

<b>OMB APPROVAL</b>	
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Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

**STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP**

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

1. Name and Address of Reporting Person* <b>PERCEPTIVE ADVISORS LLC</b>  (Last) (First) (Middle) <b>499 PARK AVENUE, 25TH FLOOR</b>  (Street) <b>NEW YORK NY 10022</b>  (City) (State) (Zip)	2. Issuer Name and Ticker or Trading Symbol <b>ACELRX PHARMACEUTICALS INC [ACRX]</b>	5. Relationship of Reporting Person(s) to Issuer (Check all applicable)  Director <input checked="" type="checkbox"/> 10% Owner  Officer (give title below) Other (specify below)
	3. Date of Earliest Transaction (Month/Day/Year) <b>09/09/2015</b>	

**Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned**

1. Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)		4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5)			5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
			Code	V	Amount	(A) or (D)	Price			
Common Stock	09/09/2015		S		310,000	D	\$4.1767	6,264,060	I	See Footnotes <sup>(1)(2)</sup>

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

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)		5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)		6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4)	8. Price of Derivative Security (Instr. 5)	9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)
				Code	V	(A)	(D)	Date Exercisable	Expiration Date					

1. Name and Address of Reporting Person* <b>PERCEPTIVE ADVISORS LLC</b>  (Last) (First) (Middle) <b>499 PARK AVENUE, 25TH FLOOR</b>  (Street) <b>NEW YORK NY 10022</b>  (City) (State) (Zip)		
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1. Name and Address of Reporting Person *		
<u>EDELMAN JOSEPH</u>		
(Last)	(First)	(Middle)
C/O PERCEPTIVE ADVISORS LLC 499 PARK AVENUE, 25TH FLOOR		
(Street)		
NEW YORK	NY	10022
(City) (State) (Zip)		

1. Name and Address of Reporting Person *		
<u>PERCEPTIVE LIFE SCIENCES MASTER FUND LTD</u>		
(Last)	(First)	(Middle)
C/O PERCEPTIVE ADVISORS LLC 499 PARK AVENUE, 25TH FLOOR		
(Street)		
NEW YORK	NY	10022
(City) (State) (Zip)		

**Explanation of Responses:**

1. This Form 4 is being filed by Perceptive Life Science Master Fund Ltd. (the "Master Fund"), Perceptive Advisors LLC (the "Advisor") and Joseph Edelman. The Advisor serves as the investment manager of Master Fund and to a managed account (the "Managed Account") for Titan Perc, Ltd. Mr. Edelman is the managing member of the Advisor.
2. This amount reflects the amount of securities held by the Master Fund and the Managed Account immediately following the transaction requiring the filing of this statement. In accordance with Instruction 5(b)(iv) of Form 4, the entire amount of the Issuer's securities held by Master Fund and the Managed Account is reported herein. Each of Mr. Edelman and the Advisor disclaims, for purposes of Section 16 of the Securities Exchange Act of 1934, beneficial ownership of such securities, except to the extent of his/its indirect pecuniary interest therein, and this report shall not be deemed an admission that either Mr. Edelman or the Advisor is the beneficial owner of such securities for purposes of Section 16 or for any other purposes.

/s/ Joseph Edelman, managing member of Perceptive Advisors LLC      09/10/2015

\*\* 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 4 (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.**

**Information Regarding Joint Filers**

Designated Filer of Form 4: Perceptive Advisors LLC

Date of Earliest Transaction Required to be Reported: September 9, 2015

Issuer Name and Ticker Symbol: **AcelRX Pharmaceuticals, Inc. (ACRX)**

Names: Perceptive Life Sciences Master Fund Ltd. and Joseph Edelman

Address: Perceptive Advisors LLC  
499 Park Avenue, 25th Floor  
New York, NY 10022

Signatures:

The undersigned, Perceptive Life Sciences Master Fund Ltd. and Joseph Edelman, are jointly filing the attached Statement of Changes in Beneficial Ownership of Securities on Form 4 with Perceptive Advisors LLC with respect to the beneficial ownership of securities of AcelRX Pharmaceuticals, Inc.

PERCEPTIVE LIFE SCIENCES MASTER FUND LTD.

By: Perceptive Advisors LLC, its investment manager

By: /s/ Joseph Edelman  
Joseph Edelman, managing member

JOSEPH EDELMAN

By: /s/ Joseph Edelman  
Joseph Edelman

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