

October 9, 2015

**VIA EDGAR AND FEDERAL EXPRESS**

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

**Re: Voyager Therapeutics, Inc.  
Amendment No. 3 to Confidential Draft Registration Statement on Form S-1  
Submitted August 28, 2015  
CIK No. 0001640266**

Dear Ms. Hayes:

This letter is 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 Amendment No. 3 to Draft Registration Statement on Form S-1, confidentially submitted on August 28, 2015 (the “**Draft Registration Statement**”), as set forth in the Staff’s letter dated September 14, 2015 addressed to Steven M. Paul, M.D., President and Chief Executive Officer of the Company (the “**Comment Letter**”). The Company is concurrently publicly filing the Registration Statement on Form S-1 (“**Registration Statement**”), which includes changes to the Draft Registration Statement in response to the Staff’s comments.

For reference purposes, the text of the Comment Letter has been reproduced herein with responses below each numbered comment. For your convenience, we have italicized the reproduced Staff comments from the Comment Letter. Unless otherwise indicated, page references in the descriptions of the Staff’s comments refer to the Draft Registration Statement, and page references in the responses refer to the Registration Statement. All capitalized terms used and not otherwise defined herein shall have the meanings set forth in the Registration Statement.

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The responses provided herein are based upon information provided to Goodwin Procter LLP by the Company. In addition to confidentially submitting this letter via EDGAR, we are sending via Federal Express five (5) copies of each of this letter and the Registration Statement (marked to show changes from the Draft Registration Statement).

1. *We refer to your disclosure regarding your “exclusive, worldwide, royalty-bearing license” agreement with the University of Massachusetts and the corresponding agreement filed as Exhibit 10.4. We also note your disclosure, “[w]e have exclusively licensed three families of patents and patent applications and nonexclusively licensed three families of patents and patent applications directed to RNAi constructs as vector payloads, their design and use in the treatment of CNS disorders from the University of Massachusetts,” in the second paragraph of “Licensed Intellectual Property” on page 122. Please expand your disclosure to indicate which patents and patent applications licensed from the University of Massachusetts are exclusive and which are non-exclusive. Please also discuss the material terms of any agreement with the University of Massachusetts relating to the non-exclusive licensed patent families. In addition, please file the agreement as an exhibit in accordance with Item 601 of Regulation S-K.*

RESPONSE: The Draft Registration Statement has been revised in response to the Staff’s comment. Please see revisions on page 123 of the Registration Statement.

2. *We refer to your last patent disclosure on page 122. Please expand your disclosure to briefly identify the intellectual property and type of patent protection sought (e.g. method of use or composition of matter) to protect your intellectual property rights arising from the Amyotrophic Lateral Sclerosis Association grant.*

RESPONSE: The Draft Registration Statement has been revised in response to the Staff’s comment. Please see revisions on page 123 of the Registration Statement.

If you should have any questions concerning the enclosed matters, please contact the undersigned at (617) 570-1055.

Sincerely,

/s/ Mitchell S. Bloom

Mitchell S. Bloom

cc: Steven M. Paul, M.D., President and Chief Executive Officer, *Voyager Therapeutics, Inc.*  
J. Jeffrey Goater, Senior Vice President, Finance & Business Development, *Voyager Therapeutics, Inc.*

