

November 29, 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. 333-275721

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 November 30, 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

AcelRx Pharmaceuticals, Inc. 1850 Gateway Drive, Suite 175 San Mateo, CA 94404