

Defence R&D Canada, Suffield Research Centre, BioThreat Defence Section: Handheld bioaerosol detection and rapid drug discovery

Defence Research and Development Canada (DRDC) is the science and technology organization of the Department of National Defence. As the national leader in defence and public security science and technology, it is our role to advise, create and establish capabilities with innovative partners to assist the Canadian Armed Forces. In this presentation, Dr. Nora Chan will provide information about DRDC and some insights to our work in defence against pathogens in the BioThreat Defence Section in Suffield, Alberta. She will present a summary of the plans and recent results of her multidisciplinary research in the development of a Canadian handheld bioaerosol detector based on electrochemistry and Toll-Like receptors; and the discovery of covalent inhibitors against SARS-CoV-2 using advance molecular docking and quantum simulations.

As an Adjunct Professor of the Chemistry Department at Queen's, she has established a collaboration with Professors She and Crudden on unique biodetection capabilities at Queen's and DRDC to facilitate technology assessment and integration with national and international partners. She is also interested in forming partnership with her Chemistry Department colleagues to co-supervise students and present some opportunities for students to work at DRDC Suffield Research Centre.