

December 19, 2016

VIA EDGAR

United States Securities and Exchange Commission
Division of Corporation Finance
Mail Stop 4561
100 F. Street, N.E.
Washington, D.C. 20549
Attention: Suzanne Hayes
Joseph McCann

**Re: Voyager Therapeutics, Inc.
Registration Statement on Form S-3
Filed December 1, 2016
File No. 333-214861**

Dear Ms. Hayes:

This letter is being submitted on behalf of Voyager Therapeutics, Inc. (the "Company") in response to the comments of the staff of the Division of Corporation Finance (the "Staff") of the U.S. Securities and Exchange Commission (the "Commission") with respect to the Company's Registration Statement on Form S-3, File No. 333-214861, filed December 1, 2016 (the "Registration Statement"), as set forth in your letter dated December 16, 2016 addressed to Dr. Steven M. Paul, President and Chief Executive Officer of the Company (the "Comment Letter"). The Company is concurrently filing with the Commission an amended Registration Statement, which includes changes that reflect responses to the Staff's comments. For reference purposes, the text of the Comment Letter has been reproduced herein with responses below each numbered comment.

Registration Statement on Form S-3 filed December 1, 2016

1. *Your plan of distribution and coverage for the sales agreement prospectus indicate that sales of your common stock, if any, will be made at market prices by any method that is deemed to be an "at the market offering" as defined in Rule 415 under the Securities Act, including sales made directly on The NASDAQ Global Select Market or any other trading market for your common stock, or sales to or through a market maker other than on an exchange. Your disclosure also states that Cowen and Company may sell your common stock by any other method permitted by law, including negotiated transactions. Please tell us whether sales made to or through a market maker or sales made in negotiated transactions satisfy the "at the market offering" definition under Rule 415. If any sales method does not constitute a sales method that is deemed to be an "at the market offering" as defined in Rule 415 or if any material information*

with respect to a particular offering has been omitted, please confirm that you will file an additional prospectus supplement at the time of such sales or tell us why such additional filing would not be necessary.

RESPONSE: The Company acknowledges the Staff's comment. The Company has revised its disclosure on the coverage and page 10 of the sales agreement prospectus to provide that sales may be made only in an "at the market offering" as defined in Rule 415(a)(4) of the Securities Act of 1933, as amended (the "Securities Act"). The Company hereby confirms that if any sales method does not constitute a sales method that is deemed to be an "at the market offering" as defined in Rule 415(a)(4) of the Securities Act, or if any material information with respect to a particular offering has been omitted, it will file an additional prospectus supplement at the time of such sales.

Exhibits

2. *Please file your indentures (Exhibits 4.2 and 4.3) prior to effectiveness of the registration statement.*

RESPONSE: The Company acknowledges the Staff's comment and has filed the indentures as Exhibits 4.2 and 4.3 to the Registration Statement.

Should you have any further comments or questions with regard to the foregoing, please do not hesitate to contact the undersigned by phone at (617) 570-1879, by facsimile transmission at (617) 321-4398 or by e-mail LBurlingame@goodwinlaw.com, or Edwin O'Connor by phone at (212) 813-8853, by facsimile transmission at (212) 937-3476 or by email at EOConnor@goodwinlaw.com.

Sincerely,

/s/ Laurie A. Burlingame, Esq.

Goodwin Procter LLP

cc: Dr. Steven M. Paul, *Voyager Therapeutics, Inc.*
J. Jeffrey Goater, *Voyager Therapeutics, Inc.*
Mitchell S. Bloom, Esq., *Goodwin Procter LLP*
Edwin O'Connor, Esq., *Goodwin Procter LLP*