Department of Microbiology and Immunology

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Faculty of Science

Present a seminar by

Candidate for UBC Faculty of Science CRC Tier 1 Position in Data Science

Dr. Michel Dumontier

Associate Professor of Medicine (Biomedical Informatics), Stanford University

entitled:

Semantic approaches for biomedical knowledge discovery

With its focus on investigating the basis for the sustained existence of living systems, modern biology has always been a fertile, if not challenging, domain for knowledge discovery. Despite the existence of millions of scientific articles, thousands of databases, and hundreds of ontologies, our ability to efficiently reuse our collective knowledge is hampered by incompatible formats, partial and overlapping standards, and heterogeneous data access interfaces. In this talk, I will discuss our efforts to use web standards to build and uniformly expose a rich network of Linked Data and Services, and to use these to i) test biomedical hypotheses concerning drug cardiotoxicity, ii) uncover disease pathways, and iii) identify candidate drugs for repositioning. As the amount of linked open data increases and the portfolio of semantic technologies continues to mature, researchers worldwide will be strategically poised to pursue increasingly sophisticated knowledge discovery to understand human health and disease.

Bio: Dr. Michel Dumontier is an Associate Professor of Medicine (Biomedical Informatics) at Stanford University. He obtained his PhD in Biochemistry at the University of Toronto in 2004, and subsequently joined the Department of Biology at Carleton University, in Ottawa. His research aims to develop methods to integrate, mine, and make sense of large, complex, and heterogeneous biomedical data. His research interests include (1) finding novel therapeutics for rare and complex diseases, (2) elucidating the mechanism of drug-induced side-effects, and (3) optimizing multi-drug therapies. Dr. Dumontier is the Stanford University Advisory Committee Representative for the World Wide Web Consortium, the co-Chair for the Semantic Web for Health Care and the Life Sciences Interest Group, and the Scientific Director for Bio2RDF, an open source project to build a vast network of Linked Data for the Life Sciences. Dr. Dumontier is involved in a number of international community efforts for knowledge integration, including the DataFAIRport, Force11, and the Monarch Initiative, a cross-species phenotype integration effort.

Hosted by: Dr. Michael Gold

**Monday May 11, 2015
11:00am to 12:00pm, LSC3**