<u>PART IV</u>	
Item 15. <u>Exhibits, Financial Statements and Schedules</u>	1
<u>SIGNATURES</u>	6
<u>EXHIBIT INDEX</u>	
<u>EXHIBIT 23.1</u>	
<u>EXHIBIT 31.1</u>	
<u>EXHIBIT 31.2</u>	

PART IV

Item 15. Exhibits, Financial Statement Schedules

(a) Documents Filed. The following documents are filed as part of this report:

Financial Statements. The following report of J.H. Cohn LLP:

- Report of J.H. Cohn LLP, Independent Registered Public Accounting Firm

Exhibits. See subsection (b) below.

(b) Exhibits.

Exhibit	Description
2.1 (1)	Agreement and Plan of Merger, dated April 7, 2006, among the registrant, Speed Acquisition, Inc., SD Pharmaceuticals, Inc. and certain individuals named therein (including exhibits thereto)
3.1 (2)	Amended and Restated Certificate of Incorporation of the registrant
3.2 (3)	Amended and Restated Bylaws of the registrant (formerly known as Biokeys Pharmaceuticals, Inc.)
4.1(4)	Form of Registration Rights Agreement entered into in October and November 2001 (including the original schedule of holders)
4.2 (5)	\$2.50 Warrant to Purchase Common Stock issued on April 12, 2002 to Emisphere Technologies, Inc.
4.3 (4)	Form of \$0.60 Warrant to Purchase Common Stock issued May 28, 2003 (including the original schedule of holders)
4.4 (4)	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 (4)	Common Stock and Warrant Purchase Agreement, dated as of April 5, 2004, among the registrant and the Investors (as defined therein)
4.6 (4)	Registration Rights Agreement, dated April 5, 2004, among the registrant and the Investors (as defined therein)
4.7 (4)	Form of \$2.00 A-1 Warrant to Purchase Common Stock issued April 8, 2004 (including the original schedule of holders)
4.8 (4)	Form of \$2.50 A-2 Warrant to Purchase Common Stock issued April 8, 2004 (including the original schedule of holders)
4.9 (6)	Common Stock and Warrant Purchase Agreement, dated April 8, 2004, between the registrant and CD Investment Partners, Ltd.
4.10 (6)	Registration Rights Agreement, dated April 8, 2004, between the registrant and CD Investment Partners, Ltd.
4.11 (6)	\$2.00 A-1 Warrant to Purchase Common Stock issued on April 8, 2004 to CD Investment Partners, Ltd.
4.12 (6)	\$2.00 A-1 Warrant to Purchase Common Stock issued on April 8, 2004 to Burnham Hill Partners
4.13 (6)	\$2.00 A-1 Warrant to Purchase Common Stock issued on April 8, 2004 to Ernest Pernet

Table of Contents

Exhibit	Description
4.14 (6)	\$2.00 A-1 Warrant to Purchase Common Stock issued on April 8, 2004 to W.R. Hambrecht + Co., LLC
4.15 (7)	Common Stock and Warrant Purchase Agreement, dated April 19, 2004, between the registrant and Franklin M. Berger
4.16 (8)	Registration Rights Agreement, dated April 19, 2004, between the registrant and Franklin M. Berger
4.17 (9)	\$2.00 A-1 Warrant to Purchase Common Stock issued on April 19, 2004 to Franklin M. Berger
4.18 (8)	Securities Purchase Agreement, dated July 21, 2005, among the registrant and the Purchasers (as defined therein)
4.19 (8)	Rights Agreement, dated July 27, 2005, among the registrant, the Icahn Purchasers and Viking (each as defined therein)
4.20 (9)	First Amendment to Rights Agreement, dated September 22, 2006, among the registrant and the Icahn Purchasers (as defined therein)
4.21 (8)	Form of \$2.26 Common Stock Warrant issued on July 27, 2005 (including the original schedule of holders)
4.22 (8)	Form of \$2.26 Common Stock Warrant issued on July 27, 2005 (including the original schedule of holders)
4.23 (10)	\$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 (11)	\$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 (11)	\$2.50 Warrant to Purchase Common Stock issued on October 22, 2004 to Thomas J. DePetrillo
10.1# (10)	2005 Equity Incentive Plan
10.2# (12)	Form of Stock Option Agreement under the 2005 Equity Incentive Plan
10.3# (2)	Form of Restricted Share Award Agreement under the 2005 Equity Incentive Plan
10.4# (12)	2005 Employee Stock Purchase Plan
10.5# (12)	Form of Subscription Agreement under the 2005 Employee Stock Purchase Plan
10.6* (13)	Option and License Agreement, dated January 23, 1998, between the registrant and the University of Southern California
10.7 (3)	First Amendment to License Agreement, dated August 16, 2000, between the registrant and the University of Southern California
10.8* (13)	Option and License Agreement, dated August 17, 2000, between the registrant and the University of Southern California

Table of Contents

Exhibit	Description
10.9* (14)	Amendment to Option and License Agreement, dated April 21, 2003, between the registrant and the University of Southern California
10.10* (2)	Agreement, effective as of May 1, 2005, between the registrant and Pharm-Olam International Ltd.
10.11 (2)	Amendment dated July 19, 2005 to the Agreement between the registrant and Pharm-Olam International Ltd.
10.12 (15)	License Agreement, dated October 20, 2006, between the registrant, through its wholly-owned subsidiary SD Pharmaceuticals, Inc., and Theragenex, LLC
10.13 (10)	License Agreement, dated December 10, 2005, between SD Pharmaceuticals, Latitude Pharmaceuticals and Andrew Chen
10.14 (16)	Standard Multi-Tenant Office Lease — Gross, dated June 3, 2004, between the registrant and George V. Casey & Ellen M. Casey, Trustees of the Casey Family Trust dated June 22, 1998
10.15 (2)	First Amendment to the Standard Multi-Tenant Office Lease — Gross, dated June 3, 2004 between the registrant and George V. & Ellen M. Casey, Trustees of the Casey Family Trust dated June 22, 1998
10.16# (17)	Offer letter, dated March 5, 2003, to Joan M. Robbins
10.17# (18)	Offer letter, dated November 15, 2004, to Brian M. Culley
10.18# (18)	Offer letter, dated November 17, 2004, to Carrie Carlander
10.19# (19)	Severance Agreement and Release of All Claims, dated September 7, 2006, with Carrie Carlander
10.20# (19)	Consulting Agreement, dated September 7, 2006, with Carrie Carlander
10.21# (19)	Offer letter, dated September 7, 2006, to James A. Merritt
10.22# (19)	Form of Stock Option Agreement between the registrant and James A. Merritt (included in Exhibit 10.21)
10.23# (20)	Offer letter, dated December 13, 2006, to Gregory P. Hanson
10.24# (20)	Stock Option Agreement, effective December 20, 2006, between the registrant and Gregory P. Hanson
10.25 (21)	Form of Director and Officer Indemnification Agreement
10.26# (22)	Director compensation policy
10.27 (23)	Placement Agency Agreement, dated November 2, 2006, among the registrant, ThinkEquity Partners LLC and Fortis Securities LLC
14.1 (24)	Code of Business Conduct and Ethics
21.1 (10)	List of Subsidiaries
23.1	Consent of J.H. Cohn LLP, Independent Registered Public Accounting Firm
31.1	Certification of chief executive officer pursuant to Rule 13a-14(a)/15d-14(a)

Table of Contents

Exhibit	Description
31.2	Certification of chief financial officer pursuant to Rule 13a-14(a)/15d-14(a)

* Indicates that confidential treatment has been requested or granted to certain portions, which portions have been omitted and filed separately with the Securities and Exchange Commission

Indicates management contract or compensatory plan

- (1) Filed with the registrant's Amendment No. 1 to Current Report on Form 8-K/A on May 1, 2006
- (2) Filed with the registrant's Annual Report on Form 10-K on March 16, 2006
- (3) Filed with the registrant's Registration Statement on Form 10SB on October 2, 2001
- (4) Filed with the registrant's Registration Statement on Form S-3 on June 30, 2004
- (5) Filed with the registrant's Amendment No. 1 to Quarterly Report on Form 10-Q/A on October 30, 2006
- (6) Filed with the registrant's Current Report on Form 8-K/A on April 13, 2004
- (7) Filed with the registrant's Quarterly Report on Form 10-QSB on May 12, 2005
- (8) Filed with the registrant's Quarterly Report on Form 10-Q on August 12, 2005
- (9) Filed with the registrant's Current Report on Form 8-K on September 22, 2006
- (10) Filed with the registrant's Annual Report on Form 10-K on March 15, 2007
- (11) Filed with the registrant's Registration Statement on Form S-3 on August 26, 2005
- (12) Filed with the registrant's Registration Statement on Form S-8 on July 13, 2005
- (13) Filed with the registrant's Registration Statement on Form 10-SB/A on January 14, 2002
- (14) Filed with the registrant's Quarterly Report on Form 10-QSB on August 14, 2003
- (15) Filed with the registrant's Current Report on Form 8-K on October 23, 2006
- (16) Filed with the registrant's Quarterly Report on Form 10-QSB on August 10, 2004
- (17) Filed with the registrant's Annual Report on Form 10-KSB on April 16, 2003
- (18) Filed with the registrant's Annual Report on Form 10-KSB on March 31, 2005
- (19) Filed with the registrant's Current Report on Form 8-K on September 8, 2006
- (20) Filed with the registrant's Current Report on Form 8-K on December 20, 2006
- (21) Filed with the registrant's Current Report on Form 8-K on October 23, 2006
- (22) Filed with the registrant's Current Report on Form 8-K on June 23, 2006
- (23) Filed with the registrant's Current Report on Form 8-K on November 3, 2006
- (24) Filed with the registrant's Current Report on Form 8-K on January 23, 2007

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

ADVENTRX Pharmaceuticals, Inc.

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

Date: August 7, 2007

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Evan M. Levine</u> Evan M. Levine	Chief Executive Officer (Principal Executive Officer)	August 7, 2007
<u>/s/ Gregory P. Hanson</u> Gregory P. Hanson	Chief Financial Officer, Senior Vice President, Finance, and Treasurer (Principal Financial and Accounting Officer)	August 7, 2007
<u>*</u> M. Ross Johnson	Chairman of the Board	
<u>*</u> Mark Bagnall	Director	
<u>*</u> Alexander J. Denner	Director	
<u>*</u> Michael M. Goldberg	Director	
<u>*</u> Jack Lief	Director	
<u>*</u> Mark J. Pykett	Director	

* By: /s/ Evan M. Levine
Evan M. Levine
Attorney-in-Fact

August 7, 2007

[Table of Contents](#)

Index to Consolidated Financial Statements

[Report of Independent Registered Public Accounting Firm](#)

Page
F-2

F-1

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders
ADVENTRX Pharmaceuticals, Inc.

We have audited the accompanying consolidated balance sheets of ADVENTRX Pharmaceuticals, Inc. and Subsidiaries (a development stage enterprise) as of December 31, 2006 and 2005, and the related consolidated statements of operations, stockholders' equity (deficit) and cash flows for each of the three years in the period ended December 31, 2006 and for the period from January 1, 2002 to December 31, 2006. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of ADVENTRX Pharmaceuticals, Inc. and Subsidiaries (a development stage enterprise) as of December 31, 2006 and 2005, and the results of operations and their cash flows for each of the years in the three-year period ended December 31, 2006 and for the period from January 1, 2002 to December 31, 2006, in conformity with accounting principles generally accepted in the United States of America.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the effectiveness of ADVENTRX Pharmaceuticals, Inc. and Subsidiaries' internal control over financial reporting as of December 31, 2006, based on criteria established in "Internal Control Integrated Framework" issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 23, 2007 expressed an unqualified opinion on management's assessment of internal control over financial reporting and an unqualified opinion of the effectiveness of internal control over financial reporting.

/s/ J.H. Cohn LLP

San Diego, California
February 23, 2007

[Table of Contents](#)

EXHIBIT INDEX

Exhibit	Description
2.1 (1)	Agreement and Plan of Merger, dated April 7, 2006, among the registrant, Speed Acquisition, Inc., SD Pharmaceuticals, Inc. and certain individuals named therein (including exhibits thereto)
3.1 (2)	Amended and Restated Certificate of Incorporation of the registrant
3.2 (3)	Amended and Restated Bylaws of the registrant (formerly known as Biokeys Pharmaceuticals, Inc.)
4.1(4)	Form of Registration Rights Agreement entered into in October and November 2001 (including the original schedule of holders)
4.2 (5)	\$2.50 Warrant to Purchase Common Stock issued on April 12, 2002 to Emisphere Technologies, Inc.
4.3 (4)	Form of \$0.60 Warrant to Purchase Common Stock issued May 28, 2003 (including the original schedule of holders)
4.4 (4)	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 (4)	Common Stock and Warrant Purchase Agreement, dated as of April 5, 2004, among the registrant and the Investors (as defined therein)
4.6 (4)	Registration Rights Agreement, dated April 5, 2004, among the registrant and the Investors (as defined therein)
4.7 (4)	Form of \$2.00 A-1 Warrant to Purchase Common Stock issued April 8, 2004 (including the original schedule of holders)
4.8 (4)	Form of \$2.50 A-2 Warrant to Purchase Common Stock issued April 8, 2004 (including the original schedule of holders)
4.9 (6)	Common Stock and Warrant Purchase Agreement, dated April 8, 2004, between the registrant and CD Investment Partners, Ltd.
4.10 (6)	Registration Rights Agreement, dated April 8, 2004, between the registrant and CD Investment Partners, Ltd.
4.11 (6)	\$2.00 A-1 Warrant to Purchase Common Stock issued on April 8, 2004 to CD Investment Partners, Ltd.
4.12 (6)	\$2.00 A-1 Warrant to Purchase Common Stock issued on April 8, 2004 to Burnham Hill Partners
4.13 (6)	\$2.00 A-1 Warrant to Purchase Common Stock issued on April 8, 2004 to Ernest Pernet
4.14 (6)	\$2.00 A-1 Warrant to Purchase Common Stock issued on April 8, 2004 to W.R. Hambrecht + Co., LLC
4.15 (7)	Common Stock and Warrant Purchase Agreement, dated April 19, 2004, between the registrant and Franklin M. Berger
4.16 (8)	Registration Rights Agreement, dated April 19, 2004, between the registrant and Franklin M. Berger
4.17 (9)	\$2.00 A-1 Warrant to Purchase Common Stock issued on April 19, 2004 to Franklin M. Berger

Table of Contents

Exhibit	Description
4.18 (8)	Securities Purchase Agreement, dated July 21, 2005, among the registrant and the Purchasers (as defined therein)
4.19 (8)	Rights Agreement, dated July 27, 2005, among the registrant, the Icahn Purchasers and Viking (each as defined therein)
4.20 (9)	First Amendment to Rights Agreement, dated September 22, 2006, among the registrant and the Icahn Purchasers (as defined therein)
4.21 (8)	Form of \$2.26 Common Stock Warrant issued on July 27, 2005 (including the original schedule of holders)
4.22 (8)	Form of \$2.26 Common Stock Warrant issued on July 27, 2005 (including the original schedule of holders)
4.23 (10)	\$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 (11)	\$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 (11)	\$2.50 Warrant to Purchase Common Stock issued on October 22, 2004 to Thomas J. DePetrillo
10.1# (10)	2005 Equity Incentive Plan
10.2# (12)	Form of Stock Option Agreement under the 2005 Equity Incentive Plan
10.3# (2)	Form of Restricted Share Award Agreement under the 2005 Equity Incentive Plan
10.4# (12)	2005 Employee Stock Purchase Plan
10.5# (12)	Form of Subscription Agreement under the 2005 Employee Stock Purchase Plan
10.6* (13)	Option and License Agreement, dated January 23, 1998, between the registrant and the University of Southern California
10.7 (3)	First Amendment to License Agreement, dated August 16, 2000, between the registrant and the University of Southern California
10.8* (13)	Option and License Agreement, dated August 17, 2000, between the registrant and the University of Southern California
10.9* (14)	Amendment to Option and License Agreement, dated April 21, 2003, between the registrant and the University of Southern California
10.10* (2)	Agreement, effective as of May 1, 2005, between the registrant and Pharm-Olam International Ltd.
10.11 (2)	Amendment dated July 19, 2005 to the Agreement between the registrant and Pharm-Olam International Ltd.
10.12 (15)	License Agreement, dated October 20, 2006, between the registrant, through its wholly-owned subsidiary SD Pharmaceuticals, Inc., and Theragenex, LLC
10.13 (10)	License Agreement, dated December 10, 2005, between SD Pharmaceuticals, Latitude Pharmaceuticals and Andrew Chen

Table of Contents

Exhibit	Description
10.14 (16)	Standard Multi-Tenant Office Lease — Gross, dated June 3, 2004, between the registrant and George V. Casey & Ellen M. Casey, Trustees of the Casey Family Trust dated June 22, 1998
10.15 (2)	First Amendment to the Standard Multi-Tenant Office Lease — Gross, dated June 3, 2004 between the registrant and George V. & Ellen M. Casey, Trustees of the Casey Family Trust dated June 22, 1998
10.16# (17)	Offer letter, dated March 5, 2003, to Joan M. Robbins
10.17# (18)	Offer letter, dated November 15, 2004, to Brian M. Culley
10.18# (18)	Offer letter, dated November 17, 2004, to Carrie Carlander
10.19# (19)	Severance Agreement and Release of All Claims, dated September 7, 2006, with Carrie Carlander
10.20# (19)	Consulting Agreement, dated September 7, 2006, with Carrie Carlander
10.21# (19)	Offer letter, dated September 7, 2006, to James A. Merritt
10.22# (19)	Form of Stock Option Agreement between the registrant and James A. Merritt (included in Exhibit 10.21)
10.23# (20)	Offer letter, dated December 13, 2006, to Gregory P. Hanson
10.24# (20)	Stock Option Agreement, effective December 20, 2006, between the registrant and Gregory P. Hanson
10.25 (21)	Form of Director and Officer Indemnification Agreement
10.26# (22)	Director compensation policy
10.27 (23)	Placement Agency Agreement, dated November 2, 2006, among the registrant, ThinkEquity Partners LLC and Fortis Securities LLC
14.1 (24)	Code of Business Conduct and Ethics
21.1 (10)	List of Subsidiaries
23.1	Consent of J.H. Cohn LLP, Independent Registered Public Accounting Firm
31.1	Certification of chief executive officer pursuant to Rule 13a-14(a)/15d-14(a)
31.2	Certification of chief financial officer pursuant to Rule 13a-14(a)/15d-14(a)

* Indicates that confidential treatment has been requested or granted to certain portions, which portions have been omitted and filed separately with the Securities and Exchange Commission

Indicates management contract or compensatory plan

(1) Filed with the registrant's Amendment No. 1 to Current Report on Form 8-K/A on May 1, 2006

(2) Filed with the registrant's Annual Report on Form 10-K on March 16, 2006

(3) Filed with the registrant's Registration Statement on Form 10SB on October 2, 2001

[Table of Contents](#)

- (4) Filed with the registrant's Registration Statement on Form S-3 on June 30, 2004
- (5) Filed with the registrant's Amendment No. 1 to Quarterly Report on Form 10-Q/A on October 30, 2006
- (6) Filed with the registrant's Current Report on Form 8-K/A on April 13, 2004
- (7) Filed with the registrant's Quarterly Report on Form 10-QSB on May 12, 2005
- (8) Filed with the registrant's Quarterly Report on Form 10-Q on August 12, 2005
- (9) Filed with the registrant's Current Report on Form 8-K on September 22, 2006
- (10) Filed with the registrant's Annual Report on Form 10-K on March 15, 2007
- (11) Filed with the registrant's Registration Statement on Form S-3 on August 26, 2005
- (12) Filed with the registrant's Registration Statement on Form S-8 on July 13, 2005
- (13) Filed with the registrant's Registration Statement on Form 10-SB/A on January 14, 2002
- (14) Filed with the registrant's Quarterly Report on Form 10-QSB on August 14, 2003
- (15) Filed with the registrant's Current Report on Form 8-K on October 23, 2006
- (16) Filed with the registrant's Quarterly Report on Form 10-QSB on August 10, 2004
- (17) Filed with the registrant's Annual Report on Form 10-KSB on April 16, 2003
- (18) Filed with the registrant's Annual Report on Form 10-KSB on March 31, 2005
- (19) Filed with the registrant's Current Report on Form 8-K on September 8, 2006
- (20) Filed with the registrant's Current Report on Form 8-K on December 20, 2006
- (21) Filed with the registrant's Current Report on Form 8-K on October 23, 2006
- (22) Filed with the registrant's Current Report on Form 8-K on June 23, 2006
- (23) Filed with the registrant's Current Report on Form 8-K on November 3, 2006
- (24) Filed with the registrant's Current Report on Form 8-K on January 23, 2007

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the registration statement on Form S-8 (No. 333-126551) and the registration statements on Form S-3 (No. 333-117022, No. 333-127857, No. 333-113729 and No. 333-133824) and related prospectuses of ADVENTRX Pharmaceuticals, Inc. of our report dated February 23, 2007 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 and management's assessment of the effectiveness of internal control over financial reporting as of December 31, 2006, which report appears in this Amendment No. 1 to Annual Report on Form 10-K for the year ended December 31, 2006.

/s/ J.H. Cohn LLP
San Diego, California
August 7, 2007

**CERTIFICATION OF CHIEF EXECUTIVE OFFICER PURSUANT TO SECTION 302 OF THE
SARBANES-OXLEY ACT OF 2002**

I, Evan M. Levine, certify that:

1. I have reviewed this Amendment No. 1 to Annual Report on Form 10-K of ADVENTRX Pharmaceuticals, Inc.; and
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report.

Date: August 7, 2007

By: /s/ Evan M. Levine

Evan M. Levine
Chief Executive Officer
(Principal Executive Officer)

**CERTIFICATION OF CHIEF FINANCIAL OFFICER PURSUANT TO SECTION 302 OF THE
SARBANES-OXLEY ACT OF 2002**

I, Gregory P. Hanson, certify that:

1. I have reviewed this Amendment No. 1 to Annual Report on Form 10-K of ADVENTRX Pharmaceuticals, Inc.; and
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report.

Date: August 7, 2007

By: /s/ Gregory P. Hanson
Gregory P. Hanson
Senior Vice President, Chief Financial Officer
(Principal Financial and Accounting Officer)