Partnerships for Innovation

ORAU

OAK RIDGE ASSOCIATED UNIVERSITIES

Elevating Global Understanding and Medical Response to Radiation Emergencies

In the event of a radiological or nuclear incident, first responders as well as hospital and emergency management personnel need the knowledge and ability to quickly manage and support the medical aspects of human exposure to radiation. Through practical, hands-on education programs as well as a dedicated 24/7 deployable team of physicians, nurses, and health physicists, ORAU has increased the global knowledge base and education necessary to provide appropriate and qualified medical management of radiological incidents anywhere in the world.

Capabilities in Radiation Emergency Medicine, Response, and Education

- Manage and operate the Radiation Emergency Assistance Center/Training Site (REAC/TS) as a deployable asset of DOE/NNSA
- Manage and operate the Cytogenetic Biodosimetry Laboratory (CBL) at REAC/TS, one of only two federally funded labs of its kind in the country
- Provide 24/7 response to national and international incidents involving ionizing radiation
- Serve as one of only two World Health Organization (WHO) Collaborating Centers in the U.S.
- Serve as one of only 13 Collaborating Centers worldwide in WHO's Radiation Emergency Medical Preparedness and Assistance Network
- Provide hands-on continuing medical education courses onsite at REAC/TS or at various locations worldwide, including instruction on pre-hospital radiation emergency preparedness, radiation emergency medicine, and health physics in radiation emergencies, among others (http://www.orau.org/radiation-emergency-medicine/capabilities/continuing-medical-education/in-house-courses.aspx)
- Accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians; other courses accredited by the American College of Emergency Physicians and the American Academy of Health Physics

FY08 by the Numbers

- 46 courses conducted
  - 17 resident programs in Oak Ridge, Tennessee
  - 29 outreach programs
- 1,000+ participants from 37 states and 16 countries

Customers and Partners

- U.S. Department of Energy (DOE)
  - National Nuclear Security Administration (NNSA)
  - Office of Health, Safety and Security (HSS)
- U.S. Department of Health and Human Services (HHS)
  - Centers for Disease Control and Prevention (CDC)
  - National Center for Environmental Health (NCEH)
- World Health Organization (WHO)
- National Aeronautics and Space Administration (NASA)
- International Atomic Energy Agency (IAEA)

ORISE

OAK RIDGE INSTITUTE FOR SCIENCE AND EDUCATION

ORISE is managed by ORAU for the U.S. Department of Energy

Improving Knowledge of and Response to Radiation Emergencies

Nuclear accidents and radiological attacks demand an immediate, expert medical response. Yet, while nuclear technology extends to the far reaches of the globe, few communities have local professionals in place with the knowledge and practical training required to quickly address the medical aspects of human exposure to radiation. To help meet this pressing national and international need, ORAU is contributing expertise and resources—through REAC/TS—to a global network of personnel and laboratories equipped to provide appropriate and qualified medical management of radiological incidents.

Providing 24/7 Response to Radiation Emergencies Around the Globe

When a radiological or nuclear incident occurs anywhere in the world, specialized REAC/TS response teams are ready to respond 24/7. Each interdisciplinary team includes a physician, nurse/paramedic, and health physicist who are cross-trained in all aspects of radiation.

2008 Key Accomplishments

- Presented a three-day, educational outreach program for nearly 100 personnel at the Mexican Navy Hospital in Vera Cruz, Mexico, preparing them for an upcoming Mexican government nuclear power plant accident response exercise.
- Collaborated with the American College of Medical Toxicology to offer the first-ever, awareness-level course on emergency medical response to exposures from toxic chemical and radiological materials.
- Managed the Cytogenetic Biodosimetry Lab (CBL), one of only two federally funded labs that applies cytogenetic biodosimetry as a proven technique to calculate the radiation dose of individuals exposed to ionizing radiation. The CBL is working to establish an international Web-based consortium of cytogenetic laboratories for rapid triage and emergency radiation dose assessment.

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www.orau.org/radiation-emergency-medicine

The map depicts those countries in which REAC/TS has provided training, radiation incident response, or both.