NANYANG TECHNOLOGICAL UNIVERSITY

School of Biological Sciences

Seminar Announcement

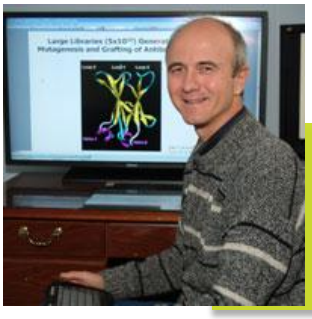
Human monoclonal antibodies against cancer and viruses

Date: 22 March 2016 (Tuesday)

Time: 3:00pm to 4:00pm

Venue: SBS-01n-33 Classroom 1

Host: A/Prof Julien Lescar



Speaker: Dr.Dimiter S. Dimitrov
Cancer and Inflammation Program
Intramural Research Program
National Institutes of Health (NIH), USA

Abstract

I will give an overview of the current state of the field. Then will discuss our group work on the identification, characterization and engineering of human monoclonal antibodies (mAbs) in IgG1, Fab, scFv, VH and CH2 formats, and as antibody drug conjugates, chimeric antigen receptors (CARs) and bispecific antibodies. First, candidate therapeutic mAbs against cancer two of which are now in clinical trials as CARs; second, engineered antibody domains and fragments with an emphasis on HIV-1 inhibitors for HIV-1 eradication; third, full-size mAbs against emerging and biodefense-related viruses with an emphasis on henipaviruses and coronaviruses mostly MERS-CoV especially for prophylaxis and therapy of humans.

Dr. Dimitrov joined the National Cancer Institute (NCI) of the National Institutes of Health (NIH), USA, in 1990, was tenured as Senior Investigator in 1993 and appointed at the Senior Biomedical Research Service in 2008. His research group includes molecular biologists who are experts in display/screening/libraries methodologies, antibody engineering, and protein biochemistry. His major long-term goal is the development of clinically useful therapeutics and vaccines based on human monoclonal antibodies including engineered antibody domains. He has authored and coauthored more than 360 articles cited more than 16,000 times, and is inventor or coinventor of more than 60 inventions, patent applications or patents.