



## Professor Irma Makalinao, MD, MA, FPPS, FPSCOT

Dr. Makalinao has been a faculty of the University of the Philippines College of Medicine since 1994. She has been instrumental in institutionalizing the first and only Toxicology Fellowship Program in the Philippines in 1996 at the University of the Philippines in Manila from 1997 to 2005 she has served as the first Program Director of the Clinical Toxicology Fellowship based at the then National Poison Control and Information Service at the Philippine General Hospital. She was a former board member of APAMT and a founding secretary of the Philippine Society of Clinical and Occupational Toxicology in 1998.

Multi-faceted, resourceful and reliable professional with more than fifteen years of experience in the field of Chemical, Biological, Radiological and Nuclear (CBRN) Risk Management supporting the government and other relevant agencies to raise awareness, influence policy development, prevent and prepare for emergencies. She has also been an international short-term expert of the EU CBRN COE SEA Project 46. At some point in her career Dr. Makalinao has also be called to advise the OPCW on areas of engagement and the way forward.

She is currently a member of the Philippine National CBRN Team and the Technical Advisory Group of the World Health Organization (WHO) Health and Security Interface, a member of the IHR Roster of Experts for the WHO WPRO, secretary of the Asia Pacific Biosafety Association and Board of Directors for the Pacific Basin Consortium for Environment and Health among others.

## Chemical Security and Emerging Toxic Threats: The Role of the Toxicologist

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Why should the health sector be concerned about chemical security and the emerging toxic threats? Most recently, the world has witnessed unfortunate events that have shown that while chemicals will have its benefits, they can be deliberately misused to threaten or harm people, environment and societies. For example, chlorine, sarin, VX and Novichok have reportedly been used leading to deaths and environmental contamination. Likewise, there have been reports of the attempted use of toxins such as ricin and abrin. The advances in science and technology may also increase the risk posed by the deliberate release of toxic industrial chemicals.

As such we need to understand better the continuum between chemical safety and chemical security and the intersection between chemical security and biosecurity.

Poison Control Centers in the Asia Pacific should have a better understanding of their country specific chemical threats and vulnerabilities to better prepare for a CBRN incident using chemicals or toxins.

The Philippine National Action Plan on Chemical Biological, Radiological and Nuclear (NAP CBRN) Risk Mitigation is a strategic document adopted officially as the Anti-Terrorism Council Resolution 40 highlights the need for a multi-stakeholder chemical security plan and the creation of unified national list of high-risk chemicals of concern. This plan also highlights the important obligations toward Chemical Weapons Convention, UN Security Resolution 1540, the International Health Regulation and UN SDG.

This session aims to generate interest among toxicologists about their important role in prevention, mitigation and treatment of the intentional use of toxic chemicals to harm human, animal and environmental health. The Network of Poison Centers in the Asia Pacific will be important players in chemical security.