

Institute of Molecular and Cell Biology (IMCB)

**Animal Models of Development And Disease**

Name	Project	Degree By
<a href="#">Assistant Professor Adam Claridge-Chang</a> <a href="#">Adjunct Assistant Professor NUS Physiology</a> <a href="mailto:acchang@imcb.a-star.edu.sg">acchang@imcb.a-star.edu.sg</a>	Neurogenetics of memory, feeding and emotional behavior	NUS
Assoc Prof Suresh Jesuthasan Assoc Prof at YLLSOM,NGS;Duke-NUS GSM; LKCSOM <a href="mailto:sureshjj@imcb.a-star.edu.sg">sureshjj@imcb.a-star.edu.sg</a>	Microbiome control of fear	NTU
Dr Philip Ingham Adj Prof at FOS, NUS <a href="mailto:pingham@imcb.a-star.edu.sg">pingham@imcb.a-star.edu.sg</a>	Developmental Biology/ Hedgehog signal transduction/ Autophagy in development/ epidermal development	NUS
Dr Sudipto Roy Adj Prof at FOS, NUS <a href="mailto:sudiptor@imcb.a-star.edu.sg">sudiptor@imcb.a-star.edu.sg</a>	Roles of cilia in the regulation of embryonic development and adult physiology.  Cilia and human diseases.	NUS
Dr Walter Hunziker Adj Research Prof at NUS, SERI <a href="mailto:hunziker@imcb.a-star.edu.sg">hunziker@imcb.a-star.edu.sg</a>	Role of tight junctions in physiology and pathophysiology of the GI tract, skin, retina, liver and heart studied using cell culture and mouse models.  Characterization of the spatial and temporal apical junctional adhesion complex landscape and spatial and temporal modulation in biological processes using <u>proximity proteomics and imaging</u> .	NUS
Prof. Byrappa Venkatesh Adj Prof at YLLSOM, NUS <a href="mailto:mcbbv@imcb.a-star.edu.sg">mcbbv@imcb.a-star.edu.sg</a>	Comparative Genomics/evolution of cis-regulatory elements/evolution.  Regulation of Hox cluster genes.	NUS
<a href="#">Dr Aw Shiyong, Sherry</a> <a href="#">Independent Fellow; Adjunct Asst Prof, NUS Physiology</a> <a href="mailto:syaw@imcb.a-star.edu.sg">syaw@imcb.a-star.edu.sg</a>	Circuit regulation of tremor in Drosophila models of neurodegenerative disease; 2) Functional roles for microRNAs in neurodegeneration and movement disorders; 3) Dissection of distinct roles for glia in neurodegeneration and neuroprotection using novel genetic tools	NUS

**Cancer Genetics And Therapeutics**

Name	Project	Degree By
------	---------	-----------

<p>Associate Professor Karen CRASTA Associate Professor at LKCMed, NTU kccrasta@imcb.edu.sg</p>	<p>Chromosomal Instability in Liver Cancers( funded by MOE Tier 1)</p> <p>Aneuploidy-related signalling pathways upon treatment with antimetotics( funded by NRF).</p> <p>Replication stress and Chromothripsis ( funded by NRF).</p>	<p>NTU</p>
<p><a href="#">Dr Ernesto Guccione</a> Adj Ast/Prof at FOS, NUS <a href="mailto:eguccione@imcb.a-star.edu.sg">eguccione@imcb.a-star.edu.sg</a></p>	<p>Bioinformatic analysis of Genome wide Chip-seq and RNA-seq datasets.</p> <p>Role of arginine methylation in transcriptional control.</p> <p>Role of PRDM methyltransferases in mammalian development.</p>	<p>NUS</p>
<p>Dr Qi Zeng Adj A/Prof at FOS, NUS <a href="mailto:mcbzengq@imcb.a-star.edu.sg">mcbzengq@imcb.a-star.edu.sg</a></p>	<p>PRL-3 phosphatase as a novel oncotarget for cancer immunotherapies'.</p>	<p>NUS</p>
<p><a href="#">Dr Vinay Tergaonkar</a> Professor, School of Medicine <a href="mailto:vinayt@imcb.a-star.edu.sg">vinayt@imcb.a-star.edu.sg</a></p>	<p>RNA Biology Inflammation and Cancer</p>	<p>NUS</p>
<p>Dr Xiaomeng Wang <a href="mailto:xmwang@imcb.a-star.edu.sg">xmwang@imcb.a-star.edu.sg</a></p>	<p>The crosstalk between LRG1 and TGFbeta1 and their implication in fibrogenic diseases.</p>	<p>NTU</p>

Prof Kaldis Philipp Adj A/Prof at FOS, NUS kaldis@imcb.a-star.edu.sg	Cyclin-dependent kinase (Cdk) knockout mice: development and cancer; Liver tumors and regeneration; The functions of cyclin-dependent kinases in meiosis; Coupling of cell division and differentiation in neural stem cells.	NUS
Prof SURANA Uttam Adj Prof at YLLSOM, NUS mcbucs@imcb.a-star.edu.sg	Dynamics of histone modification during adaptation to DNA damage.  Role of Sumoylation during chromosome segregation and DNA damage.  <u>Regulation of spindle dynamics by ubiquitin-coniugating E2 enzyme Cdc34.</u>	NUS
<a href="#">Dr Li Yinghui</a> <a href="#">Assistant Professor at SBS, NTU</a> <a href="#">liyh@ntu.edu.sg</a>	Epigenetic regulation of NF-kB in cancers 2. Inflammation and gene regulation in diseases	NTU
<a href="#">Dr Cheok Chit Fang</a> <a href="#">Principal Investigator (Adjunct Ast Prof Department of Pathology and Department of Biochemistry)</a> <a href="#">cheokcf@imcb.a-star.edu.sg</a>	1. Genomic Instability- Deciphering connections underlying cancer initiation and progression 2. Developing novel synthetic lethal drug targets for anticancer therapy 3. Developing new molecular detection of cancers	

## Cell Biology In Health And Disease

Name	Project	Degree By
Dr Adam Claridge-Chang Adj Ast/Prof at Duke-NUS acchang@imcb.a-star.edu.sg	Mechanisms of obesity and food addiction.  Cognitive aspects of memory and learning.  Neurogenetics of anxiety and tranquillity.  Thermotolerant genomes for structural neurobiology.  Chemical neurogenetics.  <del>Behavioral neuroscience research engineering</del>	Duke-NUS (Neuroscience) and NUS (Physiology)
<a href="#">Dr Frederic Bard</a> <a href="#">Adj Ast/Prof at FOS, NUS</a> <a href="#">fbard@imcb.a-star.edu.sg</a>	Regulation of membrane trafficking and glycosylation in cancer.	NUS
Dr Loh Yui Han Jonathan yhloh@imcb.a-star.edu.sg	Stem cell and cellular reprogramming for human disease modeling.  Genetic and epigenetic regulation of cell fate switches.	NUS

<p>Dr Ng Shi Yan Jn Investigator, IMCB Honaray Visiting Scientist, NNI <a href="mailto:syng@imcb.a-star.edu.sg">syng@imcb.a-star.edu.sg</a></p>	<p>Role of long non-coding RNAs in Amyotrophic Lateral Sclerosis.</p>	<p>NUS</p>
<p>Dr Tee, Wee Wei <a href="mailto:wwtee@imcb.a-star.edu.sg">wwtee@imcb.a-star.edu.sg</a></p>	<p>Disease epigenetics: Understanding and targeting chromatin dysfunction in neurological disorders and cancer.  Investigating the relationship between chromatin plasticity and cellular potency for <u>regenerative medicine applications</u>.</p>	<p>NUS</p>
<p>Dr Teo Kee Keong Adrian Independent Fellow Adj Asst Prof, School of Biological Sciences and LKCMedicine, NTU Adj Asst Prof, Department of Biochemistry, NUS <a href="mailto:ateo@imcb.a-star.edu.sg">ateo@imcb.a-star.edu.sg</a></p>	<p>Stem cells and diabetes</p>	<p>NUS (Medicine) NTU(SBS or LKCMedicine)</p>
<p>Dr Walter Hunziker Adj Research Prof at YLLSOM, NUS <a href="mailto:hunziker@imcb.a-star.edu.sg">hunziker@imcb.a-star.edu.sg</a></p>	<p>Role of tight junction proteins in stem cells, GI tract, skin, central and peripheral nervous system, blood-brain barrier, heart, pancreas, mammary gland, B- and T-cells, and dendritic cells using in vitro and mouse models.  Physiological role of BRAP, a novel regulator of voltage gated calcium channels in <u>animal models. Characterization of BARP interacting proteins</u>.</p>	<p>NUS</p>
<p><a href="#">Dr Wanjin Hong</a> <a href="#">Honorary Joint Professor, Department of Biochemistry, NUS</a> <a href="mailto:mcbhwj@imcb.a-star.edu.sg">mcbhwj@imcb.a-star.edu.sg</a></p>	<p>SNAREs in membrane traffic and physiology.  Sorting nexins in membrane traffic and physiology.  Hippo Pathway and TAZ/YAP in cancer cell migration, invasion and tumorigenesis.</p>	<p>NUS</p>
<p><a href="#">Dr Feng XU</a> <a href="#">Principal Investigator, IMCB A*STAR / Adj Ast/Prof, NUS</a> <a href="mailto:fxu@imcb.a-star.edu.sg">fxu@imcb.a-star.edu.sg</a></p>	<p>Epigenetic regulation of metabolic homeostasis.  Targeting Obesity through Fat Burning- a Brown Fat Connection.  <u>Discovering Natural Compounds for the Treatment of Metabolic Diseases.</u></p>	<p>NUS</p>
<p><a href="#">Dr Ajay S. Mathuru</a> <a href="#">Principial Investigator; Assitant Professor, Yale-NUS College; and Department of Physiology, NUS</a> <a href="mailto:ajaym@imcb.a-star.edu.sg">ajaym@imcb.a-star.edu.sg</a>; <a href="mailto:ajay.mathuru@yale-nus.edu.sg">ajay.mathuru@yale-nus.edu.sg</a></p>	<p>Neurogenetics of addiction; Alarm behaviors; Neurobiology of Alzheimer's disease; Rewards and punishment motivating behaviors;</p>	<p>NUS</p>

## Structural Biology And Drug Discovery

Name	Project	Degree By
Dr Gao Yonggui ygao@ntu.edu.sg	Structure and Functional interactions of translational factors with ribosome  Structure and regulation of c-di-GMP signalling.  Protein-DNA/RNA interaction and regulatory function.	NTU
Dr Justin Jang Hann Chu jhchu@imcb.a-star.edu.sg	Antiviral and vaccines developments for dengue virus, Zika virus and human enteroviruses.  Molecular mechanism of viral pathogenesis of dengue virus, Zika virus and human enteroviruses.  Immunopathogenesis of dengue virus, Zika virus and human enteroviruses.	NUS
Dr Yee-Joo TAN mcbtanyj@imcb.a-star.edu.sg	Understanding viral-host interplay in hepatitis virus infection.  Understanding viral-host interplay in RNA virus infection.	NUS
Dr Yue WANG Adj Prof at FOS, NUS mcbwangy@imcb.a-star.edu.sg	Cell polarity and morphogenesis control in the dimorphic fungus Candida albicans.  Signal sensing and integration in Candida albicans.  Candida albicans-host interaction.	NUS
Dr. Haiwei SONG Adj Prof at FOS, NUS haiwei@imcb.a-star.edu.sg	Molecular mechanisms of nonsense-mediated mRNA decay and miRNA-mediated translational repression.  Structural studies on proteins involved the Hippo tumor suppressor pathway and anti-cancer drug design.	NUS

## IMCB Independent Fellow & Junior Investigators (IJ)

Name	Project	Degree By
Dr Huili GUO Adj Ast/Prof at 1) FOS, NUS 2) LKCSOM, NTU hguo@imcb.a-star.edu.sg	Specialized ribosomes and the control of translation.	NUS/NTU

Dr TEO Kee Keong Adrian Adj Ast/Prof at SBS, NTU and YLLSoM, NUS ateo@imcb.a-star.edu.sg	Stem Cells and Diabetes.	NUS/NTU
--	--------------------------	---------

**Translational Research Division**

Name	Project	Degree By
Dr. Chen Qingfeng Adj Ast/Prof at YLLSOM, NUS qchen@imcb.a-star.edu.sg	Humanization of mouse kidney and study of the interactions between human immune system and renal cancers in humanized mouse.  Modelling Enterovirus 71 infection, disease and human immune responses in humanized mouse.  Characterization of tissue residential human Natural Killer cells and their roles in organ specific diseases	NUS
Dr. Jayantha Gunarane Adj Ast/Prof at 1) LKCSOM, NTU 2) YLLSOM, NUS jayanthag@imcb.a-star.edu.sg	Breast cancer biomarker and possible drug target identification and characterization using discovery and targeted proteomics.  Mass Spectrometry-based quantitative proteomics technology development (biochemical and computational).  Mapping comprehensive interaction proteomes of key signaling pathways.  Mode of action of small molecule anti-cancer natural products using proteomics-based Systems Biology	NUS

## **Biomedical Sciences**

<b>Name</b>	<b>Project</b>	<b>Degree By</b>
<a href="#">Dr Loh Yui-Han Jonathan</a> Senior Principal Investigator <a href="mailto:yhloh@imcb.a-star.edu.sg">yhloh@imcb.a-star.edu.sg</a>	Diseased organoids and tissues analyses using single-cell technologies  Stem cell and cellular reprogramming for human disease modelling.  <u>Genetic and epigenetic regulation of cell fate switches.</u>	NUS
<a href="#">Dr Christine Cheung</a> Assistant Professor, LKCMedicine (NTU), IMCB (A*STAR) <a href="mailto:ccheung@imcb.a-star.edu.sg">ccheung@imcb.a-star.edu.sg</a>	Molecular and Vascular Medicine  Phenotyping of microvasculature for early diagnosis and treatment of age-related vascular conditions	NTU
<a href="#">Dr. Daniel Martin MESSERSCHMIDT</a> Principal Investigator <a href="mailto:daniel.messerschmidt@imcb.a-star.edu.sg">daniel.messerschmidt@imcb.a-star.edu.sg</a>	Chromatin & Epigenetics in mammalian embryogenesis	NUS