



Centre for Biosystems Science and Engineering Seminar

Immunoengineering: Vaccines and Beyond

3:00 PM, 23rd May 2016,
Seminar Hall, MRDG, Biological Sciences Building.

Siddharth Jhunjhunwala

Assistant Professor,

Center for Bio Systems Science and Engineering.

A vast majority of diseases in humans, ranging from infections to cancer and even cardiovascular conditions, involve the immune system. With increased knowledge on the roles of a variety of immune players, altering their function has emerged as a strategy to treat the aforementioned disorders. This talk will begin by giving an introduction to vaccinations, which were potentially the first passive attempts to alter the immune system. Next new approaches that use engineering principles to actively manipulate immune responses will be discussed. In this context, research performed on the development and commercialization of a micro fluidic approach to lymphocyte specific intracellular delivery (sqzbiotech®) will be presented. Finally, the use of synthetic systems to study immune cell development and potentially influence immunity outcomes will be examined.

About the speaker

Siddharth Jhunjhunwala is currently an Assistant Professor at the Centre for BioSystems Science and Engineering at the Indian Institute of Science. He completed his Bachelors of Technology from Anna University in Chennai, his PhD from the University of Pittsburgh in Pittsburgh, and went on to do a postdoctoral fellowship at the Massachusetts Institute of Technology in Cambridge. During his postdoctoral training, he was awarded the Mazumdar-Shaw International Oncology fellowship. Siddharth has published 26 peer-reviewed manuscripts, of which 9 are first-authored, in international journals.