UNITED STATES SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM S-8 REGISTRATION STATEMENT

UNDER
THE SECURITIES ACT OF 1933

	Lantheus H	oldings, Inc.				
		as specified in its charter)				
	Delaware	35-2318913				
	(State or other jurisdiction of incorporation or organization)	(I.R.S. Empløyer Identification No.)				
201 Bı	ırlington Road, South Building,					
	dford, Massachusetts 01730	01730	01730			
	dress of Principal Executive Offices)	(Zip Code)				
		Employee Stock Purchase Plan le of Plan)				
		iedzwiecki				
		rative Officer and				
		l Counsel ling, Bedford, Massachusetts 01730				
		of agent for service)				
	(978) 6	71-8648				
		area code, of agent for service)				
	y. See the definitions of "large accelerated filer," "	accelerated filer, a non-accelerated filer, a smaller reporting company or a accelerated filer," "smaller reporting company" and "emerging growth	an			
Large Accelerated filer	\boxtimes	Accelerated filer				
Non-accelerated filer		Smaller reporting company				
		Emerging growth company				
		Emerging growth company				

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any

new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act. \Box

PART I

INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

The information required by Part I is included in the documents sent or given to participants in the 2023 Employee Stock Purchase Plan of Lantheus Holdings, Inc. (the "Registrant") pursuant to Rule 428(b)(1) of the Securities Act of 1933, as amended (the "Securities Act"). Such documents are not required to be, and are not, filed with the Securities and Exchange Commission (the "SEC") either as part of this Registration Statement or as a prospectus or prospectus supplement pursuant to Rule 424 under the Securities Act. These documents and the documents incorporated by reference in this Registration Statement pursuant to Item 3 of Part II of Form S-8, taken together, constitute a prospectus that meets the requirements of Section 10(a) of the Securities Act.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents are incorporated by reference herein:

- (a) the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2022 (the "Annual Report"), filed with the Securities and Exchange Commission (the "SEC") pursuant to the Securities Exchange Act of 1934, as amended (the "Exchange Act"), on February 23, 2023;
 - (b) the Registrant's Quarterly Report on Form 10-Q, for the quarterly period ended March 31, 2023, filed with the SEC on May 4, 2023;
- (c) the Registrant's Current Reports on Form 8-K, filed with the SEC on March 17, 2023, as amended on March 20, 2023, May 1, 2023, and May 4, 2023 (Items 1.01 and 2.03); and
- (d) the description of the Registrant's common stock, filed with the Commission as Exhibit 4.2 to the Annual Report, including all amendments and reports filed for the purpose of updating such description.

All reports and other documents filed by the Registrant after the date hereof pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act, prior to the filing of a post-effective amendment to this Registration Statement that indicates that all securities offered have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated herein by reference and to be part hereof from the date of filing of such report or other document. Any statement contained herein or in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained herein or in any subsequently filed document which also is incorporated or is deemed to be incorporated by reference herein modifies or supersedes such earlier statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute part of this Registration Statement.

Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

Not applicable.

Item 6. Indemnification of Directors and Officers.

The Registrant is governed by the Delaware General Corporation Law (the "DGCL"). Section 145 of the DGCL provides that a corporation may indemnify any person, including an officer or director, who was or is, or is threatened to be made, a party to any threatened, pending or completed legal action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of such corporation), by reason of the fact that such person was or is an officer, director, employee or agent of such corporation or is or was serving at the request of such corporation as a director, officer, employee or agent of another corporation or enterprise. The indemnity may include expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding, provided such officer, director, employee or agent acted in good faith and in a manner such person reasonably believed to be in, or not opposed to, the corporation's best interest and, for criminal actions or proceedings, had no reasonable cause to believe that such person's conduct was unlawful. A Delaware corporation may indemnify any person, including an officer or director, who was or is, or is threatened to be made, a party to any threatened, pending or contemplated action or suit by or in the right of such corporation, under the same conditions, except that such indemnification is limited to expenses (including attorneys' fees) actually and reasonably incurred by such person, and except that no indemnification is permitted without judicial approval if such person is adjudged to be liable to such corporation. Where an officer or director of a corporation must indemnify that person against the expenses (including attorneys' fees) which such officer or director actually and reasonably incurred in connection therewith.

The Registrant's amended and restated certificate of incorporation authorizes the indemnification of its officers and directors, as permitted by Section 145 of the DGCL. Reference is made to Section 102(b)(7) of the DGCL, which enables a corporation in its original certificate of incorporation or an amendment thereto to eliminate or limit the personal liability of a director or officer for violations of the director's or officer's fiduciary duty, except (i) for any breach of the director's or officer's duty of loyalty to the corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) in the case of directors, pursuant to Section 174 of the DGCL, which provides for liability of directors for unlawful payments of dividends of unlawful stock purchase or redemptions or (iv) for any transaction from which a director or officer derived an improper personal benefit, or (v) in the case of an officer, in any action by or in the right of the corporation. As permitted by the DGCL, the Registrant has included in its amended and restated certificate of incorporation a provision to eliminate the personal liability of its directors for monetary damages for breach of their fiduciary duties as directors, subject to certain exceptions, but it has not provided for the elimination of personal monetary liabilities of its officers for any breach of their fiduciary duties. In addition, the Registrant's amended and restated certificate of incorporation and bylaws provide that it is required to indemnify its officers and directors under certain circumstances, including those circumstances in which indemnification would otherwise be discretionary, and it is required to advance expenses to its officers and directors as incurred in connection with proceedings against them for which they may be indemnified.

The Registrant has entered into indemnification agreements with each of its directors and executive officers. These agreements, among other things, require the Registrant to indemnify each director and executive officer to the fullest extent permitted by Delaware law, including indemnification of expenses such as attorneys' fees, judgments, fines and settlement amounts incurred by the director or executive officer in any action or proceeding, including any action or proceeding by or in right of the Registrant, arising out of the person's services as a director or executive officer, in each case, subject to certain exceptions.

The Registrant maintains directors' and officers' liability insurance for the benefit of its directors and officers.

Item 7. Exemption From Registration Claimed.

Not applicable.

Item 8. Exhibits.

		INCORPORATED BY REFERENCE			
EXHIBIT NUMBER	DESCRIPTION OF EXHIBITS	FORM	FILE NUMBER	EXHIBIT	FILING DATE
4.1	Amended and Restated Certificate of Incorporation of Lantheus Holdings, Inc.	8-K	001-36569	3.1	April 27, 2018
4.2	Amended and Restated Bylaws of Lantheus Holdings, Inc.	8-K	001-36569	3.2	December 28, 2022
4.3	Common Stock Certificate.	8-K	001-36569	4.1	June 30, 2015
4.4	Lantheus Holdings, Inc. 2023 Employee Stock Purchase Plan.	8-K	001-36569	10.1	May 1, 2023
5.1*	<u>Legal Opinion of Foley Hoag LLP.</u>				
23.1*	Consent of Independent Registered Public Accounting Firm, Deloitte & Touche LLP.				
23.2*	Consent of Foley Hoag LLP (included as part of Exhibit 5.1).				
24.1*	Power of Attorney (included as part of the signature page hereto).				
107*	Filing Fee Table.				

 ^{*} Filed herewith

Item 9. Undertakings.

- a) The undersigned Registrant hereby undertakes:
 - (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act;
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of the Registration Statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the Registration Statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and
 - (iii) To include any material information with respect to the plan of distribution not previously disclosed in the Registration Statement or any material change to such information in the Registration Statement;

provided, *however*, that paragraphs (a)(1)(i) and (a)(1)(ii) above do not apply if the registration statement is on Form S-8 and the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the SEC by the Registrant pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in the Registration Statement.

- (2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (b) The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Registrant's annual report pursuant to Section 13(a) or 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the Registration Statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (c) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities, the Registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of North Billerica, Commonwealth of Massachusetts, on May 16, 2023.

Lantheus Holdings, Inc.

By: /s/ Mary Anne Heino

Name: Mary Anne Heino
Title: Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each of the undersigned constitutes and appoints each of Mary Anne Heino, Robert J. Marshall, Jr. and Daniel Niedzwiecki, each acting alone, her or his true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for such person and in her or his name, place and stead, in any and all capacities, to sign this Registration Statement on Form S-8 (including all pre-effective and post-effective amendments and registration statements filed pursuant to Rule 462(b) under the Securities Act), and to file the same, with all exhibits thereto, and other documents in connection therewith, with the SEC, granting unto said attorneys-in-fact and agents, each acting alone, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming that any such attorney-in-fact and agent, or her or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date	
/s/ Mary Anne Heino Mary Anne Heino	Chief Executive Officer and Director (Principal Executive Officer)	May 16, 2023	
/s/ Robert J. Marshall, Jr. Robert J. Marshall, Jr.	Chief Financial Officer (Principal Financial Officer)	May 16, 2023	
/s/ Andrea Sabens Andrea Sabens	Chief Accounting Officer (Principal Accounting Officer)	May 16, 2023	
/s/ Brian Markison Brian Markison	Chairman of the Board of Directors	May 16, 2023	
/s/ Minnie Baylor-Henry Minnie Baylor-Henry	Director	May 16, 2023	
/s/ Dr. Gérard Ber Dr. Gérard Ber	Director	May 16, 2023	
/s/ Samuel Leno Samuel Leno	Director	May 16, 2023	
/s/ Heinz Mäusli Heinz Mäusli	Director	May 16, 2023	
/s/ Julie McHugh Julie McHugh	Director	May 16, 2023	
/s/ Gary Pruden Gary Pruden	Director	May 16, 2023	
/s/ Dr. James Thrall Dr. James Thrall	Director	May 16, 2023	



May 16, 2023

Lantheus Holdings, Inc. 201 Burlington Road, South Building Bedford, Massachusetts 01730

Re: Registration Statement on Form S-8

Ladies and Gentlemen:

We are familiar with the Registration Statement on Form S-8 (the "Registration Statement") being filed by Lantheus Holdings, Inc., a Delaware corporation (the "Company"), with the Securities and Exchange Commission (the "Commission") under the Securities Act of 1933, as amended (the "Securities Act"), on the date hereof. The Registration Statement relates to the offer and sale by the Company of up to 500,000 shares (the "Shares") of its common stock, par value \$0.01 per share ("Common Stock"), issuable pursuant to the Lantheus Holdings, Inc. 2023 Employee Stock Purchase Plan (the "2023 Plan").

In arriving at the opinions expressed below, we have examined and relied upon the Certificate of Incorporation and Bylaws of the Company, each as amended and restated to date, the records of meetings and consents of the Company's Board of Directors, or committees thereof, records of the proceedings of its stockholders, and the 2023 Plan, each as provided to us by the Company, and the Registration Statement.

In addition, we have relied upon certificates and other assurances of officers of the Company and others as to factual matters without having independently verified such factual matters. In our examination, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals, the conformity to authentic original documents of all documents submitted to us as copies and the due authorization, execution and delivery of all documents by all persons other than the Company, where authorization, execution and delivery are prerequisites to the effectiveness of such documents. We have also made such investigations of law, as we have deemed appropriate as a basis for the opinions expressed below.

We have assumed that the Company will continue to have sufficient authorized, unissued and otherwise unreserved shares of Common Stock available for issuance at the time of each issuance of the Shares pursuant to the 2023 Plan. We have also assumed that the purchase price or other consideration to be received by the Company for the Shares will be valid consideration equal to or in excess of the par value thereof.

In rendering the opinion expressed below, we express no opinion other than as to the Delaware General Corporation Law.

On the basis of the foregoing, it is our opinion that the Shares, when issued and sold in accordance with the terms of the 2023 Plan against the Company's receipt of the purchase price, will be validly issued, fully paid and non-assessable.

This opinion is to be used only in connection with the offer and sale of the Shares while the Registration Statement is in effect.

Seaport West 155 Seaport Boulevard Boston, MA 02210-2600

617 832 1000 main 617 832 7000 fax This opinion is being delivered solely for the benefit of the Company and such other persons as are entitled to rely upon it pursuant to the applicable provisions of the Securities Act. This opinion may not be used, quoted, relied upon or referred to for any other purpose, nor may it be used, quoted, relied upon or referred to by any other person, for any purpose, without our prior written consent.

This opinion is based upon currently existing statutes, rules and regulations and judicial decisions and is rendered as of the date hereof, and we disclaim any obligation to advise you of any change in any of the foregoing sources of law or subsequent developments in law or changes in facts or circumstances which might affect any matters or opinions set forth herein.

We consent to the filing of this opinion as an exhibit to the Registration Statement. In giving such consent, we do not admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission promulgated thereunder.

This opinion letter shall be interpreted in accordance with the Core Opinion Principles jointly issued by the Committee on Legal Opinions of the American Bar Association's Business Law Section and the Working Group on Legal Opinions Foundation as published in 74 Business Lawyer 815 (2019).

Very truly yours,

FOLEY HOAG LLP

By: /s/ Stacie S. Aarestad

a Partner

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on Form S-8 of our reports dated February 23, 2023, relating to the financial statements of Lantheus Holdings, Inc. and the effectiveness of Lantheus Holdings, Inc.'s internal control over financial reporting, appearing in the Annual Report on Form 10-K of Lantheus Holdings, Inc. for the year ended December 31, 2022.

/s/ Deloitte & Touche LLP

Boston, Massachusetts May 16, 2023

Calculation Of Filing Fee Tables

Form S-8 (Form Type)

Lantheus Holdings, Inc. (Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered Securities

Security Type	Security Class Title	Fee Calculation Rule	Amount Registered(1)	Proposed Maximum Offering Price Per Share	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee
Equity	Common						
	stock,	Rule					
	\$0.01 par	457(c)					
	value per	and Rule					
	share	457(h)	500,000(2)	\$96.27(3)	\$48,135,000	\$0.00011020	\$5,304.48
Total Offering Amounts				\$48,135,000		\$5,304.48	
Total Fee Offsets					·		
Net Fee Due						\$5,304.48	

- (1) Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the "Securities Act"), this registration statement on Form S-8 (the "Registration Statement") shall also cover any additional shares of the Registrant's common stock, \$0.01 par value per share (the "Common Stock") that becomes issuable under the Registrant's 2023 Employee Stock Purchase Plan (the "2023 ESPP") by reason of any stock dividend, stock split, recapitalization or other similar transaction effected without the receipt of consideration that increases the number of the Registrant's outstanding shares of Common Stock.
- (2) This Registration Statement covers 500,000 shares of the Registrant's Common Stock, which are issuable pursuant to the 2023 ESPP.
- (3) Estimated in accordance with Rule 457(c) and (h) under the Securities Act solely for the purpose of calculating the registration fee on the basis of \$96.27 per share, the average of the high and low prices of the Registrant's common stock as reported on the Nasdaq Global Market on May 9, 2023, which date is within five business days prior to the filing of this registration statement.