

Bioprocessing Technology Institute (BTI)

Microbial Cells

Name	Project	Degree By
Dr Ow, Siak Wei Dave dave_ow@bti.a-star.edu.sg	Synthetic and Systems Biotechnology of Microbial Cells. Engineering and Application of Phages. Enzymes and Antibody Fragments. Understanding and Overcoming Microbial Stress Response during Bioprocesses.	Nil

Animal Cell Technology

Name	Project	Degree By
Dr NG Say Kong ng_say_kong@bti.a-star.edu.sg	Recombinant protein expression and production in mammalian cells. Cell culture media and bioreactor process development. Development of anti-microbials.	NUS
Dr Yang Yuansheng Adj Ast/Prof at SCBE, NTU yang_yuansheng@bti.a-star.edu.sg	Vector design, cell line development, cell engineering, and bioprocess development to enhance production of recombinant protein production in mammalian cells.	NTU

Bioinformatics

Name	Project	Degree By
Dr Lee Dong Yup Assistant Professor (Joint Appointment) Chemical Engineering, NUS lee_dong_yup@bti.a-star.edu.sg	Computational Analysis and Engineering of Biological Systems. Bioinformatics Analysis of Omics Data. Bioinformatics Platform and Tool Development.	NUS

Immunology

Name	Project	Degree By
Dr Xu Shengli Adjunct Assistant Professor, Physiology, NUS xu_shengli@bti.a-star.edu.sg	Regulation of antibody response MiRNAs in B cell development and function	NUS
Prof Lam Kong Peng Professor (Joint Appointment) Microbiology and Immunology, NUS and Adjunct Professor at Biological Sciences, NTU lam_kong_peng@bti.a-star.edu.sg	Immunology Infectious Diseases and Autoimmunity	NTU / NUS

Expression Engineering

Name	Project	Degree By
Dr Jimmy CHAO Sheng-Hao Adjunct Assistant Professor, Microbiology, NUS jimmy_chao@bti.a-star.edu.sg	Regulation of cellular and viral transcription Potential use of a novel HEXIM1 cytotoxic peptide in anti-cancer and anti-microbial therapy Role of unfolded protein response in viral replication Recombinant protein and peptide production	NUS
Dr SONG Zhiwei Adjunct Associate Professor, Biochemistry, NUS song_zhiwei@bti.a-star.edu.sg	Glycosylation of recombinant protein drugs and Glycoengineering of CHO cells with different genome editing tools Glycobiology: Structure, function and localization of nucleotide sugar transporters and glycosyltransferases. Developing cell lines to produce follow-on biologics such as therapeutic antibodies	NUS

Stem Cells

Name	Project	Degree By
Dr Andre CHOO Adj Ast/Prof at FOE, NUS andre_choo@bti.a-star.edu.sg	Generation and characterization of novel monoclonal antibodies to cell surface markers on stem cells, progenitor cells and cancer cells (Antibody Discovery Platform).	NUS
Dr Steve OH Adj A/Prof at SCBE, NTU steve_oh@bti.a-star.edu.sg	Novel up- and down-stream bioprocessing for cell and gene therapies. CRISPR engineering cells and novel delivery for cell therapies.	NTU

Metabolomics

Name	Project	Degree By
Dr Ho Ying Swan ho_ying_swan@bti.a-star.edu.sg	Metabolic profiling/metabolomics studies of mammalian cell lines to further understanding of intracellular metabolic processes and their impact on recombinant protein.	Nil

Transcriptomics

Name	Project	Degree By
Dr Andy Tan Associate Staff Scientist andy_tan@bti.a-star.edu.sg	(1) Engineering of immune cells for cancer immunotherapy (2) Role of immune cell subsets in immune and autoimmune responses (3) Genetics and transcriptomics studies of cells of high industrial and commercial interest, e.g. Chinese Hamster Ovary (CHO), human, animal cells for bioproduction of biologics, food and nutrition (4) Metagenomics of mouse gut microbiome	NUS

Proteomics

Name	Project	Degree By
Dr Bi Xuezhi Senior Scientist, Proteomics bi_xuezhi@bti.a-star.edu.sg	Mass spectrometry based proteomics as bioprocessing analytical technology Application of proteomic technology in food and nutrition Proteomic profiling of upstream and downstream processes of recombinant protein production in mammalian cells Biopharmaceutical multiple critical quality attributes (CQAs) analysis by mass spectrometry	Nil