

ACELRX PHARMACEUTICALS, INC.
25821 Industrial Boulevard, Suite 400
Hayward, CA 94545

November 21, 2022

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. 333-268396

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, as amended to become effective on November 22, 2022, 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 each of John T. McKenna, Mark B. Weeks and David R. Ambler 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, or in his absence, Mark B. Weeks at (650) 843-5011 or David R. Ambler at (650) 843-5899.

Very truly yours,

ACELRX PHARMACEUTICALS, INC.

By: /s/ Vincent J. Angotti
Name: Vincent J. Angotti
Title: Chief Executive Officer

cc: Thomas McCracken, AcelRx Pharmaceuticals, Inc.
John T. McKenna, Cooley LLP
Mark B. Weeks, Cooley LLP
David R. Ambler, Cooley LLP