NANYANG TECHNOLOGICAL UNIVERSITY

School of Biological Sciences

Seminar Announcement

The application of BioLayer Interferometry technology in the study of protein interactions

Date: 01 July 2015 Wednesday

Time: 3:30pm to 4:30pm

Venue: SBS Classroom 2 (SBS-01n-22)

Host: A/Prof Valerie Lin



Speaker: Asst/Prof Samuel Gan
Antibody Product Development Group,
BII, A*STAR)



Speaker: Dr Shenglan Cao
Asia Marketing Manager – FortéBio, Pall Corporation

Abstract

An Introduction to BioLayer Interferometry and its application in protein kinetics study

The biolayer interferometry (BLI) technology pioneered by ForteBio has gained worldwide acceptance over the years in both industry and academia, due to its class-leading ease-of-use, instrument robustness, and unmatched versatility. ForteBio systems are now widely used in protein science labs, in drug discovery labs, as well as in every stage of drug discovery and manufacturing process. In this presentation, we will uncover the mystery of BLI technology and discuss the application of the technology in various research projects.

Synergistic binding: Validating the binding kinetics of two antibodies on the BLITZ system

Therapeutic efficacy resulting from combining drugs in oncology is increasingly being reported. A significant improvement in survival was recently reported in the treatment of HER2 overexpressing breast cancer patients from combining the antibodies Trastuzumab and Pertuzumab. However, the underlying molecular mechanism has remained enigmatic. A hypothesis was put forward from a molecular modeling study that suggested a partial rationale in the form of enhanced affinities arising from co-localization of the two antibodies onto the extracellular domain of HER2. We report here the experimental characterization of this interaction by measuring the binding kinetics of these two antibodies (whole antibodies and F(ab)s) to the extracellular domain of HER2 in solution.