

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 13D
(Rule 13d-101)

**INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT TO 13d-1(a) AND
AMENDMENTS THERETO FILED PURSUANT TO 13d-2(a)**

(Amendment # 1)*

AcelRx Pharmaceuticals, Inc.

(Name of Issuer)

Common Stock, par value \$0.001 per share

(Title of Class of Securities)

00444T100

(CUSIP Number)

Hilary Strain

Alta Partners

One Embarcadero Center, Suite 3700

San Francisco, CA 94111

(415) 362-4022

(Name, Address and Telephone Number of Person Authorized to
Receive Notices and Communications)

December 12, 2012

(Date of Event which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of Rule 13d-1(e), Rule 13d-1(f) or Rule 13d-1(g), check the following box.

*The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be filed for the purpose of Section 18 of the Securities Exchange Act of 1934 ("*Act*") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

(1) Names of Reporting Persons.

ACP IV, L.P.

(2) Check The Appropriate Box If A Member Of A Group (a)
(b) X

(3) SEC Use Only

(4) Source Of Funds

WC

(5) Check Box If Disclosure Of Legal Proceedings Is Required Pursuant To Items 2(d) Or 2(e) :

(6) Citizenship Or Place Of Organization

Delaware

Number Of Shares Beneficially Owned By Each Reporting Person With	(7)	Sole Voting Power	2,794,907 (a)
	(8)	Shared Voting Power	-0-
	(9)	Sole Dispositive Power	2,794,907 (a)
	(10)	Shared Dispositive Power	-0-

(11) Aggregate Amount Beneficially Owned By Each Reporting Person
2,794,907 (a)

(12) Check If The Aggregate Amount In Row (11) Excludes Certain Shares*

(13) Percent Of Class Represented By Amount In Row (11)
7.5% (b)

(14) Type Of Reporting Person
PN

(a) ACP IV, L.P. (“ACP IV”) has sole voting and dispositive control over these shares of common stock (“Common Stock”) of AcelRx Pharmaceuticals, Inc. (the “Issuer”), except that ACMP IV, LLC (“ACMP IV”), the general partner of ACP IV, and Guy Nohra (“Nohra”), Daniel Janney (“Janney”), and David Mack (“Mack”), directors of ACMP IV, may be deemed to share the right to direct the voting and dispositive control over such stock.

(b) The percentage set forth in row (13) is based on the sum of (i) the Issuer’s 22,646,773 outstanding shares of Common Stock as disclosed on the Issuer’s Form 8-K filed with the SEC on December 7, 2012 (ii) the 12,500,000 shares of Common Stock of the Issuer that were issued in a public offering pursuant to an underwriting agreement dated December 6, 2012 as disclosed on the Issuer’s Form 8-K filed with the SEC on December 7, 2012 and iii) an additional 1,875,000 shares of common stock issued to the Underwriters after the exercise of their options as disclosed on the Issuer’s Form 8-K filed with the SEC on December 7, 2012 and subsequent press release on December 14, 2012.



(1) Names of Reporting Persons.

ACMP IV, LLC

(2) Check The Appropriate Box If A Member Of A Group (a)
(b) X

(3) SEC Use Only

(4) Source Of Funds

AF

(5) Check Box If Disclosure Of Legal Proceedings Is Required Pursuant To Items 2(d) Or 2(e) :

(6) Citizenship Or Place Of Organization

Delaware

Number Of Shares Beneficially Owned By Each Reporting Person With	(7)	Sole Voting Power	-0-
	(8)	Shared Voting Power	2,794,907(c)
	(9)	Sole Dispositive Power	-0-
	(10)	Shared Dispositive Power	2,794,907(c)

(11) Aggregate Amount Beneficially Owned By Each Reporting Person
2,794,907(c)

(12) Check If The Aggregate Amount In Row (11) Excludes Certain Shares*

(13) Percent Of Class Represented By Amount In Row (11)
7.5% (b)

(14) Type Of Reporting Person
OO

(c) ACMP IV is the general partner of ACP IV and shares voting and dispositive power over the shares of Common Stock held by those entities.

(b) The percentage set forth in row (13) is based on the sum of (i) the Issuer's 22,646,773 outstanding shares of Common Stock as disclosed on the Issuer's Form 8-K filed with the SEC on December 7, 2012 (ii) the 12,500,000 shares of Common Stock of the Issuer that were issued in a public offering pursuant to an underwriting agreement dated December 6, 2012 as disclosed on the Issuer's Form 8-K filed with the SEC on December 7, 2012 and iii) an additional 1,875,000 shares of common stock issued to the Underwriters after the exercise of their options as disclosed on the Issuer's Form 8-K filed with the SEC on December 7, 2012 and subsequent press release on December 14, 2012.



(1) Names of Reporting Persons.

Guy Nohra

(2) Check The Appropriate Box If A Member Of A Group (a)
(b) X

(3) SEC Use Only

(4) Source Of Funds

AF

(5) Check Box If Disclosure Of Legal Proceedings Is Required Pursuant To Items 2(d) Or 2(e) :

(6) Citizenship Or Place Of Organization

U.S.A

Number Of Shares	(7)	Sole Voting Power	-0-
Beneficially Owned			
By Each Reporting			
Person With	(8)	Shared Voting Power	2,794,907(d)
	(9)	Sole Dispositive Power	-0-
	(10)	Shared Dispositive Power	2,794,907(d)

(11) Aggregate Amount Beneficially Owned By Each Reporting Person

2,794,907(d)

(12) Check If The Aggregate Amount In Row (11) Excludes Certain Shares*

(13) Percent Of Class Represented By Amount In Row (11)

7.5% (b)

(14) Type Of Reporting Person

IN

(d) Nohra is a director of ACMP IV and shares voting and dispositive control over the shares of Common Stock held by ACP IV. Nohra disclaims beneficial ownership of such shares except to the extent of his proportionate pecuniary interest therein.

(b) The percentage set forth in row (13) is based on the sum of (i) the Issuer's 22,646,773 outstanding shares of Common Stock as disclosed on the Issuer's Form 8-K filed with the SEC on December 7, 2012 (ii) the 12,500,000 shares of Common Stock of the Issuer that were issued in a public offering pursuant to an underwriting agreement dated December 6, 2012 as disclosed on the Issuer's Form 8-K filed with the SEC on December 7, 2012 and (iii) an additional 1,875,000 shares of common stock issued to the Underwriters after the exercise of their options as disclosed on the Issuer's Form 8-K filed with the SEC on December 7, 2012 and subsequent press release on December 14, 2012.

(1) Names of Reporting Persons.

Daniel Janney

(2) Check The Appropriate Box If A Member Of A Group (a)
(b) X

(3) SEC Use Only

(4) Source Of Funds

AF

(5) Check Box If Disclosure Of Legal Proceedings Is Required Pursuant To Items 2(d) Or 2(e) :

(6) Citizenship Or Place Of Organization

U.S.A

Number Of Shares (7) Sole Voting Power -0-

Beneficially Owned
By Each Reporting
Person With (8) Shared Voting Power 2,794,907(f)

(9) Sole Dispositive Power -0-

(10) Shared Dispositive Power 2,794,907(f)

(11) Aggregate Amount Beneficially Owned By Each Reporting Person

2,794,907(f)

(12) Check If The Aggregate Amount In Row (11) Excludes Certain Shares*

(13) Percent Of Class Represented By Amount In Row (11)

7.5% (b)

(14) Type Of Reporting Person

IN

(f) Janney is a director of ACMP IV and shares voting and dispositive control over the shares of Common Stock held by ACP IV. Janney disclaims beneficial ownership of such shares except to the extent of his proportionate pecuniary interest therein.

(b) The percentage set forth in row (13) is based on the sum of (i) the Issuer's 22,646,773 outstanding shares of Common Stock as disclosed on the Issuer's Form 8-K filed with the SEC on December 7, 2012 (ii) the 12,500,000 shares of Common Stock of the Issuer that were issued in a public offering pursuant to an underwriting agreement dated December 6, 2012 as disclosed on the Issuer's Form 8-K filed with the SEC on December 7, 2012 and iii) an additional 1,875,000 shares of common stock issued to the Underwriters after the exercise of their options as disclosed on the Issuer's Form 8-K filed with the SEC on December 7, 2012 and subsequent press release on December 14, 2012.



(1) Names of Reporting Persons.

David Mack

(2) Check The Appropriate Box If A Member Of A Group (a)
(b) X

(3) SEC Use Only

(4) Source Of Funds

AF

(5) Check Box If Disclosure Of Legal Proceedings Is Required Pursuant To Items 2(d) Or 2(e) :

(6) Citizenship Or Place Of Organization

U.S.A

Number Of Shares (7) Sole Voting Power -0-

Beneficially Owned

By Each Reporting (8) Shared Voting Power 2,794,907(g)

Person With

(9) Sole Dispositive Power -0-

(10) Shared Dispositive Power 2,794,907(g)

(11) Aggregate Amount Beneficially Owned By Each Reporting Person

2,794,907(g)

(12) Check If The Aggregate Amount In Row (11) Excludes Certain Shares*

(13) Percent Of Class Represented By Amount In Row (11)

7.5% (b)

(14) Type Of Reporting Person

IN

(g) Mack is a director of ACP IV and shares voting and dispositive control over the shares of Common Stock held by ACP IV. Mack disclaims beneficial ownership of such shares except to the extent of his proportionate pecuniary interest therein.

(b) The percentage set forth in row (13) is based on the sum of (i) the Issuer's 22,646,773 outstanding shares of Common Stock as disclosed on the Issuer's Form 8-K filed with the SEC on December 7, 2012 (ii) the 12,500,000 shares of Common Stock of the Issuer that were issued in a public offering pursuant to an underwriting agreement dated December 6, 2012 as disclosed on the Issuer's Form 8-K filed with the SEC on December 7, 2012 and iii) an additional 1,875,000 shares of common stock issued to the Underwriters after the exercise of their options as disclosed on the Issuer's Form 8-K filed with the SEC on December 7, 2012 and subsequent press release on December 14, 2012.



Item 1. Security and Issuer.

This Amendment No. 1 to Schedule 13D is being filed to amend the statement on Schedule 13D relating to the common stock, par value \$0.001 per share, of AcelRx Pharmaceuticals Inc., a Delaware corporation (the "Issuer"). The Original Schedule 13D is hereby amended and supplemented as detailed below and, except as amended and supplemented hereby, the Original Schedule 13D remains in full force and effect.

The principal executive office of the Issuer is located at 351 Galveston Drive, Redwood City, CA 94063. Information given in response to each item shall be deemed incorporated by reference in all other items as applicable.

Item 2. Identity and Background.

Items 2(a) of the Original Schedule 13D is hereby amended and restated in their entirety to read as follows:

(a) This Statement is being filed by (i) ACP IV, L.P., a Delaware limited partnership ("ACP IV"), (ii) ACMP IV, LLC, a Delaware limited liability company ("ACMP IV"), and (iii) Guy Nohra, Daniel Janney, and David Mack (collectively referred to as the "Directors"), the Directors of ACMP IV. Guy Nohra is also a Director of the Issuer. ACP IV, ACMP IV and the Directors are sometimes hereinafter collectively referred to as the "Reporting Persons."

Item 5. Interest in Securities of the Issuer.

Items 5(a) of the Original Schedule 13D is hereby amended and restated in their entirety to read as follows:

(a) As of December 14, 2012, ACP IV directly held 2,794,907 shares of Common Stock, representing 7.5% of the Issuer's outstanding Common Stock as of such date. As the general partner of ACP IV, ACMP IV beneficially owned 2,794,907 shares of Common Stock, representing 7.5% of the Issuer's Common Stock outstanding as of such date. Each of the Directors beneficially owned 2,794,907 shares of Common Stock, representing 7.5% of the Issuer's outstanding Common Stock as of such date. The percentages set forth in this Item 5 are calculated based on the sum of (i) the Issuer's 22,646,773 outstanding shares of Common Stock as disclosed on the Issuer's Form 8-K filed with the SEC on December 7, 2012 (ii) the 12,500,000 shares of Common Stock of the Issuer that were issued in a public offering pursuant to an underwriting agreement dated December 6, 2012 as disclosed on the Issuer's Form 8-K filed with the SEC on December 7, 2012 and (iii) an additional 1,875,000 shares of common stock issued to the Underwriters after the exercise of their options as disclosed on the Issuer's Form 8-K filed with the SEC on December 7, 2012 and subsequent press release on December 14, 2012.

Signatures

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Date: December 18, 2012

ACP IV, L.P.

By: ACMP IV, LLC

Its: General Partner

ACMP IV, LLC

By: /s/ Guy Nohra
Guy Norha, Director

By: /s/ Guy Nohra
Guy Norha, Director

 /s/ David Mack

 /s/ Guy Nohra

 /s/ Daniel Janney



EXHIBIT A

Joint Filing Statement

We, the undersigned, hereby express our agreement that the attached Schedule 13D is filed on behalf of each of us.

Date: December 18, 2012

ACP IV, L.P.

By: ACMP IV, LLC

Its: General Partner

ACMP IV, LLC

By: /s/ Guy Nohra
Guy Nohra, Director

By: /s/ Guy Nohra
Guy Nohra, Director

 /s/ David Mack

 /s/ Guy Nohra

 /s/ Daniel Janney