

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, 2015

ACELRX PHARMACEUTICALS, INC.

(Exact name of registrant as specified in its charter)

DELAWARE

(State of incorporation)

001-35068

(Commission File No.)

41-2193603

(IRS Employer Identification No.)

**351 Galveston 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))
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Item 1.01. Entry into a Material Definitive Agreement.

On May 11, 2015, AcelRx Pharmaceuticals, Inc. (the “Company”) entered into an award contract supported by the United States Army Medical Research and Materiel Command (“USAMRMC”) within the U.S. Department of Defense (the “DoD”), in which the DoD granted up to \$17.0 million to the Company in order to support the development of the Company’s product candidate, ARX-04, a proprietary, non-invasive, single-use 30 mcg sufentanil sublingual tablet in a disposable, pre-filled, single-dose applicator for the treatment of moderate-to-severe acute pain. The DoD grant will support development of ARX-04 to perform Phase 3 clinical trials and manufacturing activities in order to submit a New Drug Application to the U.S. Food and Drug Administration (the “FDA”). Under the terms of the grant, the DoD will reimburse the Company for costs incurred for development, manufacturing and clinical costs outlined in the contract, including reimbursement for certain personnel and overhead expenses. The period of performance under the grant begins on May 11, 2015 and ends on June 21, 2016. The grant gives the DoD the option to extend the term of the grant and provide additional funding for the research. In addition, if ARX-04 is approved by the FDA, the DoD has the option to purchase a certain number of units of commercial product pursuant to the terms of the contract.

The foregoing summary of the award contract is not complete and is qualified in its entirety by reference to the award contract, a copy of which will be filed as an exhibit to the Company’s Quarterly Report on Form 10-Q for the quarter ended June 30, 2015.

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 14, 2015

ACELRX PHARMACEUTICALS, INC.

By: /s/ Jane Wright-Mitchell

Jane Wright-Mitchell

Chief Legal Officer