جامعة الشارقة
UNIVERSITY OF SHARJAH

Office of the Vice Chancellor for Research & Graduate Studies
Research Insitue of Sciences & Engineering

Big Data Mining & Multimedia Research Group

and

Information & Network Security Research Group

Cordially Invites You to a Seminar Titled

Computational Drug Discovery: A Candle In The Dark

Speaker: Khaled Barakat, Ph.D

Dr. Barakat is the leader of a multidisciplinary world-class research team funded by a $5.4M grant to develop novel immunotherapy drugs in Canada. Dr. Barakat's research stands at the multidisciplinary interface of physics, biology and computer science.

Date: Wednesday: Feb 17th , 2016 **Time: 12:30-13:30 pm**

Venue: Ibn Elnafees hall (W8-Ground Floor)

Abstract:

Recent advances in computer software and hardware combined with the exponential growth of biological information render in silico methods essential in rationally designing new drugs and understand how cells work in health and disease. This talk will provide a brief background about the field of computational drug design. It will also provide several examples where computers were able to guide wet lab experiments to understand the mode of action of different drugs and design new ones. Among these examples, two detailed cases will be introduced. The first illustrates how computer simulations were used to understand the mode of action of hepatitis C virus (HCV) inhibitors and the second describes a new approach in cancer immunotherapy that can activate the immune system to recognize and cure cancer. Other examples will demonstrate how computer simulations can predict drug off-target interactions and reduce side effects.

Speakers Biography:

Dr. Barakat is an Assistant Professor at College of Pharmacy and Pharmaceutical Sciences, University of Alberta, Canada. He is the leader of a multidisciplinary world-class research team funded by a $5.4M grant to develop novel immunotherapy drugs targeting the immune checkpoints' proteins. He received his PhD in biophysics from the University of Alberta in 2012 followed by a postdoctoral fellowship in Professor Michael Houghton's Lab for two years. Dr. Barakat's research stands at the multidisciplinary interface of physics, biology and computer science. During his career, Dr. Barakat received numerous awards including the CIHR and AIHS postdoctoral fellowships, the prestigious UofA dissertation award, the ACRI Studentship and many distinction awards throughout his undergraduate and graduate studies. Dr. Barakat is also the editor of a number of journals. Dr. Barakat's lab received more than $6M in grant funding over the next five years from different funding agencies including the Alberta Cancer Foundation, Li Ka Shing Applied Virology Institute, Natural Sciences and Engineering Research Council (NSERC), Li Ka Shing Institute of Virology and IC-IMPACTS Centres of Excellence.