

CATABASIS PHARMACEUTICALS, INC.

One Kendall Square
Bldg. 1400 E, Suite B14202
Cambridge, Massachusetts 02139

June 22, 2015

VIA EDGAR

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

Re: Catabasis Pharmaceuticals, Inc.
Registration Statement on Form S-1
File No. 333-204144
Request for Acceleration

Ladies and Gentlemen:

Pursuant to Rule 461 promulgated under the Securities Act of 1933, as amended, Catabasis Pharmaceuticals, Inc. (the “Registrant”) hereby requests acceleration of the effective date of its Registration Statement on Form S-1 (File No. 333-204144), as amended (the “Registration Statement”), so that it may become effective at 4:00 p.m. Eastern Daylight Time on June 24, 2015, or as soon thereafter as practicable.

The Registrant hereby acknowledges that:

- (a) should the Securities and Exchange Commission (the “Commission”) or the staff, acting pursuant to delegated authority, declare the Registration Statement effective, it does not foreclose the Commission from taking any action with respect to the Registration Statement;
- (b) the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the Registration Statement effective, does not relieve the Registrant from its full responsibility for the adequacy and accuracy of the disclosure in the Registration Statement; and
- (c) the Registrant may not assert staff comments and the declaration of effectiveness of the Registration Statement as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

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Very truly yours,

Catabasis Pharmaceuticals, Inc.

By: /s/ Jill C. Milne
Name: Jill C. Milne, Ph.D.
Title: President and Chief Executive Officer
