LEU TechneLite® Generator Update

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DOE Mo-99 Topical Meeting
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60+ Years of Innovation, Providing Leading/Best-in-Class Imaging Agents and Products

Lantheus at-a-Glance

- Global leader in diagnostic medical imaging
- Develop, manufacture and commercialize essential diagnostic imaging agents and products that help healthcare professionals identify disease and improve patient treatment and care
- Diversified portfolio serving Echocardiography and Nuclear Medicine specialties
  - Lead products include DEFINITY®, TechneLite® and Xenon
  - Dynamic pipeline contains promising next-generation imaging agents
- Worldwide distribution partnerships covering EU, APAC, and LatAm regions
- Operations in U.S., Puerto Rico and Canada with headquarters in North Billerica, MA
- 2017 worldwide revenue: $331.4 million
- ~480 employees including the largest dedicated echocardiography sales force based in North America
- IPO in June 2015 (Ticker: LNTH)

Schematic for illustrative purposes only. Please see Indications and full Prescribing Information on product specific pages of Lantheus.com.
TechneLite® Generator History

- $^{99m}$Tc- generator developed in Brookhaven National Labs in 1958 and commercialized in the mid 1960s
- $^{99m}$Tc generator manufactured by LMI and predecessors since 1967
  - New England Nuclear (NEN) introduced Tc-99m Generator based on Mo-99 produced by neutron capture ($^{98}$Mo(n,γ)$^{99}$Mo)
  - NDA for generator based on Mo-99 from fission of U-235 ($^{235}$U(n,f)$^{99}$Mo) approved in 1975
- TechneLite®, terminally sterilized generator introduced in 1993
- TechneLite®, CMS compliant LEU sourced Mo-99 introduced in 2013
Lantheus Mo-99 Supply Chain
Reactors & Processors

KEY:
Reactors
Processors

SHINE (future)
HFR (Netherlands)
BR2 (Belgium)
IRE (Belgium)
LVR-15 (Czech)
SAFARI (South Africa)
NTP (South Africa)
OPAL (Australia)
ANSTO Health (Australia)
Support for Non-HEU U.S. Domestic Supply

• Lantheus has supported U.S. Government efforts to establish domestic, non-HEU Mo-99 production
  – Lantheus testimony, House Energy and Commerce Committee, 2009
  – Supported American Medical Isotope Production Act (AMIPA); passed in 2012, signed into law Jan. 1, 2013
  – CORAR engagement with Congress and DOE
  – Lantheus consistent participation in informal coalitions to promote additional U.S. cooperative funding and Q9969 $10 add-on payment

• Lantheus has supported U.S. Government efforts to convert medical isotope production to LEU
  – First generator manufacturer to qualify LEU-produced Mo-99 for use in TechneLite® generators (South Africa 2010; Australia 2011)
  – First to produce all LEU Mo-99 generator in January 2013 which met Center for Medicare Services criteria for $10 add-on payment
Upcoming LEU Mo-99 Supply Developments

• ANM hot commissioning underway
  – Validation runs planned for October
  – Commercial supply in 2Q2019

• IRE LEU conversion progressing
  – Validation runs expected in early 2019
  – Commercial supply in 2H2019
Future – LEU Supply from SHINE Medical

- Lantheus and SHINE concluded supply agreement in Oct. 2014
- SHINE evaluated and supported by Department of Energy Cooperative Agreement program
- SHINE High Specific Activity Mo-99 will be compatible with Lantheus TechneLite® Tc-99m generator with no design changes
- Use of several accelerators and production lines means continuous production
- Alternative technology strengthens Lantheus Mo-99 supply diversification
- Lantheus also engages in regular discussions with other domestic projects, monitors progress
Xe-133

• Xe-133 used in U.S. for pulmonary imaging
• Lantheus longest continuous supplier of Xe-133 gas for pharmaceutical use
• Lantheus agreement with IRE in Jan. 2015 for supply of Xe-133 gas
• First commercial shipment June 30, 2016; IRE completely replaced NRU beginning in November 2016
• Additional diversification options being pursued
• LEU-based Xe-133 development advancing
Conclusions

• Lantheus has taken a leadership role in use of LEU Mo-99 in its TechneLite® generator supply chain

• LEU TechneLite® generators poised for significant increase in 2019

• LEU key to enhanced global nuclear security and creates foundation for more secure, reliable future supply of Mo-99

• Anticipate full conversion to LEU in 2019

• Lantheus and IRE have demonstrated reliable Xe-133 supply

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Thank you

Questions?