

**International Conference on Occupational Radiation Protection:  
Strengthening Radiation Protection of Workers –Twenty Years of Progress  
and the Way Forward**

Contribution ID: 79

Type: **Poster**

## **Assessment of the nuclear medicine personnel occupational exposure to radioiodine in Thailand**

In Thailand, the diagnostic and treatment of hypothyroidism and thyroid cancer using radiopharmaceutical with iodine-131 (I-131) is widely performed. The utilization of large quantities of I-131 in nuclear medicine has been recorded and regulated by the Office of Atoms for Peace, Thailand. Although workplace safety regulations have been established, a review of reported data of routine handling of the radionuclide could result in a significant risk of occupational exposure of the workers chronically intake and intact to unsealed radioiodine. To ensure safety uses of the radiopharmaceutical to be aligned with national regulation and international standards, the radiation biology group under the regulatory support division of the Office of Atoms for Peace performed dose assessment for nuclear medicine personnel and radiation workers in Thailand. By measuring and evaluating the radiation dose of nuclear medicine practitioners using internal dosimetry tools including direct thyroid measurement and aerosol sample analysis, thus, ensuring the safety of I-131 exposure enters the body of nuclear medicine operators. Additionally, this raises awareness of the relevant stakeholders to understand the importance of routine monitoring iodine-131 content and ultimately use it to improve work or analyse the cause of radiation exposure.

To determine the safety of using iodine-131 Nuclear Medicine Agency The worker is required to measure and assess the radiation dose from within the body according to the criteria specified in the IAEA Safety Standards Series No.RS-G-1.2 and the Nuclear Energy for Peace Act, No.2, B.E. 2016. This work will present methods and results from 4 year-monitoring and dose assessment for the nuclear medicine personnel and radiation workers in Thailand and how these results were communicated to relevant stakeholders and applied in the workplace to improve occupational radiation protection safety.

### **Speakers email**

issariya.c@oap.go.th

### **Speakers affiliation**

Office of Atoms for Peace

### **Name of Member State/Organization**

Thailand

**Author:** Dr CHAIRAM, Issariya (Office of Atoms for Peace)

**Co-authors:** Ms PEEKHUNTOD, Darunee (Office of Atoms for Peace); Ms BANGVIRUNRAK, Jittima (Office of Atoms for Peace); Mr NUKULTHAM, Amnaj (Office of Atoms for Peace); Mr PUKKHAW, Teerawut (Office of Atoms for Peace)

**Presenter:** Dr CHAIRAM, Issariya (Office of Atoms for Peace)

**Session Classification:** Session 2. Monitoring and dose assessment of occupational radiation exposures

**Track Classification:** 3. Monitoring and dose assessment of occupational radiation exposures