

August 5, 2022

Steven L. Hoerter  
President, Chief Executive Officer and Director  
Deciphera Pharmaceuticals, Inc.  
200 Smith Street  
Waltham, MA 02451

Pharmaceuticals, Inc.  
Statement on Form S-3  
2022

Re: Deciphera  
Registration  
Filed August 4,  
File No. 333-266523

Dear Mr. Hoerter:

This is to advise you that we have not reviewed and will not review your registration statement.

Please refer to Rules 460 and 461 regarding requests for acceleration. We remind you that the company and its management are responsible for the accuracy and adequacy of their disclosures, notwithstanding any review, comments, action or absence of action by the staff.

Please contact Joshua Gorsky at 202-551-7836 with any questions.

Sincerely,

Division of Corporation Finance  
Office of Life Sciences

cc:  
Esq.

Alicia M. Tschirhart,