

AcelRx Secures \$20 Million Loan Financing Agreement, Expected to Extend Its Operating Cash Runway Into 2013

REDWOOD CITY, Calif., June 30, 2011 /PRNewswire via COMTEX/ --

AcelRx Pharmaceuticals, Inc. (Nasdaq: ACRX) (AcelRx) today announced that it has obtained a \$20 million secured loan agreement with Hercules Technology Growth Capital (Hercules). Upon the execution of this agreement with Hercules, AcelRx received \$10 million in the first tranche of the loan. The second tranche of up to \$10 million can be drawn, at AcelRx's option, any time prior to December 16, 2011. In addition, AcelRx announced that approximately \$2.8 million of the proceeds were used to repay the remaining obligations under its loan and security agreement entered into with Pinnacle Ventures LLC in 2008. AcelRx expects to use the remainder of the capital to fund development activities related to its ARX-01 product candidate and for general corporate purposes.

General terms of the loan arrangement include interest-only payments through June 2012, with the possibility of extending the interest-only period through September 2012 if certain product candidate development conditions are met. Subsequently, the principal, together with interest, will be repaid over the following 36 months. Further information with respect to the loan arrangement with Hercules is contained in a Current Report on Form 8-K filed today by AcelRx with the Securities and Exchange Commission.

"We are very pleased to add Hercules to an existing group of supportive and experienced partners," said Richard King, AcelRx President and CEO. "This loan provides AcelRx with the resources to complete our third and last planned Phase 3 clinical trial for ARX-01, our product candidate for the treatment of post-operative pain. ARX-01 is designed to solve a number of issues experienced in the management of post-surgical pain by non-invasively delivering the high therapeutic index opioid sufentanil while eliminating programming errors with a non-programmable device. This loan is expected to extend our operating cash runway into the first quarter of 2013."

Kathy Conte, Managing Director of Hercules added, "Hercules is excited to invest in a team that is looking to transform the management of post-operative pain with its lead product, ARX-01."

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 SufentanilNanoTab PCA System, which is entering Phase 3 clinical development, is designed to solve the problems associated with post-operative intravenous patient-controlled analgesia, 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. ARX-04 will soon enter Phase 2 clinical development for the management of acute pain in a medically supervised setting.

Forward-Looking Statements

This press release contains forward-looking statements, including, but not limited to, statements related to the US Army Medical Research and Material Command grant for research and development of AcelRx Pharmaceuticals' ARX-04 product candidate, potential market for the ARX-04 product candidate and its applications, the AcelRx Pharmaceuticals' statements relating to ARX-04 Phase 2 clinical trial, the funding and timing of the clinical trial 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, including any new product candidates; its ability to obtain funding for its operations and new product development; its plans to research, develop and commercialize its product candidates, including new product candidates; its ability to attract funding partners or 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, and its Form 10-Q for the quarter ending March 31, 2011. 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. SOURCE AcelRx Pharmaceuticals, Inc.