

**Concert Pharmaceuticals, Inc.  
65 Hayden Avenue, Suite 3000N  
Lexington, MA 02421**

April 26, 2022

**Via EDGAR Transmission**

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

Re: Concert Pharmaceuticals, Inc.: Registration Statement on Form S-3 filed March 3, 2022 (File No. 333-263247).

Ladies and Gentlemen:

Pursuant to Rule 461 under the Securities Act of 1933, as amended (the “**Act**”), Concert Pharmaceuticals, Inc. (the “**Company**”) hereby requests that the effective date of the above-referenced registration statement (the “**Registration Statement**”) be accelerated to April 28, 2022, at 4:00 pm Eastern Time, or as soon thereafter as practicable, unless we or our outside counsel, Goodwin Procter LLP, request by telephone that such Registration Statement be declared effective at some other time. In making this acceleration request, the Company acknowledges that it is aware of its responsibilities under the Act.

If you have any questions regarding this request, please contact Sarah Ashfaq of Goodwin Procter LLP at (212) 459-7238.

Sincerely,  
Concert Pharmaceuticals, Inc.

/s/ Roger D. Tung, Ph.D.

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Roger D. Tung, Ph.D.

President and Chief Executive Officer

cc: Jeffrey A. Munsie, Esq., *Concert Pharmaceuticals, Inc.*  
John M. Mutkoski, Esq., *Goodwin Procter LLP*  
Sarah Ashfaq, Esq., *Goodwin Procter LLP*