



Lantheus to Acquire Progenics to Form a Leading Precision Diagnostics Imaging and Therapeutics Company

October 2, 2019

Highly Complementary Portfolio of Ultrasound and Radiopharmaceutical Diagnostics and Oncology Therapeutics

Lantheus' Proven Commercial, Manufacturing and Operational Excellence Well Positioned to Optimize the Combined Company's Innovative Diagnostic and Radiopharmaceutical Portfolio

Progenics Shareholders to Receive 0.2502 Shares of Lantheus Common Stock for Each Share of Progenics Stock in All-Stock Transaction

Exchange Ratio Represents ~35% Aggregate Ownership Stake in the Combined Company and Implies Premium of 21.5% to Progenics' 30-Day VWAP

Diversifies Revenue Streams, Enhances Cash Flow Generation and Positions Combined Company for Sustainable, Long-Term, Profitable Growth

NORTH BILLERICA, MA and NEW YORK, October 2, 2019 -- Lantheus Holdings, Inc. (NASDAQ: LNTN) ("Lantheus"), parent company of Lantheus Medical Imaging, Inc. ("LMI"), a leader in the development, manufacture and commercialization of innovative diagnostic imaging agents and products, and Progenics Pharmaceuticals, Inc. (NASDAQ: PGNX) ("Progenics"), an oncology company developing innovative medicines and artificial intelligence to find, fight and follow cancer, today announced a definitive agreement for Lantheus to acquire Progenics in an all-stock transaction. The transaction has been unanimously approved by the Boards of Directors of both companies.

Under the terms of the agreement, Lantheus Holdings will acquire all of the issued and outstanding common shares of Progenics stock at a fixed exchange ratio. Progenics shareholders will receive 0.2502 shares of Lantheus Holdings stock for each share of Progenics stock, representing approximately a 35% aggregate ownership stake in the combined company. The exchange ratio implies a 21.5% premium to Progenics' 30-day volume weighted average closing stock price ("VWAP").¹

Progenics is an oncology company focused on the development and commercialization of innovative targeted medicines and artificial intelligence to find, fight and follow cancer. Progenics takes a leading role in developing diagnostics that help guide physicians and therapeutics that treat patients.

The company's oncology-focused portfolio currently includes three FDA approved products as well as a rich product pipeline. AZEDRA®, approved in July 2018, is the first and only FDA approved product used to treat adult and pediatric patients 12 years and older for the ultra-orphan indications of pheochromocytoma and paraganglioma. Progenics' other approved products are oral and subcutaneous formulations of RELISTOR®, which are licensed to Bausch Health Companies Inc.

The combination of Lantheus and Progenics forms an innovative company with a diversified diagnostic and therapeutics portfolio. The transaction leverages Lantheus' long-standing expertise in complex manufacturing, supply chain and commercial excellence, with Progenics' three leading FDA approved products, clinical pipeline and development capabilities. Anchored by Lantheus' leading microbubble franchise, the resulting company's robust portfolio includes additional radiopharmaceutical products for precision diagnostics and therapeutics in the field of oncology as well as a related artificial intelligence platform with a 510(k) approved application in oncology. The two companies had pro forma combined revenue of \$370.1 million for the 12 months ended June 30, 2019.

"A long-term pioneer in medical diagnostics, Lantheus remains an industry leader in radiopharmaceuticals as well as the world-wide leader of ultrasound contrast agents. With this combination, we broaden our reach in emerging uses of radioisotopes for precision diagnostics and the exciting and expanding field of radiopharmaceuticals in oncology treatment," said Mary Anne Heino, President and Chief Executive Officer of Lantheus. "Lantheus will be a leader in radiopharmaceutical innovation, providing medical professionals with essential tools and therapies to diagnose and treat neuroendocrine tumors and prostate cancer patients. Our complementary strengths, radiopharmaceutical manufacturing and supply chain expertise, and focus on commercial execution will deliver sustainable and diversified revenue streams and increase our gross margin potential. We have assessed the strategic fit with Progenics for a number of years and I am pleased that we are finally able to make this combination come to fruition; I believe that the combined company will be well positioned for long-term value creation for all of our stockholders."

"Today marks the beginning of an exciting new chapter for Progenics. This combination unlocks additional value for stakeholders and stockholders alike through Lantheus' enhanced resources and R&D capabilities, proven commercial expertise and complementary portfolio of products. The transaction also creates value for Progenics stockholders through a significant premium and the opportunity to participate in the future growth of Lantheus," said Mark Baker, Chief Executive Officer of Progenics. "Lantheus shares our confidence in the potential of our promising pipeline, and we believe that Lantheus will provide additional commercialization expertise and resources to further advance AZEDRA's® launch and deliver substantial revenue growth. This compelling opportunity would not have been possible without the hard work and dedication of our talented employees. We have gotten to know Lantheus' Board and management team extremely well as we have discussed this combination over the past nine months and we look forward to working together to continue developing innovative products to target diseases and improve treatment for patients around the world."

Upon completion of the acquisition, which is intended to be tax-free to Progenics' stockholders for U.S. federal income tax purposes, the combined company will continue to be headquartered in North Billerica, Massachusetts and will trade on the NASDAQ under the ticker symbol: LNTN.

The combined company will be led by Lantheus Chief Executive Officer Mary Anne Heino, who brings 30 years of diverse life sciences industry experience with deep pharmaceutical and operational expertise, including commercializations across complex market channels that will help maximize the success of Progenics' development pipeline and commercial assets. Ms. Heino will be supported by Chief Financial Officer Robert J. Marshall Jr., CFA, who brings over three decades of finance experience, including in healthcare M&A, capital markets, investor relations and corporate financial planning and analysis, and Chief Operations Officer John Bolla, who has over 22 years of diverse supply chain, global operations and manufacturing experience from pilot to full-scale manufacturing of complex pharmaceutical products. Following the closing, Bradley Campbell, currently a member of

Progenics' Board of Directors, will be added as a member of the Board of Directors of Lantheus Holdings.

Compelling Strategic and Financial Rationale

- **Robust portfolio of precision diagnostic and therapeutic products:** With complementary strengths and products, the resulting company will serve patients and healthcare professionals across the continuum of critical diagnosis and care. Progenics enhances Lantheus' R&D platform, combining to form an innovative development portfolio of precision diagnostics and oncology therapeutics.
- **Sustainable and diversified revenue growth:** This transaction bolsters and diversifies Lantheus' revenue growth, which is anchored by DEFINITY's® continued strong performance and the expansion of its microbubble franchise. The combined company will focus on advancing the successful commercialization of AZEDRA® to drive revenue growth and on maximizing the value of its development pipeline, which we believe has significant market potential. Supported by Lantheus' proven manufacturing, supply chain and clinical development expertise in the field of radiopharmaceuticals, the combination is expected to drive enhanced revenue growth over the long term.
- **Attractive returns and enhanced cash flow generation potential:** Through enhanced revenue growth and significant realizable cost savings opportunities through the elimination of redundant costs and process and scale efficiencies, Lantheus is expected to improve its gross margin profile into the future. The company expects to generate approximately \$15 to \$20 million in run-rate cost savings by 2022. These savings are related primarily to public company costs and G&A expenses. With improved top line growth, operational execution and synergy opportunities, the transaction is expected to enhance the company's cash flow generation and be accretive to adjusted and reported EPS by 2022 and 2023, respectively.
- **Experienced executive management team:** The combined company will be led by a management team with deep experience in the development, manufacturing and commercialization of precision diagnostics and radiopharmaceuticals, and will continue to deploy a team of highly specialized field personnel. The Lantheus Board of Directors is committed to overseeing and incentivizing management to ensure alignment with stockholders' interests.

Additional Transaction Details

The transaction is expected to close in the first quarter of 2020, subject to approval by Lantheus and Progenics stockholders, regulatory approvals, and customary closing conditions.

Advisors

SVB Leerink LLC is acting as financial advisor and White & Case LLP is acting as legal counsel to Lantheus. Jefferies LLC is acting as financial advisor to Progenics and O'Melveny & Myers LLP is acting as its legal counsel.

Conference Call and Webcast Details

Lantheus and Progenics will hold a conference call on Wednesday, October 2, at 8:00 Eastern Time. To access the live conference via telephone, please dial 1 (866) 498-8390 (U.S. callers) or 1 (678) 509-7599 (international callers) and provide passcode 5441618. A live audio webcast of the call also will be available at <https://lantheusprogenics.transactionannouncement.com/>, and replay of the audio webcast will be available approximately two hours after completion of the call and will be archived for 30 days.

The conference call may include forward-looking statements. See the cautionary information about forward-looking statements in the safe-harbor section of this press release.

About Lantheus Holdings, Inc. and Lantheus Medical Imaging, Inc.

Lantheus Holdings, Inc. is the parent company of LMI, a global leader in the development, manufacture and commercialization of innovative diagnostic imaging agents and products. LMI provides a broad portfolio of products, including the echocardiography contrast agent DEFINITY® Vial for (Perflutren Lipid Microsphere) Injectable Suspension and TechneLite® (Technetium Tc99m Generator), a technetium-based generator that provides the essential medical isotope used in nuclear medicine procedures. The Company is headquartered in North Billerica, Massachusetts with offices in Puerto Rico and Canada. For more information, visit www.lantheus.com.

About Progenics

Progenics is an oncology company focused on the development and commercialization of innovative targeted medicines and artificial intelligence to find, fight and follow cancer, including: therapeutic agents designed to treat cancer (AZEDRA®, 1095, and PSMA TTC); prostate-specific membrane antigen ("PSMA") targeted imaging agents for prostate cancer (PyL™ and 1404); and imaging analysis technology (aBSI and PSMA AI). Progenics has three commercial products, AZEDRA, for the treatment of patients with unresectable, locally advanced or metastatic pheochromocytoma or paraganglioma (rare neuroendocrine tumors of neural crest origin) who require systemic anticancer therapy; and oral and subcutaneous formulations of RELISTOR® (methylnaltrexone bromide) for the treatment of opioid-induced constipation, which is partnered with Bausch Health Companies Inc.

Important Information For Investors And Stockholders

This document does not constitute an offer to sell or the solicitation of an offer to buy any securities or a solicitation of any vote or approval in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to appropriate registration or qualification under the securities laws of such jurisdiction. No offering of securities shall be made except by means of a prospectus meeting the requirements of Section 10 of the U.S. Securities Act of 1933, as amended.

In connection with the proposed transaction, Lantheus Holdings intends to file with the Securities and Exchange Commission ("SEC") a registration statement on Form S-4 that will include a joint proxy statement of Lantheus Holdings and Progenics that also constitutes a prospectus of Lantheus Holdings. Each of Lantheus Holdings and Progenics also plan to file other relevant documents with the SEC regarding the proposed transaction. Any definitive joint proxy statement/prospectus (if and when available) will be mailed to stockholders of Lantheus Holdings and Progenics. INVESTORS AND SECURITY HOLDERS OF LANTHEUS HOLDINGS AND PROGENICS ARE STRONGLY ENCOURAGED TO READ THE JOINT PROXY

STATEMENT/PROSPECTUS AND OTHER DOCUMENTS THAT WILL BE FILED WITH THE SEC CAREFULLY AND IN THEIR ENTIRETY WHEN THEY BECOME AVAILABLE BECAUSE THEY WILL CONTAIN IMPORTANT INFORMATION. Investors and security holders will be able to obtain free copies of the registration statement and the joint proxy statement/prospectus (if and when available) and other documents filed with the SEC by Lantheus Holdings or Progenics through the website maintained by the SEC at <https://www.sec.gov>.

Copies of the documents filed with the SEC by Lantheus Holdings will also be available free of charge on Lantheus Holdings' website at <https://www.lantheus.com/> or by contacting Lantheus Holdings' Investor Relations Department by email at ir@lantheus.com or by phone at (978) 671-8001. Copies of the documents filed with the SEC by Progenics will also be available free of charge on Progenics' internet website at <https://www.progenics.com/> or by contacting Progenics' Investor Relations Department by email at mdowns@progenics.com or by phone at (646) 975-2533.

Certain Information Regarding Participants

Lantheus Holdings, Progenics, and their respective directors and executive officers may be considered participants in the solicitation of proxies in connection with the proposed transaction. Information about the directors and executive officers of Lantheus Holdings is set forth in its Annual Report on Form 10-K for the year ended December 31, 2018, which was filed with the SEC on February 20, 2019, its definitive proxy statement for its 2019 annual meeting of stockholders, which was filed with the SEC on March 15, 2019, and its Current Report on Form 8-K, which was filed with the SEC on March 25, 2019. Other information regarding the participants of Lantheus Holdings in the proxy solicitation and a description of their direct and indirect interests, by security holdings or otherwise, will be contained in the joint proxy statement/prospectus and other relevant materials to be filed with the SEC regarding the proposed transaction when they become available.

Information about the directors and executive officers of Progenics is set forth in its Annual Report on Form 10-K for the year ended December 31, 2018, which was filed with the SEC on March 15, 2019 and amended on April 30, 2019, and its definitive proxy statement for its 2019 annual meeting of stockholders, which was filed with the SEC on May 30, 2019. Other information regarding the participants of Progenics in the proxy solicitations and a description of their direct and indirect interests, by security holdings or otherwise, will be contained in the joint proxy statement/prospectus and other relevant materials to be filed with the SEC regarding the proposed transaction when they become available. You may obtain these documents (when they become available) free of charge through the website maintained by the SEC at <https://www.sec.gov> and from Investor Relations at Lantheus Holdings or Progenics as described above.

Cautionary Statement Regarding Forward-Looking Statements

This document contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 that are subject to risks and uncertainties and are made pursuant to the safe harbor provisions of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Such statements are based upon current plans, estimates and expectations that are subject to various risks and uncertainties. The inclusion of forward-looking statements should not be regarded as a representation that such plans, estimates and expectations will be achieved. Words such as "anticipate," "expect," "project," "intend," "believe," "may," "will," "should," "plan," "could," "target," "contemplate," "estimate," "predict," "potential," "opportunity," "creates" and words and terms of similar substance used in connection with any discussion of future plans, actions or events identify forward-looking statements. All statements, other than historical facts, including the expected timing of the closing of the merger; the ability of the parties to complete the merger considering the various closing conditions; the expected benefits of the merger, such as efficiencies, cost savings, synergies, revenue growth, creating shareholder value, growth potential, market profile, enhanced competitive position, and financial strength and flexibility; the competitive ability and position of the combined company; and any assumptions underlying any of the foregoing, are forward-looking statements. Important factors that could cause actual results to differ materially from Lantheus Holdings' and Progenics' plans, estimates or expectations could include, but are not limited to: (i) Lantheus Holdings or Progenics may be unable to obtain stockholder approval as required for the merger; (ii) conditions to the closing of the merger may not be satisfied; (iii) the merger may involve unexpected costs, liabilities or delays; (iv) the effect of the announcement of the merger on the ability of Lantheus Holdings or Progenics to retain and hire key personnel and maintain relationships with customers, suppliers and others with whom Lantheus Holdings or Progenics does business, or on Lantheus Holdings' or Progenics' operating results and business generally; (v) Lantheus Holdings' or Progenics' respective businesses may suffer as a result of uncertainty surrounding the merger and disruption of management's attention due to the merger; (vi) the outcome of any legal proceedings related to the merger; (vii) Lantheus Holdings or Progenics may be adversely affected by other economic, business, and/or competitive factors; (viii) the occurrence of any event, change or other circumstances that could give rise to the termination of the merger agreement; (ix) risks that the merger disrupts current plans and operations and the potential difficulties in employee retention as a result of the merger; (x) the risk that Lantheus Holdings or Progenics may be unable to obtain governmental and regulatory approvals required for the transaction, or that required governmental and regulatory approvals may delay the transaction or result in the imposition of conditions that could reduce the anticipated benefits from the proposed transaction or cause the parties to abandon the proposed transaction; (xi) risks that the anticipated benefits of the merger or other commercial opportunities may otherwise not be fully realized or may take longer to realize than expected; (xii) the impact of legislative, regulatory, competitive and technological changes; (xiii) expectations for future clinical trials, the timing and potential outcomes of clinical studies and interactions with regulatory authorities; and (xiv) other risks to the consummation of the merger, including the risk that the merger will not be consummated within the expected time period or at all. Additional factors that may affect the future results of Lantheus Holdings and Progenics are set forth in their respective filings with the SEC, including each of Lantheus Holdings' and Progenics' most recently filed Annual Report on Form 10-K, subsequent Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and other filings with the SEC, which are available on the SEC's website at www.sec.gov. Readers are urged to consider these factors carefully in evaluating these forward-looking statements, and not to place undue reliance on any forward-looking statements. Readers should also carefully review the risk factors described in other documents that Lantheus Holdings and Progenics file from time to time with the SEC. The forward-looking statements in this document speak only as of the date of these materials. Except as required by law, Lantheus Holdings and Progenics assume no obligation to update or revise these forward-looking statements for any reason, even if new information becomes available in the future.

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¹ Based on Progenics' Volume Weighted Average Closing Stock Price for 30-day period ended October 1, 2019 and Lantheus' closing price on October 1, 2019.