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No.	**Department**	**A*STAR Supervisor's Name**	**Designation**	**Email**	**Project Title**	**Project Description**	**Degree Awarded By Upon Graduation**	**Website Link (if any)**
1	Animal Models of Development And Disease	Assoc Prof Suresh Jesuthasan	Assoc Prof at YLLSOM,NGS;Duke-NUS GSM; LKCSOM	sureshjj@imcb.a-star.edu.sg	Microbiome control of fear	Animals are considered super-organisms, as they contain diverse micro-organisms in addition to their own eukaryotic cells. Signals from these micro-organisms have been shown to affect emotional state. This project investigates neural circuits mediating these effects, and also considers how the nervous system can regulate the microbiota.	NTU	
2	Animal Models of Development And Disease	Dr Sudipto Roy	Adj Prof at FOS, NUS	sudiptor@imcb.a-star.edu.sg	1. Roles of cilia in the regulation of embryonic development and adult physiology. 2.Cilia and human diseases.	Transcriptional regulation of ciliogenesis, cilia in the node for left-right asymmetry and congenital heart disease, multiciliated cells, primary cilia and cystic kidney disease, primary cilia and Hedgehog signaling	NUS	https://www.a-star.edu.sg/imcb/imcb-research/scientific-programmes/cell-biology-and-therapies
3	Animal Models of Development And Disease	Dr Aw Shiying, Sherry	Independent Fellow; Adjunct Asst Prof, NUS Physiology	syaw@imcb.a-star.edu.sg	1. Molecular and circuit mechanisms of neurodegeneration, tremor and movement disorder, including roles for RNA/microRNA 2. RNA aptamers, ribozymes, sensors and molecular tools for disease diagnostics and therapeutics	1. Movement disorders are a class of neurodegenerative diseases that result in debilitating dysfunctions, including tremor and movement difficulties. We aim to understand the molecular, cellullar and circuit mechanisms that underlie movement disorders like Parkinson's Disease and Essential Tremor, in order to develop new therapeutic strategies. We have a particular interest in roles for RNA, including microRNA, and roles for neurometabolism. 2. Nucleic acid-based synthetic tools are versatile and promising technologies for disease diagnosis and treatment. We develop and optimise novel RNA-based technologies for various disease applications.	NUS	www.sherryawlab.org
4	Animal Models of Development And Disease	Dr Ajay S. Mathuru	Prinicipal Investigator; Assitant Professor, Yale-NUS College; and Department of Physiology, NUS	ajaym@imcb.a-star.edu.sg	Models for phenotypes associated with human disorders of the brain, neurodegeneration, Alzheimer's disease, and locomotion.	To gain a transformative understanding of the underlying pathology and neurobiology of human brain disorders, the project uses a neurogenetics approach and employs novel methods or technologies. Applied to AD, and degenerative disorders effecting neuromuscular activity.	NUS	https://mechunderlyingbehavior.wordpress.com/
5	Cancer Genetics And Therapeutics	Prof Vinay Tergaonkar	Professor, YLLSoM, NUS	vinayt@imcb.a-star.edu.sg	Development of gene therapy for pediatric liver diseases	The aim of this project is to develop gene therapy for a group of pediatric diseases known as cholangiopathies. This particular group of diseases are the most common cause for pediatric liver transplantation. We aim to develop a proof-of-concept for a novel delivery system using an all-in-one vector for genome editing of primary biliary cells. We would then apply for a ground patent for engagement of external stakeholders to level up testing in higher mammals. Because liver transplant is currently the only therapeutic approach for pediatric biliary disorders, our gene therapy may lead to development, transfer and application of new technologies promoting the commercialization of high-value added biotechnology products.	NUS	

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6	Cancer Genetics And Therapeutics	Dr Xiaomeng Wang	Principal Investigator	xmwang@imcb.a-star.edu.sg	Understanding the molecular mechanism underlying fibrovascular progression	Abnormal blood vessel formation and subsequent fibrotic progression is a characteristic feature of many diseases, including neovascular age-related macular degeneration, proliferative diabetic retinopathy, arthritis, diabetes-related delay in wound healing and various cancers. Current treatment targeting fibrovascular progression is very limited. Understanding the molecular mechanisms underlying this process may lead to the discovery of novel treatment strategies.	Duke-NUS	
7	Cancer Genetics And Therapeutics	Dr Tee, Wee Wei	Principal Investigator, IMCB Assistant Professor at the Department of Physiology, NUS Medicine.	wwtee@imcb.a-star.edu.sg	Targeting transcriptional and epigenetic aberrancies in cancer	1) To identify and exploit chromatin vulnerabilities in cancer for therapeutic interventions. 2) Explore epigenetic modifiers as new immunomodulatory therapies	NUS	https://wwteelab.com
8	Cancer Genetics And Therapeutics	Assistant Professor Cheok Chit Fan	Joint Principal Investigator, IMCB Assistant Professor, Department of Pathology, NUS	cheokcf@imcb.a-star.edu.sg	1. Developing novel synthetic lethal drug targets for anticancer therapy 2. Genomic Instability- Deciphering connections underlying cancer initiation and progression 3. Developing new molecular detection of cancers	The projects encompass studies of developing genetic technology and cancer targets for curative cancer therapy. Various aspects of cancer therapy ranging from targeting replication stress to cancer metabolism are investigated using synthetic lethal approaches. The ultimate aims are to develop also combination therapies with immunotherapy and preclinical work in mouse and patient-derive models.	NUS	https://research.a-star.edu.sg/researcher/chit-fang-cheok/
9	Cell Biology In Health And Disease	Dr Frederic Bard	Adj Ast/Prof at FOS, NUS	fbard@imcb.a-star.edu.sg	1. Tumor growth, signaling and protein glycosylation 2. New cancer therapies 3. Fibrosis and innovative therapeutic strategies.	1. Tumor growth, signalling and protein glycosylation How do tumor grow inside a tissue, how do they remodel the surrounding ECM and disrupt healthy cells? The project involves identifying cell surface proteins involved in this process. We have identified a pathway regulating protein glycosylation and found it is essential for tissue remodelling. We have identified candidate proteins that are hyper-glycosylated and we need to screen for their direct involvement in the process of tumor growth. This will allow us to identify new targets for anti-cancer therapies. 2. Arthritis and protein glycosylation Arthritis is a process involving cartilage matrix degradation. We have identified a pathway driving matrix degradation during arthritis. The project consists in identifying and characterising new molecular players regulated by this pathway. 3. Fibrosis and innovative therapeutic strategies We have identified a novel, uncharacterised human gene coding for a secreted protein. This protein regulates collagen expression. The project consists in characterising how this protein functions and induces signalling.	NUS	

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10	Cell Biology In Health And Disease	Dr Loh Yuin Han Jonathan	Senior Principal Investigator	yhloh@imcb.a-star.edu.sg	1. Stem cell and cellular reprogramming for human disease modeling 2. Genetic and epigenetic regulation of cell fate switches	The project entails reprogramming of disease patient cells into pluripotent stem cells. Thereafter detailed analysis using re-differentiation, screening with epigenetic drugs and mechanistic studies, will be carried out.	NUS	https://medicine.nus.edu.sg/phys/jonathan-yuin-han-loh/
11	Cell Biology In Health And Disease	Dr Ng Shi Yan	Principal Investigator, IMCB; Asst Prof NUS	syng@imcb.a-star.edu.sg	Modeling human neurological diseases using induced pluripotent stem cells	Human pluripotent stem cells (iPSCs) are useful models of neurological diseases. They can be differentiated into neural types that are affected, for in depth analyses. In this project, patient-specific iPSCs will be differentiated into various neurons and astrocytes to understand their contribution to neurodegeneration.	NUS	https://research.a-star.edu.sg/researcher/shi-yan-ng/
12	Cell Biology In Health And Disease	Dr Tee, Wee Wei	Principal Investigator, IMCB Assistant Professor at the Department of Physiology, NUS Medicine.	wwtee@imcb.a-star.edu.sg	1. Disease modeling Understanding and functionalizing chromatin-associated disease mutations in neurological disorders and cancer. 2. Investigating the relationship between chromatin plasticity and cellular potency for cellular reprogramming and regenerative medicine applications.	Investigate the chromatin mechanisms underlying cell fate plasticity in human cells (e.g. epigenetic reprogramming towards totipotency - deriving stem cells with maximal plasticity for regenerative medicine	NUS	https://wwteelab.com
13	Cell Biology In Health And Disease	Dr Teo Kee Keong Adrian	Principal Investigator Asst Prof at YLLSoM, NUS & Adj Asst Prof at SBS, NTU	ateo@imcb.a-star.edu.sg	Stem cells and diabetes	The use of human pluripotent stem cell-derived cells, human islets and beta cells to study diabetes disease mechanisms, develop therapeutics for diabetes and use them as a cell source for cell therapy in diabetes.	NUS (Medicine) and NTU (SBS)	http://www.adrianteolab.com/
14	Cell Biology In Health And Disease	Dr Walter Hunziker	Adj Research Prof at YLLSOM, NUS	hunziker@imcb.a-star.edu.sg	Use of Adeno-associated virus (AAV) vectors and antisense-oligonucleotides (AONs) to target novel cholestasis and heart failure pathways.	Tight junctions (TJs) are key components of tissue barriers involved in pahysiological and pathophsiological processes. Modulating their expression using AAV vectors or AONs has reveled possibe theraputic interventions in tissue regeneration and liver diseases.	NUS	
15	Cell Biology In Health And Disease	Dr Wanjin Hong	Honorary Joint Professor, Department of Biochemistry, NUS	mcbhwj@imcb.a-star.edu.sg	1. Hippo Pathway regulators and TAZ/YAP in cancer cell migration, invasion and tumorigenesis. 2. Agrin in modulating tumor microenvironment and cancer cell behaviors	To study the components of Hippo core kinases and their regulators such as USP9X in regulating the functional relevance of YAP and TAZ in cancer signalling, aiming to defining new way of treating cancer by inhibiting YAP/TAZ-TEAD complex To define the role of extracellular matrix protein Agrin in integrating cell-mtrix interaction and designing novel approach to interfere Agrin function	NUS	https://medicine.nus.edu.sg/bch/faculty/hong-wanjin/ https://scholar.google.com.sg/citations?user=sBAuF7AAAAAJ&hl=en

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16	Cell Biology In Health And Disease	Dr Feng Xu	Principal Investigator, IMCB A*STAR / Adj Ast/Prof, NUS	fxu@imcb.a-star.edu.sg	1. Epigenetic regulation of metabolic homeostasis. 2. Targeting Obesity through Fat Burning- a Brown Fat Connection. 3. Discovering Natural Compounds for the Treatment of Metabolic Diseases.	We are increasingly focusing on the genome-wide studies in the context of thermogenic adipocytes development and function, or further on in the general area of metabolism. Specifically, we are spearheading towards single cell RNA-seq, post-translational modification profiling, DNA and mRNA methylome studies. We also develop bioinformatic tools for data analysis and use conventional mouse physiological studies involving KO and transgenic lines for functional validation of the candidates we identified through our bioinformatic analyses.	NUS	https://www.a-star.edu.sg/imcb/imcb-research/scientific-programmes
17	Cell Biology In Health And Disease	Dr Ajay S. Mathuru	Prinicipal Investigator; Assitant Professor, Yale-NUS College; and Department of Physiology, NUS	ajaym@imcb.a-star.edu.sg	1. Neurogenetics of addiction 2. Alarm behaviors 3. Neurobiology of Alzheiemer's disease 4.Rewards and punishment motivating behaviors.	Multi-dimensional projects that are geared towards understanding sub-cortical circuits that impact animal and human behaviors when malfunctioning. Applications include development of precision medicine tools for substance addiction.	NUS	https://mechunderlyingbehavior.wordpress.com/
18	Structural Biology And Drug Discovery	Dr Gao Yonggui	Associate Professor, School of Biological Sciences	yggao@imcb.a-star.edu.sg	1. Molecular mechanims of protein translation and its application to tackle antimicrobial resistance 2. Molecular mechanism of cell wall formation and cellulose synthesis 3. Structure and regulation of c-di-GMP signalling	We are working on protein structure and function that involves protein translation and gene regulation, cell wall formation and cellulose/exopolysaccharides biosynthesis, as well as c-di-GMP mediated signalling in biofilm/cell wall formation. These processes are directly relevant to drug action mode and antimicrobial resistance, their better understanding in structural information would boost knowledge-driven drug discovery and help us to tack infectious disease.	NTU	https://research.ntu.edu.sg/expertise/academicprofile/Pages/StaffProfile.aspx?ST_EMAILID=ygao
19	Structural Biology And Drug Discovery	Dr Justin Jang Hann Chu	Associate Professor at NUS Medicine; Director of NUS Medicine BSL3 Core Facility; Assistant Dean NUS Medicine Academic Affairs	jhchu@imcb.a-star.edu.sg	1. Antiviral and vaccines developments for COVID-19, dengue virus, Zika virus and human enteroviruses. 2. Molecular mechanism of viral pathogenesis of COVID-19, dengue virus, Zika virus and human enteroviruses. 3. Immunopathogenesis of COVID-19, dengue virus, Zika virus and human enteroviruses.	COVID-19 was declared a pandemic by the World Health Organization on March 11, 2020. This novel coronavirus disease, caused by the SARS-CoV-2 virus, has resulted in severe and unprecedented social and economic disruptions globally. Since the discovery of COVID-19 in December 2019, there is urgent needs to develop antiviral strategies against the virus. Different approaches such as vaccine, therapeutic antibodies, antiviral drugs as well as other molecular inhibitors can be developed against this emerging coronavirus. In this study, we will be focusing on the development of the next generation antiviral strategies combining both immunomodulation and therapeutic molecules targeting the entry process of the virus into target cells. With the commitment from all drug discovery sectors, including academia and industry as well as buy in from all governments and international organizations, we are confident that this study will generate translational outcome for the successful treatment of mild, moderate, and severe COVID-19 disease.	NUS	https://medicine.nus.edu.sg/researchers/chu-jang-hann-justin/ ; https://www.a-star.edu.sg/imcb/imcb-research/joint-pis

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20	Structural Biology And Drug Discovery	Dr Yee-Joo Tan	Associate Professor at NUS	mcbtanyj@imcb.a-star.edu.sg	1. Understanding viral-host interplay in hepatitis virus infection. 2. Development of antibodies for research and diagnostic applications	1. Hepatitis B virus (HBV) infection is a major health problem affecting about 300 million people globally. In order to understand how HBV interacts with host factors to replicate inside the cell, we use various molecular biology methods to express viral proteins as well as design genetically modified viruses. 2. Antibodies are powerful tools in different areas of research and can be also used for diagnostic assay development. We use proteins of HBV and other viruses to generate antibodies and use them to study the virus life-cycle and map immunogenic domains in viral proteins.	NUS	https://www.a-star.edu.sg/imcb/imcb-research/scientific-programmes/innovative-technologies
21	Structural Biology And Drug Discovery	Dr. Haiwei Song	Adj Prof at YLLSOM, NUS	haiwei@imcb.a-star.edu.sg	1. Structural studies of proteins involved in maintaining genome stability . 2. Structure-based drug design. 3. Structural studies on proteins involved in the Hippo tumor suppressor pathway.	The project in the Hippo signaling pathway aims: (1) to elucidate the molecular mechanism governing the activation and regulation of the key kinase cascade (MST1/SAV1 and LATS1/Mob1) and (2) to design potent small molecules and peptides that disrupt the YAP/TAZ-TEAD interaction for cancer therapeutics. The goal of structural studies of proteins involved in maintaining genome stability is to unravel the mechanism by which Pif1 and WRN helicases unwind the G4 DNA and to discover novel small molecule inhibitors using structure-based rational design.	NUS	https://www.a-star.edu.sg/imcb/imcb-research/scientific-programmes/mechanisms-in-physiology-and-diseases
22	IMCB Independent Fellow & Junior Investigators (IJI)	Dr Hwei-Ee Tan	Fellow, LKCSOM	Tan_Hwei_Ee@imcb.edu.sg	1. Gut-feelings: Uncovering our gut microbes' influence on physiology and behaviour 2. Chronic stress and the gut microbiome	1. The food we eat shapes the structure and function of microbes in our gut. Furthermore, the gut microbiota influences our health and behaviour. We aim to uncover the basic biology of how food components impact our health and behaviour via the microbiota gut-brain axis, and establish a mammalian model for modulating brain health via the gut. As proof of principle, we will delineate the effects of dietary fibre (a prebiotic) on microbiota-host signalling and on gut-brain circuits controlling eating behaviours and weight loss. 2. Major depressive disorders (MDDs) are among the most common mental disorders in society, yet we do not fully understand its causation. Chronic stress is a major environmental risk determinant of depression, and in recent years it has been found that dysbiosis of the gut microbiota has been associated with clinical depression. The key questions are: How does chronic stress alter the microbiome? Could we reverse the effects of clinical depression by interventions to the gut microbiota? These questions can be addressed in mice, an experimentally accessible pre-clinical mammalian model.	NTU	http://tanlab.science/

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23	Translational Research Division	Dr. Chen Qingfeng	Adj Ast/Prof at YLLSOM, NUS	qchen@imcb.a-star.edu.sg	1. Reconstiution of human liver in immunodeficient mice for the study of human hepatotropic diseases. 2. Characterization of human specific mechanisms in tumor microenvironment using humanized mouse models.	1. Currently there is a lack of human specific models to address clinical questions related to human hepatotropic diseases. This project aims to generate human liver in mouse model for the study of HBV infection and metabolism diseases. Stem cell, pathological and animal technologies will be developed and applied to analyze the diseases outcomes which will be compared with clinical samples. 2. Tumor microenvironment is still a mystery which slows down the discovery of mechanisms and development of new targets for cancer treatment. This project aims to establish human solid cancer together with human immune system in humanized mouse model. Immunological, histological and transcriptom analysis will be applied to characterize and explore new mechanisms with a hope to disover new cancer treatment strategies.	NUS	
24	Translational Research Division	Assoc Prof. Jayantha Gunaratne	Adj Assoc Prof at YLLSOM,NUS	jayanthag@imcb.a-star.edu.sg	1. Novel mass spectrometry (MS) pipelines for functional biomarker discovery 2. Proteomics dissection of breast cancer heterogeneity 3. MS-based pathogen typing tool development	1. This project aims to develop advanced pipeline for discovering novel posttranslational modifications of proteins as next generation therapeutic and diagnostic markers primarily using MS in combination with deep learning 2. This project aim to prioritize and improve therapeutics for triple negative breast cancer subtype using proteomics-based systems biology 3. This programme aims to develop prototype assays with computational pipeline pathogen detection including food pathogens and infectious disease severity monitoring	NUS	https://www.a-star.edu.sg/imcb/imcb-research/scientific-programmes/innovative-technologies https://www.a-star.edu.sg/docs/librariesprovider19/science/scientific-programme/innovative-technologies/jayantha-gunaratn/research.pdf https://www.a-star.edu.sg/docs/librariesprovider19/science/scientific-programme/innovative-technologies/jayantha-gunaratn/publications.pdf
25	Biomedical Sciences	Dr Loh Yuin Han Jonathan	Senior Principal Investigator	yhloh@imcb.a-star.edu.sg	Diseased organoids and tissues analyses using single-cell technologies Stem cell and cellular reprogramming for human disease modelling. Genetic and epigenetic regulation of cell fate switches.	The project entails using single-cell technologies to dissect the heterogeneous cell populations within organoids and primary tissues from healthy and diseased individuals.	NUS	https://www.dbs.nus.edu.sg/staffs/loh-yuin-han-jonathan/
26	Biomedical Sciences	Dr Christine Cheung	Assistant Professor, LKCMedicine (NTU), IMCB (A*STAR)	ccheung@imcb.a-star.edu.sg	Phenotyping of microvasculature for early diagnosis and treatment of age-related vascular conditions	Our research aims to understand biological mechanisms regulating vascular ageing in diseases such as . vascular dementia and coronary artery disease. We create human-relevant experimental models using patient-derived materials. To elucidate pathological endothelial cell behaviours, we employ advanced molecular techniques such as single-cell transcriptomics and gene editing. Our work provide insights for translation to restore blood vessel health and regenerative therapies.	NTU	www.cheung-lab.com

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27	Biomedical Sciences	Dr. Daniel Martin Messerschmidt	Principal Investigator	daniel.messerschmidt@imcb.a-star.edu.sg	Chromatin & Epigenetics in mammalian embryogenesis	We research the impact of transcription factors and epigenetic modifyers on the mammalina epigenetic integrity during oocyte-to-embryo transition. We further project our findings to study male and female infertilites, subjects of great interest in the singaporean translational landscape	NUS	https://www.a-star.edu.sg/imcb/imcb-research/scientific-programmes/cell-biology-and-therapies
28	Integrative Biology for Theranostics	Dr. Joe YEONG Poh Sheng	Group Leader, IMCB Instructor, Duke-NUS	yeongps@imcb.a-star.edu.sg	Understanding the spatial immune microenvironment proximal to SARS-COV-2 viral antigen in gastrointestinal and hepatic tissues	Much remains unknown about the interaction of SARS-CoV-2 with the immune system; studies to date have been limited by using peripheral blood, pulmonary samples and low throughput techniques. In this proposal, we aim to perform comprehensive high-dimensional profiling of the immune microenvironment proximal to SARS-CoV-2 viral antigen on gastrointestinal and hepatic tissues of COVID-19 decedents and patients. We will build a novel in house bioinformatics pipeline to analyse the spatial information that gain from the abovementioned profiling. The knowledge gleaned from these studies would advance our understanding on disease pathogenesis, ultimately leading to improved clinical management and national strategic planning.	NUS, NTU	https://www.researchgate.net/profile/Joe_Yeong
28	Neuroscience	Dr. Caroline Lei Wee	Research Fellow	weel@imcb.a-star.edu.sg	Neural circuits for food decision-making	Our food decisions are modulated by many factors, such as diet and stress. In this project, we will dissect the neural circuits that govern food choice using the larval zebrafish as a model. We will use cutting-edge imaging and circuit manipulation tools to identify neuronal pathways that respond to dietary cues and modulate feeding decisions, as well as the effect of stress on these circuits. The goal is to uncover new principles of feeding regulation, and to develop interventions and therapeutics for eating-related disorders.	NUS/NTU/SUTD	
28	Neurogenetics	Dr. Caroline Lei Wee	Research Fellow	weel@imcb.a-star.edu.sg	Neurogenetics of appetite and food choice	Hundreds of genetic variants have been associated with human obesity, food intake, and dietary preference, yet causal mechanistic insights have been difficult to achieve solely using mammalian models. The zebrafish model shares conserved genes, physiology and anatomy with mammals. Here we will systematically dissect the effects of the most promising candidate genes, including those identified from Singaporean cohorts, on zebrafish physiology and feeding behaviour. The goal is to efficiently link gene function to human phenotypes, and lay the groundwork for precision nutrition and therapeutics.	NUS/NTU/SUTD	

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28	Microbiome and Neuroscience	Dr. Caroline Lei Wee	Research Fellow	weel@imcb.a-star.edu.sg	Microbiome control of dietary choice	Accumulating evidence supports the hypothesis that commensal microbiota can influence our dietary responses and decisions; however causal insights are still lacking. In this project, we will leverage the simple yet conserved gut-brain circuits of the larval zebrafish model to elucidate specific mechanisms via which the gut microbiome modulates food decision-making. The goal is to identify novel gut-brain signaling pathways linking diet and microbiome function to feeding decisions, which could then be targeted for the treatment of eating-related disorders.	NUS/NTU/SUTD	
29	Neuroscience	Dr. Sarah Luo	Principal Investigator	sarah_luo@sbic.a-star.edu.sg	Brain-liver circuits in appetite regulation	Define neural circuits underlying communication between the liver and the brain, which regulate feeding behaviour and metabolism. Using mouse models, analyze peripheral neural circuits from single cell to systems level.	NUS/NTU/SUTD	
30	Neuroscience	Dr. Sarah Luo	Principal Investigator	sarah_luo@sbic.a-star.edu.sg	Brain regulation of hepatic function	Define neural circuits regulating liver function in response to changes in blood glucose, postprandial digested metabolites using mouse models.	NUS/NTU/SUTD	
31	IMCB/DUKE-NUS	Prof. SUN Lei	Associate Professor	lsun@imcb.a-star.edu.sg; sun.lei@duke-nus.edu.sg	RNA regulatory network in metabolic diseases	Modern sedentary lifestyle and consumption of calorie-dense food are precipitating a rapidly growing population of metabolic diseases such as obesity, type 2 diabetes, and heart diseases. It is predicted, for the first time, that the current generation will have a shorter life-span than the previous one. Understanding the molecular mechanisms underlying these metabolic diseases is urgently needed for us to prevent them or develop novel therapeutic strategies. Our studies are revealing a sophisticated RNA-regulatory network governing the development and function of major metabolic organs such as adipose and liver at various physiological and pathological conditions. We aim to determine the role of RNA regulatory network and how these RNA components crosstalk with the more well-understood protein network in the context of metabolic diseases. Our research topics encompass the regulation and function of non-coding RNAs such as microRNAs and lncRNAs, RNA processing such as splicing and editing, and RNA binding proteins.	NUS	https://www.duke-nus.edu.sg/directory/detail/sun-lei
32	MEL	Dr. Cyrus Beh	Research Scientist and Team Leader	behwjc@imcb.a-star.edu.sg	Development of Materials and Methods for Bioprinting	Bioprinting is broadly described as the use of additive manufacturing approaches to create structures that can support different biological functions. Most commonly, it is envisioned as a way to create in vitro models for disease and drug interaction studies. The same cell/material constructs may also be useful for creating cultured meat. In addition to these applications, we are also interested in applying the principles of bioprinting to industrial biomanufacturing. In order to support these varied functions, novel materials and functionalization are needed to create a versatile toolkit. This project will focus on the development of suitable materials, and bioprinting approaches, that will enable the application of the technology to these areas.	NUS/NTU/SUTD	