

VIA EDGAR

June 27, 2016

Ms. Suzanne Hayes
Assistant Director
United States Securities and Exchange Commission
Division of Corporation Finance
100 F Street, N.E.
Mail Stop 4720
Washington, D.C. 20549

Re: **Syros Pharmaceuticals, Inc. (the “Company”)**
Registration Statement on Form S-1 File No. 333-211818

Ladies and Gentlemen:

Pursuant to Rule 461 under the Securities Act of 1933, as amended (the “*Act*”), and as representatives of the several underwriters of the Company’s proposed public offering of shares of the Company’s common stock, par value \$0.001 per share (the “*Common Stock*”), we hereby join the Company’s request for acceleration of the effective date of the above-referenced Registration Statement, as amended, requesting effectiveness for 4:00 p.m. (ET) on June 29, 2016, or as soon thereafter as practicable.

Pursuant to Rule 460 of the Act, we wish to advise you that we have distributed approximately 941 copies of the Company’s preliminary prospectus relating to the Common Stock, dated June 20, 2016, through the date hereof to underwriters, dealers, institutions and others.

The undersigned, as representatives of the several underwriters, have complied and will continue to comply, and have been informed by the participating underwriters that they have complied and will continue to comply, with the provisions of Rule 15c2-8 of the Securities Exchange Act of 1934, as amended.

[Signature page follows]

Very truly yours,

COWEN AND COMPANY, LLC
PIPER JAFFRAY & CO.
Acting on their own behalf
and as representatives of several
underwriters

By: COWEN AND COMPANY, LLC

By: /s/ Jason Fenton
Name: Jason Fenton
Title: Managing Director

By: PIPER JAFFRAY & CO.

By: /s/ Christie L. Christina
Name: Christie L. Christina
Title: Managing Director

[Signature Page to Acceleration Request]
