

September 19, 2014

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

Attention: Jeffrey Riedler, Assistant Director
Johnny Gharib, Staff Attorney
Daniel Greenspan, Staff Attorney

Regarding: Imprimis Pharmaceuticals, Inc.
Registration Statement on Form S-3
Filed September 10, 2014, as amended on the date hereof
File No. 333-198675

Dear Mr. Riedler:

This letter is in response to the comments received from the staff (the "Staff") of the U.S. Securities and Exchange Commission (the "Commission") in the Staff's comment letter to the Imprimis Pharmaceuticals, Inc. (the "Company") dated September 18, 2014, with respect to the Registration Statement on Form S-3 (File No. 333-198675) initially filed by the Company on September 10, 2014 and as amended on the date hereof (as amended, the "Registration Statement"). For convenience and unless expressly noted otherwise, the text of each of the Staff's comments appears in this letter in boldface type, with the Company's response immediately below each comment in regular type. Capitalized terms used in the Company's responses and not defined herein have the meanings given to them in the Registration Statement.

Incorporation By Reference, page 42

- 1. Please amend your registration statement to incorporate by reference your Form 8-Ks filed February 11, 2014; April 3, 2014; September 3, 2014; September 8, 2014; and your amended Form 8-K filed September 9, 2014. Please see Item 12(a)(2) of Form S-3 for guidance**

Response:

In response to the Staff's comment, the Company has modified its disclosure under the heading "Incorporation of Certain Documents By Reference" to reference all reports filed pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, since the end of the fiscal year covered by the Company's latest annual report on Form 10-K, in accordance with Item 12 of Form S-3.

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We appreciate your time and attention to the responses to the Staff's comments set forth in this letter and in Amendment No. 1 to the Registration Statement filed with the Commission on the date hereof. Please direct any comments or inquiries regarding the foregoing to me at (858) 704-4044 (telephone) or mark@imprimispharma.com (email).

Very truly yours,

By: /s/ Mark L. Baum

Name: Mark L. Baum

Title: President and Chief Executive Officer

cc: Steven G. Rowles, Esq., Morrison & Foerster LLP
