Lantheus Medical Imaging Presents Phase I Study Results of Novel Pet Myocardial Perfusion Imaging Tracer aAt ACC

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Data Demonstrate BMS747158's Safety and Tolerability in Patients at Rest and Under Stress

N.BILLERICA, Mass. (March 31, 2009) – Lantheus Medical Imaging, Inc., a worldwide leader in diagnostic imaging, today announced Phase I data on the safety and tolerability of BMS747158, its novel fluorine 18-labeled Positron Emission Tomography (PET) tracer for myocardial perfusion imaging in subjects under rest and stress conditions. The poster presentation (abstract number 1054-263) was made by the Principal Investigator, Dr. Jamshid Maddahi, at the 58th Annual Scientific Session of the American College of Cardiology in Orlando, Florida. The data indicate that BMS747158 is well-tolerated and demonstrates radiation dosimetry that is comparable to or less than that of other PET agents. The data also showed high myocardial uptake at rest that significantly increases with pharmacologically induced stress and a ratio of myocardial to background radioactivity that is favorable and improved over time. These findings suggest that BMS747158 has strong potential as a myocardial perfusion PET imaging agent for patients both at rest and under stress.

"These data raise hope that BMS747158 could help address the need for a radiopharmaceutical that provides greater accuracy and broadens the applicability of PET technology for myocardial perfusion imaging," said Jamshid Maddahi, M.D., F.A.C.C., professor of molecular and medical pharmacology (Nuclear Medicine) and medicine (Cardiology) at the David Geffen School of Medicine at UCLA and principal investigator of the study. "These studies found that the mean effective dose of BMS747158 was very similar to that of a commonly used F-18 labeled agent, FDG, but the radiation level absorbed by the organ receiving the highest dose was significantly lower with BMS 747158."

The Phase I clinical trials were designed to evaluate human safety, dosimetry (the dose of radiation absorbed by the body), biodistribution and myocardial imaging characteristics of BMS747158 in healthy subjects under rest and stress conditions. Thirteen subjects were injected with 222 MBq intravenously at rest in one study. In a second Phase I study, twelve additional subjects received 93 MBq BMS747158 intravenously at rest and 127 MBq under stress (either induced pharmacologically using adenosine infusion or using exercise on a treadmill) the following day. Imaging of the heart using PET technology was conducted for 10 minutes, followed by sequential cardiac and whole body imaging. Extensive safety monitoring was conducted with physical exams, clinical lab testing, ECG, EEG, blood chemistry and vital signs assessments before and after the injections.

Preliminary results of these Phase I studies show that no adverse events attributed to BMS747158 were reported. Preliminary results also show that the mean effective dose (ED, a relative measure of the long-term risk due to radiation exposure) was estimated to be 0.019 mSv/MBq at rest and pharmacological stress and 0.015 mSv/MBq under exercise stress. While the ED of BMS747158 was very similar to the ED for FDG, a commonly used F-18 labeled PET imaging agent, the dose to the organ receiving the highest dose was lower by a factor of 2.5 at rest and 1.8 under stress. Preliminary biodistribution results showed high myocardial uptake at rest that increased significantly with adenosine-induced stress. The ratio of myocardial to liver radioactivity reached a maximum of approximately 1, 2 and 5 at 20 minutes following injection for rest, pharmacological stress and exercise stress respectively and was stable (for exercise stress) or improved markedly thereafter.

"These studies found that BMS747158 has high myocardial uptake among patients at rest and under stress, which points to its potential in PET myocardial perfusion PET imaging. Combined with the findings that BMS747158 is well-tolerated in the studied population, these are very encouraging data that we will aim to replicate in additional broader studies," said D. Scott Edwards, Ph.D., vice president, Global R&D, *Lantheus* Medical Imaging, Inc. "Lantheus is committed to developing innovative imaging agents that provide physicians with improved options for diagnosing and managing their patients."

About BMS747158

BMS747158 is a fluorine 18-labeled agent that binds to the mitochondrial complex 1 (MC-1) inhibitor and was designed to be a novel myocardial perfusion PET imaging agent. The compound is currently in phase 2 development.

Preclinical studies have demonstrated the unique potential of BMS747158 to serve as a new class of PET agent for myocardial perfusion imaging. The agent demonstrates high, rapid and sustained cardiac uptake which is proportional to myocardial perfusion over a wide range of blood flow rates. The agent also exhibits high target to non-target uptake ratios, perfusion defect recognition,

and very high image quality in multiple species.

Findings of preclinical studies describing this novel agent's promise for use in combination with PET imaging were published in *The Journal of Nuclear Cardiology* (JNC)and *The Journal of Nuclear Medicine* (JNM).

About Positron Emission Tomography (PET)

A positron emission tomography (PET) scan is an imaging test that can detect changes within certain tissues or organs early, often before disease progresses.[1] In particular, PET images provide information about the function and metabolism of the body's organs, unlike computed tomography (CT) or magnetic resonance imaging (MRI), which primarily show the body's anatomy and structure.[2] PET scanning is useful in evaluating a variety of conditions — including neurological disease, heart disease, infections, certain inflammatory diseases and cancer.[1] For myocardial perfusion imaging, single photon emission tomography (SPECT) remains the dominant modality at this time; however, there is increasing interest in the use of PET for this purpose.[3] In contrast to SPECT, PET imaging technology offers higher spatial resolution and accurate, well-validated attenuation correction.[3]

About Myocardial Perfusion Imaging (MPI)

Myocardial perfusion imaging (MPI) is a non-invasive test that utilizes a small amount of radioactive material (radiopharmaceutical) injected into the body to depict the distribution of blood flow to the heart.[4] MPI is used to identify areas of reduced blood flow to the heart muscle[4] to determine whether or not that blood flow is adequate. Following the administration of the radiopharmaceutical under resting conditions, the patient's heart is scanned, then the heart is "stressed" by exercise or pharmacological agents, followed by another injection of the radiopharmaceutical and more scans taken.[5] By examining and comparing the scans taken at rest and under stress, a physician can predict whether the patient may have significant coronary artery disease.[4<]

CAD is the leading cause of death in the U.S. for both men and women.[5] Each year, more than half a million Americans die from CAD.[6] Of the estimated 16 million imaging and therapeutic procedures performed each year in the United States, 40-50 percent are cardiac-related.[7]

About Lantheus Medical Imaging, Inc.

Lantheus Medical Imaging, Inc., a worldwide leader in diagnostic medicine for the past 50 years, is committed to advancing the field of diagnostic imaging. The company's proven success in discovering, developing and marketing innovative medical imaging agents provides an unparalleled platform from which to bring forward breakthrough new tools for the diagnosis and management of disease. The company is home to leading diagnostic imaging brands, including Cardiolite® (Kit for the Preparation of Technetium Tc99m Sestamibi for Injection), DEFINITY® Vial For (Perflutren Lipid Microsphere) Injectable Suspension, and TechneLite® (Technetium Tc99m Generator) and has nearly 700 employees worldwide with headquarters in North Billerica, Massachusetts, and offices in Puerto Rico, Canada, and Australia. For more information, visitwww.lantheus.com.

[1] Mayo Clinic. Positron emission tomography (PET) scan: Detecting conditions early. http://www.mayoclinic.com/health/pet-scan/CA00052

[2] National Institutes of Health. NIH Clinical Center. Positron Emission Tomography Department Overview. http://clinicalcenter.nih.gov/pet/

[3] Glover, David K and Gropler, Robert J. Editorial: Journey to find the ideal PET flow tracer for clinical Use: Are we there yet? J Nucl Cardiology 2007;14:765-8

[4] Society of Nuclear Medicine. Procedure Guidelines for Myocardial Perfusion Imaging. Version 3.0 June 2002 http://interactive.snm.org/docs/pg_ch02_0403.pdf

[5] Wikipedia. Definition of myocardial perfusion imaging. http://en.wikipedia.org/wiki/SPECT

[6] National Institutes of Health, National Heart, Lung, and Blood Institute. Coronary Artery Disease: Who Is At Risk. http://www.nhlbi.nih.gov/health/dci/Diseases/Cad/CAD_WhoIsAtRisk.html

[7] Society of Nuclear Medicine. What is Nuclear Medicine? (Educational Tool) http://interactive.snm.org/docs/whatisnucmed.pdf, pg 8