

OMB APPROVAL	
OMB Number:	3235-0104
Expires:	December 31, 2014
Estimated average burden hours per response	0.5

INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

1. Name and Address of Reporting Person* Three Arch Management IV, L.L.C. <hr/> (Last) (First) (Middle) C/O THREE ARCH PARTNERS, 3200 ALPINE ROAD <hr/> (Street) PORTOLA VALLEY CA 94028 <hr/> (City) (State) (Zip)	2. Date of Event Requiring Statement (Month/Day/Year) 02/10/2011	3. Issuer Name and Ticker or Trading Symbol ACELRX PHARMACEUTICALS INC [ACRX]	
		4. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director <input checked="" type="checkbox"/> 10% Owner Officer (give title below) <input type="checkbox"/> Other (specify below)	5. If Amendment, Date of Original Filed (Month/Day/Year) 6. Individual or Joint/Group Filing (Check Applicable Line) <input type="checkbox"/> Form filed by One Reporting Person <input checked="" type="checkbox"/> Form filed by More than One Reporting Person

Table I - Non-Derivative Securities Beneficially Owned			
1. Title of Security (Instr. 4)	2. Amount of Securities Owned (Instr. 4)	3. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	4. Nature of Indirect Beneficial Ownership (Instr. 5)

**Table II - Derivative Securities Beneficially Owned
(e.g., puts, calls, warrants, options, convertible securities)**

1. Title of Derivative Security (Instr. 4)	2. Date Exercisable and Expiration Date (Month/Day/Year)		3. Title and Amount of Securities Underlying Derivative Security (Instr. 4)		4. Conversion or Exercise Price of Derivative Security	5. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	6. Nature of Indirect Beneficial Ownership (Instr. 5)
	Date Exercisable	Expiration Date	Title	Amount or Number of Shares ^M			
Series A Convertible Preferred Stock	(1)	(2)	Common Stock	9,721 ^{(3) (4)}	\$ ^{(1) (4)}	I	See Footnote ⁽⁵⁾
Series A Convertible Preferred Stock	(1)	(2)	Common Stock	440,278 ^{(3) (6)}	\$ ^{(1) (6)}	I	See Footnote ⁽⁷⁾
Series B Convertible Preferred Stock	(1)	(2)	Common Stock	7,088 ^{(3) (8)}	\$ ^{(1) (8)}	I	See Footnote ⁽⁵⁾
Series B Convertible Preferred Stock	(1)	(2)	Common Stock	321,036 ^{(3) (9)}	\$ ^{(1) (9)}	I	See Footnote ⁽⁷⁾
Series C Convertible Preferred Stock	(1)	(2)	Common Stock	18,928 ^{(3) (10)}	\$ ^{(1) (10)}	I	See Footnote ⁽⁵⁾
Series C Convertible Preferred Stock	(1)	(2)	Common Stock	857,241 ^{(3) (10)}	\$ ^{(1) (10)}	I	See Footnote ⁽⁷⁾
Warrants to purchase Series C Convertible Preferred Stock	(11)	(12)	Series C Preferred Stock	2,597 ⁽³⁾	\$ ^{(3) (13)}	I	See Footnote ⁽⁵⁾
Warrants to purchase Series C Convertible Preferred Stock	(11)	(12)	Series C Preferred Stock	117,661 ⁽³⁾	\$ ^{(3) (13)}	I	See Footnote ⁽⁷⁾
Convertible Promissory Note	(14)	(14)	Common Stock	\$ 40,973.37 ⁽¹⁴⁾	\$ ⁽¹⁴⁾	I	See Footnote ⁽⁵⁾
Convertible Promissory Note	(15)	(15)	Common Stock	\$ 1,855,663.23 ⁽¹⁵⁾	\$ ⁽¹⁵⁾	I	See Footnote ⁽⁷⁾

Explanation of Responses:

- Immediately convertible into shares of the Issuer's common stock.
- These shares have no expiration date.
- Reflect a 1-for-4 reverse stock split of the Company's issued an outstanding securities effective January 28, 2011.
- The shares will automatically convert into 13,277 shares of the Issuer's common stock immediately prior to the closing of the Issuer's initial public offering.
- The shares are held by Three Arch Associates IV, L.P. The voting and dispositive decisions with respect to the shares held by Three Arch Associates IV, L.P., are made by the following Managing Members of its general partner Three Arch Management IV, L.L.C.: Mark Wan and Wilfred Jaeger, each of whom disclaims beneficial ownership of such shares.
- The shares will automatically convert into 601,335 shares of the Issuer's common stock immediately prior to the closing of the Issuer's initial public offering.
- The shares are held by Three Arch Partners IV, L.P. The voting and dispositive decisions with respect to the shares held by Three Arch Partners IV, L.P., are made by the following Managing Members of its general partner Three Arch Management IV, L.L.C.: Mark Wan and Wilfred Jaeger, each of whom disclaims beneficial ownership of such shares.
- The shares will automatically convert into 10,630 shares of the Issuer's common stock immediately prior to the closing of the Issuer's initial public offering.
- The shares will automatically convert into 481,465 shares of the Issuer's common stock immediately prior to the closing of the Issuer's initial public offering.
- Automatically converts into equal shares of common stock upon the closing of the Issuer's initial public offering.
- Exercisable contingent upon and effective immediately prior to the closing of the Issuer's initial public offering.
- Pursuant to its terms, the warrant shall terminate at the closing of the Issuer's initial public offering. Holder has elected to net exercise the warrants contingent upon and effective immediately prior to the closing of the Issuer's initial public offering of common stock. In the event the Issuer's public offering does no occur, the warrant shall terminate on September 14, 2017, unless earlier terminated in accordance with its terms, in a liquidation or change of control transaction.
- The exercise price per share is \$3.9428.
- Principal amount of \$40,973,37, plus interest accrued at the rate of 4.0% per annum shall convert automatically upon the closing of the Issuer's initial public offering into shares of common stock at a conversion price of 80.0% of the per share price of the common stock sold in the Issuer's initial public offering.

15. Principal amount of \$1,855,663.23 plus interest accrued at the rate of 4.0% per annum shall convert automatically upon the closing of the Issuer's initial public offering into shares of common stock at a conversion price of 80.0% of the per share price of the common stock sold in the Issuer's initial public offering.

<u>/s/ Stephen Bonelli,</u> <u>Attorney-in-fact</u>	<u>02/10/2011</u>
** Signature of Reporting Person	Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

* If the form is filed by more than one reporting person, see Instruction 5(b)(v).

** Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.

POWER OF ATTORNEY

Know all by these presents, that the undersigned hereby constitutes and appoints Stephen Bonelli with full power of substitution, the undersigned's true and lawful attorney-in-fact to:

- (1) prepare, execute in the undersigned's name and on the undersigned's behalf, and submit to the U.S. Securities and Exchange Commission (the "SEC") a Form ID, including amendments thereto and any other documents necessary or appropriate to obtain codes and passwords enabling the undersigned to make electronic filings with the SEC of reports required by Section 16(a) of the Securities Exchange Act of 1934 or any rule or regulation of the SEC;
- (2) execute for and on behalf of the undersigned, in the undersigned's capacity as an officer, director and/or more than 10% stockholder of AcelRx Pharmaceuticals, Inc. (the "Company"), Forms 3, 4, and 5 in accordance with Section 16(a) of the Securities Exchange Act of 1934 and the rules thereunder;
- (3) do and perform any and all acts for and on behalf of the undersigned which may be necessary or desirable to complete and execute any such Form 3, 4, or 5, complete and execute any amendment or amendments thereto, and timely file such form with the SEC and any stock exchange or similar authority; and
- (4) take any other action of any type whatsoever in connection with the foregoing which, in the opinion of such attorney-in-fact, may be of benefit to, in the best interest of, or legally required by, the undersigned, it being understood that the documents executed by such attorney-in-fact on behalf of the undersigned pursuant to this Power of Attorney shall be in such form and shall contain such terms and conditions as such attorney-in-fact may approve in such attorney-in-fact's discretion.

The undersigned hereby grants to each such attorney-in-fact full power and authority to do and perform any and every act and thing whatsoever requisite, necessary, or proper to be done in the exercise of any of the rights and powers herein granted, as fully to all intents and purposes as the undersigned might or could do if personally present, with full power of substitution or revocation, hereby ratifying and confirming all that such attorney-in-fact, or such attorney-in-fact's substitute or substitutes, shall lawfully do or cause to be done by virtue of this power of attorney and the rights and powers herein granted. The undersigned acknowledges that the foregoing attorneys-in-fact, in serving in such capacity at the request of the undersigned, are not assuming, nor is the Company assuming, any of the undersigned's responsibilities to comply with Section 16 of the Securities Exchange Act of 1934.

This Power of Attorney shall remain in full force and effect until the undersigned is no longer required to file Forms 3, 4, and 5 with respect to the undersigned's holdings of and transactions in securities issued by the Company, unless earlier revoked by the undersigned in a signed writing delivered to the foregoing attorneys-in-fact. This Power of Attorney supersedes any prior power of attorney granted by the undersigned with respect to Forms 3, 4, and 5.

IN WITNESS WHEREOF, the undersigned has caused this Power of Attorney to be executed as of this 8th day of February,

Three Arch Partners III, L.P.
By Three Arch Management III, L.L.C.
Its General Partner

By: /s/ Mark Wan
Mark Wan, Managing Member

Three Arch Associates III, L.P.
By Three Arch Management III, L.L.C.
Its General Partner

By: /s/ Mark Wan
Mark Wan, Managing Member

Three Arch Partners IV, L.P.
By Three Arch Management IV, L.L.C.
Its General Partner

By: /s/ Mark Wan
Mark Wan, Managing Member

Three Arch Associates IV, L.P.
By Three Arch Management IV, L.L.C.
Its General Partner

By: /s/ Mark Wan
Mark Wan, Managing Member

By: /s/ Mark Wan

By: /s/ Wilfred Jaeger