

## LICENSING OF MEDICAL ISOTOPE PRODUCTION FACILITY—PANEL

**Session Organizer: Girija S. Shukla (NRC)**

### **Panel Discussion**

Molybdenum-99 (Moly-99) is an important isotope that decays to technetium-99, which is administered for diagnosing a multitude of diseases, including heart disease and cancer. The world-wide supply of Moly-99 is very limited. Only 5 research reactors in the world produce Moly-99 and none is in the US. The Energy Policy Act of 2005 called for a reliable supply of medical isotopes and the National Nuclear Security Administration pledged financial support to establish an adequate domestic supply of Moly-99. SHINE Medical Technologies, Inc. was created in 2010 to pursue the production of medical isotopes. In 2013, SHINE submitted applications to the Nuclear Regulatory Commission (NRC) to construct and operate a unique medical isotope production facility. The NRC issued a construction permit to SHINE in February 2016. Additionally, another company Northwest Medical Isotopes (NWMI) has proposed to produce molybdenum-99, and in 2015, NWMI submitted to the NRC a construction permit application for a medical radioisotope production facility. This is the second application received by the NRC to construct a medical isotope production facility. Licensing of a medical isotope production facility present unique challenges to both the industry and the NRC.

**Panelists:** *Alexander Adams (NRC)*  
*Jeff Chamberlin (NNSA)*  
*Carolyn Haass (NWMI)*  
*Leslie Foyto (Univ of Missouri-Columbia)*  
*Gregory Piefer (SHINE Medical Technologies, Inc.)*