Agriculture Seminars @ Canberra

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Date : Tuesday 9 February 2016; *note special time = 1-2pm*

Venue: CSIRO Black Mountain Laboratories, Building 1 Lecture Theatre

Speaker: Matthew W. Chang (Associate Professor in Biochemistry at the National University of Singapore (NUS), and Program Leader of NUS Synthetic Biology for Clinical and Technological Innovation (SynCTI))

Seminar: **Reprogramming biological functionalities for autonomous microbial factories and therapeutics**

Abstract: Synthetic biology aims to engineer genetically modified biological systems that perform novel functions that do not exist in nature, with reusable, standard interchangeable biological parts. The use of these standard biological parts enables the exploitation of common engineering principles such as standardization, decoupling, and abstraction for synthetic biology. With this engineering framework in place, synthetic biology has the potential to make the construction of novel biological systems a predictable, reliable, systematic process. While the development of most synthetic biological systems remains largely ad hoc, recent efforts to implement an engineering framework in synthetic biology have provided long-awaited evidences that engineering principles can facilitate the construction of novel biological systems. Synthetic biology has so far demonstrated that its framework can be applied to a wide range of areas such as energy, environment, and health care. In this talk, our recent efforts to develop synthetic microbes with programmable behaviors will be presented. In particular, an emphasis will be placed on our recent development of auto-regulatory genetic circuits for microbial chemical production and therapeutic applications. http://synbiolab.org/

About the Speaker:

Matthew Chang's research interests lie in synthetic biology of microbial systems, with particular emphasis on development of synthetic microbes that perform programmable functions for engineering applications. His work has received international recognition and is featured in leading media agencies worldwide. He has been honored with the Scientific and Technological Achievement Award from U.S. Environmental Protection Agency. He serves as an editorial board member for Biotechnology Journal and ACS Synthetic Biology, and an associate editor for Biotechnology for Biofuels and Critical Reviews in Microbiology.

CSIRO Black Mountain Site Map - Building 1

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