

LANTHEUS HOLDINGS, INC.

331 Treble Cove Road
North Billerica, MA 01862

August 29, 2016

VIA EDGAR

U.S. Securities and Exchange Commission
Division of Corporation Finance
450 Fifth Street, N.W.
Washington, D.C. 20549

Attention: Joseph McCann
Michael Gershon

Re: Lantheus Holdings, Inc.
Registration Statement on Form S-3 (File No. 333-212940)
Request for Acceleration

Ladies and Gentlemen:

Pursuant to Rule 461 promulgated under the Securities Act of 1933, as amended, Lantheus Holdings, Inc. (the "Company") hereby requests that the Securities and Exchange Commission (the "Commission") accelerate the effective date of the Company's Registration Statement on Form S-3 (File No. 333-212940) (the "Registration Statement"), so that it will be declared effective at 4:00 p.m. Eastern Time on August 31, 2016, or as soon as possible thereafter. The Company hereby authorizes Craig Marcus and John Donnelly of Ropes & Gray LLP, counsel to the Company, to orally modify or withdraw this request for acceleration.

The Company hereby acknowledges the position of the staff of the Commission (the "Staff") that:

- (i) should 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;
- (ii) the action of the Commission or the Staff, acting pursuant to delegated authority, in declaring the Registration Statement effective, does not relieve the Company from its full responsibility for the adequacy and accuracy of the disclosure in the Registration Statement; and
- (iii) it is the Staff's position that the Company 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.

It would be appreciated if, as soon as the Registration Statement is declared effective, you would inform John Donnelly of Ropes & Gray LLP, counsel to the Company, at (617) 235-4773.

Very truly yours,

LANTHEUS HOLDINGS, INC.

By: /s/ Daniel Niedzwiecki

Daniel Niedzwiecki
Assistant Secretary