

Wednesday, May 11, 2016

LSC 3 - Life Sciences Centre

2350 Health Sciences Mall

12-1pm



## Dr. Raymond J. Andersen

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## "Sponging off Nature for New Drug Leads"

The secondary metabolites found in marine organisms represent an extremely rich source of novel chemical diversity for academic drug discovery and chemical biology programs. Among the marine invertebrates, marine sponges have historically been one of the most prolific sources of new natural products. Our group at UBC has amassed a sizable library of crude extracts from marine sponges, other marine invertebrates, and cultured marine microorganisms collected in many of the world's oceans. In collaboration with biologists, this crude extract library has been screened for activity in cell-based and pure enzyme assays designed to identify promising marine natural product lead compounds for the development of drugs. Bioassay-guided fractionation of crude extracts and extensive spectroscopic analysis has been used to identify the structures of pure natural products active in the assays. Biology-oriented chemical synthesis has been undertaken to probe the SAR for new natural product pharmacophores that we have discovered and to provide material for *in vivo* testing in animal models. Several new drug candidates for the treatment of cancer, inflammation, cystic fibrosis, and infectious diseases have emerged from this research program. Three of them have progressed to phase II clinical trials in humans and others are in preclinical evaluation/development. The lecture will present some highlights from our academic 'Drugs from the Sea' and chemical biology research.

Live Online Seminar Viewing:  
<http://tinyurl.com/cbrseminaronline>