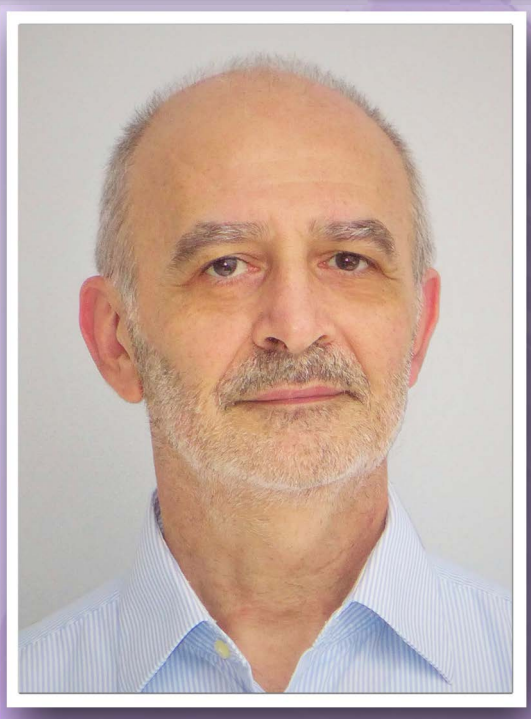
IMCB - SCSS Joint Seminar



Speaker : Prof Dario Campana
Yong Loo Lin School of Medicine, National University of Singapore
Mrs Lee Kong Chian Chair in Advanced Cellular Therapy;
Director, Division of Immunopathology & Cell Therapy;
Professor, Department of Pediatrics

Date : Tuesday, 7 April 2020
Time : 11:00AM - 12:00NN
Venue : Breakthrough Theatrette, Level 4, Matrix
30 Biopolis St, Singapore 138671
Hosts : Prof Hong Wanjin, IMCB
Asst Prof Adrian Teo, IMCB
Stem Cell Society Singapore

Seminar :

Transforming the treatment of cancer with immune cells

Immune cells can be engineered to recognize and kill tumor cells while sparing healthy tissues. Recent clinical trials with T cells redirected against leukemia, lymphoma and myeloma through the expression of chimeric antigen receptors ("CAR") have validated the potential of immune cells as living drugs to treat cancer. Infusion of CAR-T cells in children and adults with drug-resistant leukemia and lymphoma has produced dramatic and durable remissions. The clinical efficacy of CAR-T cell therapy has stimulated great interest in this area of translational research, encouraged efforts to further improve efficacy and curb toxicity, and renewed the enthusiasm for exploring the potential of other immune cells.

Our laboratory developed one of the early CARs, which became the key component of the first FDA-approved CAR-T cell product. Recent research has brought significant improvements to this technology, and expanded it to target T-cell malignancies. We have also developed a receptor (antibody-coupled T-cell receptor, ACTR) which endows T cells with antibody-dependent cell cytotoxic capacity, markedly enhancing the effect of therapeutic antibodies. ACTR is currently being tested in clinical trials enrolling patients with hematologic malignancies and solid tumors. Finally, methods to expand and genetically engineer natural killer cells have been established, leading to several first-in-human clinical trials for patients with leukemia and solid tumors. The vision underlying these efforts is that much of the current standard therapy of cancer will be ultimately replaced by an array of highly effective and specific immunotherapeutic options.

About the Speaker :

Dr. Campana obtained his MD and PhD degrees in Italy, where he received his clinical training in hematology. He trained as a scientist at the Royal Free Hospital, University of London, England, before moving to St. Jude Children's Research Hospital in Memphis, where he was Full Member in the Departments of Oncology and Pathology, and Professor of Pediatrics at the University of Tennessee.

He is currently Professor in the Department of Pediatrics, Yong Loo Lin School of Medicine, National University of Singapore, and the Mrs. Lee Kong Chian Chair in Advanced Cellular Therapy. He is a recipient of consecutive Singapore Translational Research Investigator awards, holds several patents, and is the scientific founder of three biotechnology companies. Dr. Campana's main interest is translational research in oncology, focusing on immunotherapy of leukemia, lymphoma and solid tumors.

Institute of Molecular and Cell Biology
IMCB

STEM CELL SOCIETY SINGAPORE

If you have questions about IMCB seminars, please contact seminars@imcb.a-star.edu.sg.