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

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): May 11, 2011

ACELRX PHARMACEUTICALS, INC.

(Exact name of registrant as specified in its charter)

DELAWARE	001-35068	41-2193603
(State of incorporation)	(Commission File No.)	(IRS Employer Identification No.)

575 Chesapeake Drive
Redwood City, CA 94063
(Address of principal executive offices and zip code)

Registrant's telephone number, including area code: (650) 216-3500

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

ITEM 2.02 RESULTS OF OPERATIONS AND FINANCIAL CONDITION.

On May 12, 2011, AcelRx Pharmaceuticals, Inc. (the "Company") issued a press release announcing its financial results for the quarter ended March 31, 2011. A copy of the press release is furnished as Exhibit 99.1 to this current report.

The information in this Item 2.02 and in the press release furnished as Exhibit 99.1 to this current report shall not be deemed to be "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liabilities of that Section or Sections 11 and 12(a)(2) of the Securities Act of 1933, as amended. The information contained in this Item 2.02 and in the press release furnished as Exhibit 99.1 to this current report shall not be incorporated by reference into any filing with the U.S. Securities and Exchange Commission made by the Company, whether made before or after the date hereof, regardless of any general incorporation language in such filing.

ITEM 5.02 DEPARTURE OF DIRECTORS OR CERTAIN OFFICERS; ELECTION OF DIRECTORS; APPOINTMENT OF CERTAIN OFFICERS; COMPENSATORY ARRANGEMENTS OF CERTAIN OFFICERS.

(e)

2011 Cash Bonus Plan

On May 11, 2011, the Board of Directors (the "Board") of the Company, upon the recommendation of the Compensation Committee of the Board (the "Committee"), approved a cash bonus plan for the Company's employees for the 2011 fiscal year, under which the Company's named executive officers are participants. The cash bonus plan is summarized in Exhibit 10.1 hereto and incorporated herein by reference.

ITEM 9.01 FINANCIAL STATEMENTS AND EXHIBITS.

(d) Exhibits.

Exhibit Number	Description
10.1	2011 Cash Bonus Plan Summary.
99.1	Press Release dated May 12, 2011.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Date: May 16, 2011

ACELRX PHARMACEUTICALS, INC.

By: /s/ James H. Welch
James H. Welch
Chief Financial Officer

INDEX TO EXHIBITS

Exhibit Number	Description
10.1	2011 Cash Bonus Plan Summary.
99.1	Press Release dated May 12, 2011.

Exhibit 10.1

Summary of 2011 Cash Bonus Plan

Determination of 2011 Cash Bonus

Target bonuses for named executive officers of AcelRx Pharmaceuticals, Inc. (the "Company") under the 2011 Cash Bonus Plan (the "Plan") will range from 30% to 35% of such executive's 2011 base salary. The amount of cash bonus, if any, for each named executive officer will be based on both the named executive officer achieving his or her individual performance goals and on the Company meeting the 2011 corporate objectives approved by the Board. The 2011 corporate objectives are primarily related to product development, clinical trial milestones and financial objectives. The target bonuses for the Company's named executive officers for 2011 are as follows:

Named Executive Officer	Target Bonus (as a percentage of FY 2011 Base Salary)
Richard A. King	35%
James H. Welch	30%
Pamela P. Palmer	30%
Lawrence G. Hamel	30%
Badri Dasu	30%

Mr. King's cash bonus under the Plan shall be based 25% on the achievement of his individual performance goals, as determined by the Board, and 75% on the achievement of the 2011 corporate objectives. The cash bonus for all other named executive officers shall be based 40% on the achievement of his or her individual performance goals, as determined by the Board, and 60% on the achievement of the 2011 corporate objectives. The named executive officers' actual bonuses may exceed 100% of target in the event performance exceeds the predetermined goals.

Exhibit 99.1

FOR IMMEDIATE RELEASE

AcelRx Pharmaceuticals Reports First Quarter 2011 Financial Results

Initiation of Phase 3 Trial for Lead Product Candidate ARX-01 On Track for Second Half of 2011

REDWOOD CITY, Calif., May 12, 2011 – AcelRx Pharmaceuticals, Inc. (Nasdaq: ACRX), ("AcelRx"), a specialty pharmaceutical company focused on the development and commercialization of innovative therapies for the treatment of acute and breakthrough pain, reported financial results today for the first quarter ended March 31, 2011.

Net loss for the first quarter of 2011 was $3.2 million, or $0.30 per share, compared with a net loss of $3.7 million, or $5.85 per share, for the first quarter of 2010. Common shares used in calculating earnings per share were 10,742,182 in the first quarter of 2011 compared to 629,006 common shares in the first quarter of 2010. Research and development expenses for the three months ended March 31, 2011 totaled $1.9 million, compared with $2.8 million for the three months ended March 31, 2010. General and administrative expenses were $1.6 million for the quarter ended March 31, 2011, compared with $0.7 million for the quarter ended March 31, 2010. The increase in General and Administrative expenses results primarily from incremental public company expenses and non-cash stock compensation.

As of March 31, 2011, AcelRx had cash, cash equivalents and short-term investments of $36.2 million, compared with $3.7 million as of December 31, 2010. In February 2011, AcelRx completed its initial public offering, or IPO, resulting in net proceeds to AcelRx of $35.2 million. In connection with the IPO, $8.0 million in outstanding convertible notes as of December 31, 2010 converted to common stock. On March 31, 2011, AcelRx had $4.0 million in debt outstanding.

"Progress continues towards initiating the Phase 3 program for our lead product candidate, ARX-01, in acute post-operative pain," said Richard King, President and Chief Executive Officer of AcelRx. "We have manufactured NanoTabs for all Phase 3 clinical trials, and are in the process of manufacturing components for the ARX-01 device. We have selected the CRO to conduct the Phase 3 studies for ARX-01, and anticipate initiating enrollment in our first Phase 3 study, an efficacy study in major abdominal surgery, in the second half of 2011. We anticipate initiating enrollment for our second Phase 3 study, a head-to-head comparison of ARX-01 to the standard of care, IV PCA morphine, in early 2012."

"We continue to believe that ARX-01 could become the treatment of choice for patient-controlled management of moderate-to-severe post-operative pain," said Mr. King.

Financial Outlook

AcelRx anticipates that research and development expenses will increase over the next several years as it seeks to complete Phase 3 development of ARX-01. AcelRx does not intend to initiate the third ARX-01 Phase 3 study, an efficacy study in orthopedic hip and knee replacement surgeries until additional funding is obtained. The development of ARX-02, a product candidate for the treatment of cancer breakthrough pain, and ARX-03, a product candidate for mild sedation and pain relief in procedures conducted in a physician's office, will not advance until additional funding or the identification of a partner to support this effort is secured. Additionally, AcelRx anticipates increases in general and administrative expenses due to costs associated with operating as a public company and expansion of its corporate infrastructure to support ongoing development of its product candidates.

AcelRx believes its current cash and cash equivalents, and the interest earned thereon, are sufficient to fund operations through the second quarter of 2012.

About AcelRx Pharmaceuticals, Inc.

Based in Redwood City, CA, AcelRx Pharmaceuticals, Inc. (Nasdaq: ACRX) is a specialty pharmaceutical company focused on the development and commercialization of innovative therapies for the treatment of acute and breakthrough pain. AcelRx's lead product candidate, the ARX-01 Sufentanil NanoTab(R) PCA System, which has completed Phase 2 clinical development, is designed to solve the problems associated with post-operative intravenous patient-controlled analgesia (IV PCA) which has been shown to cause harm to patients following surgery because of the side effects of morphine, the invasive IV route of delivery and the inherent potential for programming and delivery errors associated with the complexity of infusion pumps. AcelRx has two additional product candidates which have completed Phase 2 clinical development: ARX-02 for the treatment of cancer breakthrough pain, and ARX-03 for providing mild sedation, anxiety reduction and pain relief for patients undergoing painful procedures in a physician's office.

Forward Looking Statements

This press release contains forward-looking statements, including, but not limited to, statements related to AcelRx Pharmaceuticals' financial performance, clinical trial update and future financial performance, including 2011 financial outlook, and statements relating to the timing of the clinical trials and product candidate development. These forward-looking statements are based on the company's current expectations and inherently involve significant risks and uncertainties. AcelRx Pharmaceuticals' actual results and the timing of events could differ materially from those anticipated in such forward looking statements as a result of these risks and uncertainties, which include, without limitation, risks related to: the success, cost and timing of AcelRx Pharmaceutical's product development activities and clinical trials; its ability to obtain and maintain regulatory approval of its product candidates; its ability to obtain funding for its operations; its plans to research, develop and commercialize its product candidates; its ability to attract collaborators with development, regulatory and commercialization expertise; the accuracy of AcelRx Pharmaceutical's estimates regarding expenses, capital requirements and needs for financing; and other risks detailed in the "Risk Factors" and elsewhere in AcelRx Pharmaceuticals' Securities and Exchange Commission filings and reports, including its Annual Report on Form 10-K for the year ended December 31, 2010. AcelRx Pharmaceuticals undertakes no duty or obligation to update any forward-looking statements contained in this release as a result of new information, future events or changes in its expectations.

Contact:
Jim Welch
Chief Financial Officer
650.216.3511
jwelch@acelrx.com

Balance Sheets
(in thousands, except share and per share data)

	March 31, 2011	December 31, 2010
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$ 33,206	$ 3,055
Short-Term Investments	3,032	627
Prepaid expenses and other current assets	758	2,097
Total Current Assets	**$ 36,996**	**$ 5,779**
Property and equipment, net	715	800
Restricted cash	205	205
Other assets	42	46
TOTAL ASSETS	**$ 37,958**	**$ 6,830**
LIABILITIES & STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES		
Accounts payable	$ 1,309	$ 543
Accrued liabilities	499	859
Convertible notes	—	6,805
Long-term debt, current portion	3,994	5,204
Total current liabilities	**$ 5,802**	**$ 13,411**
Deferred rent	198	245
Call option liability	—	596
Convertible preferred stock warrant liability	—	2,529
TOTAL LIABILITIES	**$ 6,000**	**$ 16,781**
STOCKHOLDERS' EQUITY (DEFICIT):		
Convertible preferred stock, $0.001 par value - no shares and 46,736,123 shares authorized as of March 31, 2011 and December 31, 2010; no shares and 7,151,802 shares issued and outstanding as of March 31, 2011 and December 31, 2010	$ —	$ 55,941
Common stock, $0.001 par value - 100,000,000 and 71,000,000 shares authorized as of March 31, 2011 and December 31, 2010; 19,371,750 and 674,353 shares issued and outstanding as of March 31, 2011 and December 31, 2010	21	3
Additional paid-in capital	103,704	2,668
Accumulated other comprehensive income (loss)	—	—
Deficit accumulated during the development stage	(71,767)	(68,563)
TOTAL STOCKHOLDERS' EQUITY (DEFICIT)	**$ 31,958**	**$ (9,951)**
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)	**$ 37,958**	**$ 6,830**

Statements of Operations
(in thousands, except share and per share data)

	Three Months Ended March 31,	
	2011	2010
Operating Expenses:		
Research and development	$ 1,946	$ 2,761
General and administrative	1,589	672
Total operating expenses	**$ 3,535**	**$ 3,433**
Loss from operations	**($ 3,535)**	**($ 3,433)**
Net interest and other income (expense), net	331	(248)
Net loss	**($ 3,204)**	**($ 3,681)**
Net loss per share of common stock, basic and diluted	**($ 0.30)**	**($ 5.85)**
Shares used in computing net loss per share of common stock, basic and diluted	10,742,182	629,006