



August 7, 2023

United States Securities and Exchange Commission
Division of Corporation Finance
100 F Street, N.E.
Washington, D.C. 20549

RE: **AcelRx Pharmaceuticals, Inc.**
Registration Statement on Form S-3
File No. 333-273589

Ladies and Gentlemen:

AcelRx Pharmaceuticals, Inc. (the "**Registrant**") hereby requests that the U.S. Securities and Exchange Commission (the "**Commission**") take appropriate action to cause the above-referenced Registration Statement on Form S-3 to become effective on August 9, 2023, at 4:00 p.m., Eastern Time, or as soon thereafter as is practicable or at such later time as the Registrant may orally request via telephone call to the staff of the Commission. The Registrant hereby authorizes John T. McKenna of Cooley LLP, counsel to the Registrant, to make such request on its behalf.

Once the Registration Statement has been declared effective, please orally confirm that event with John T. McKenna of Cooley LLP, counsel to the Registrant, at (650) 843-5059.

Very truly yours,

ACELRX PHARMACEUTICALS, INC.

By: /s/ VINCENT J. ANGOTTI

Name: Vincent J. Angotti

Title: Chief Executive Officer

cc: Thomas P. McCracken, AcelRx Pharmaceuticals, Inc.
John T. McKenna, Cooley LLP