



45th Middle Atlantic Regional Meeting

Senior Chemists Breakfast

Coordinator: Lorena Tribe (lut1@psu.edu)

Talk Title: "Responsible Science and the Role of the Chemist: Toward a Safer, More Secure World"

Presenter: Dr. Kabrena E. Rodda, Pacific Northwest National Laboratory



Abstract: In today's global environment, it is critically important for students around the world to understand how decisions made by individuals and governments impact safety and security for all people. For example, scientists in a dictatorship may be forced to use their skills to create an explosive device, despite desiring to do otherwise. However, a single person's decisions can also have a positive influence on the surrounding community. Chemists who have been taught to behave responsibly are less likely to be influenced by a drive for profit at the expense of scientific ethics, are less willing to contribute to proliferation and terrorism, and are more aware of the potential dual-use nature of their work. Furthermore, by using their specialized knowledge to help others, they actively participate in making the world a better place.

Responsible science can be defined as a set of shared attitudes, values, goals and practices characterizing both individual and organizational commitment to honest, verifiable, safe, ethical and peaceful scientific research for the common good. Stated more generally, the responsible conduct of science is simply good citizenship applied to the practice of science. Responsible scientists and scientific organizations adhere to honest and verifiable methods for proposing, performing, evaluating and reporting research activities. They work within a culture and organizational framework that defines, detects and discourages misconduct in science and questionable research practices by its members. A fully functioning responsible science framework includes adoption of internationally recognized practices for chemical safety and security as well as compliance with national arms control and nonproliferation commitments.

An awareness of responsible science is the first step in empowering scientists to make ethical, safe, honest and responsible choices even when they are under pressure or when a course of action appears ambiguous. Conversely, the absence of awareness of responsible science



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increases the likelihood of poor decisions by scientists and results in behaviors that adversely impact a country or region's stability.

Since roughly 2007, incremental progress has been made in 17 countries to promote responsible science to improve chemical safety and security. In this talk, recent efforts led by the American Chemical Society in partnership with to facilitate the development and adoption of the Global Chemists' Code of Ethics will be described. Best practices for teaching ethics across the curriculum to improve the practice of science and nurture a sense of moral responsibility in emerging scientists will be explored. Working together, chemists can build a culture of responsibility that is more resilient and less likely to be negatively effected by a single person's or government's unethical or irresponsible choices.

Time: Monday, June 5 from 7:30 am - 9 am

Room: Tower 2