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): March 26, 2014

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))

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

(e)

As previously disclosed, AcelRx Pharmaceuticals, Inc. (the "Company") announced the departure of Jim Welch, the Company's Chief Financial Officer effective as of March 24, 2014. On March 26, 2014, the Company entered into a Separation and Consulting Agreement with Mr. Welch, which agreement provides for a lump sum cash payment equal to three (3) months of his current base salary and health benefits continuation for a period of three (3) months. In addition, Mr. Welch will remain a consultant through a transition period from March 24, 2014 (the "Employment Termination Date") and continue for three (3) months thereafter (the "Consulting Period"). In exchange for consideration under this agreement, Mr. Welch signed a release of claims against the Company.

The foregoing description is qualified in its entirety by reference to the full text of his Separation and Consulting Agreement, which will be filed as an exhibit to the Company's Quarterly Report on Form 10-Q for the quarter ending March 31, 2014.

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: April 1, 2014

ACELRX PHARMACEUTICALS, INC.

By: /s/ Richard A. King

Richard A. King President and Chief Executive Officer