



## Nature SciCafe Asia

Biotech Science & Investment Forum

An Eureka Institute initiative



SINGAPORE

# QUICKFIRE

CHALLENGE

## METABOLIC DISEASE INNOVATION



Johnson & Johnson INNOVATION | JLABS



## ECOSYSTEM DAY

MONDAY, 18 SEPTEMBER 2017 AT MBS CONVENTION CENTRE, SINGAPORE

### WELCOME

Welcome to 'Ecosystem Day' presented by Nature SciCafe Asia 2017 and Singapore QuickFire Challenge – Metabolic Disease Innovation. Ecosystem Day marks the first collaboration between two novice initiatives specifically designed to build networks, to catalyse and nurture interactions and to create a diverse, international community across science.

This event is a collaboration between organisations that have contributed vastly to ecosystem building including ETPL, SMART, Johnson & Johnson Innovation, JLABS, Eureka Institute, Nature Biotechnology, Duke-NUS Medical School, SingHealth Research, National Research Foundation of Singapore, A\*Star and SGINnovate.

### NATURE SCICAFE ASIA 2017 & SINGAPORE QUICKFIRE CHALLENGE

Nature SciCafe Asia has been inspired by the need to create a productive interface between Translational Science, Pharma and Investors - designed as an opportunity for 'druggable' technologies from Asia Pacific (selected by *Nature Biotechnology* and *Nature Medicine*) to be showcased to investors, entrepreneurs, scientists, government agencies, and industry representatives. It allows attendees to be active players in the development of a strong biotech investment interface and connects rising stars in biomedical research with global investment communities.

The Singapore QuickFire Challenge, managed by Johnson & Johnson Innovation, JLABS, ETPL and SMART aims to identify and support entrepreneur, academic, and biotech researchers with innovative ideas that have the potential of making a major difference in the lives of the millions of people in Asia Pacific and around the world who suffer from metabolic diseases such as diabetes and obesity. The partnership between the organisations is also a commitment to nurture the healthcare ecosystem in Singapore and in other innovation hotspots around the world, with the aim of positively impacting human health through innovation.

### ECOSYSTEM DAY - CREATION OF ECOSYSTEMS IN BIOSCIENCES

The presenting theme is on 'Creation of Ecosystems in Biosciences' - hearing expert views from a local, regional and global perspective, and on how to build bridges across and within it. We are also honoured to host two esteemed keynote speakers - Dr. Juan Carlos López, Founder of Haystack Science and former Chief Editor of *Nature Medicine* and Ms. Melinda Richter, Global Head of Johnson & Johnson Innovation, JLABS. Not forgetting also, the showcase of six novel, Nature-selected technologies with high commercialisation potential, and the unveiling of the winners of the Singapore QuickFire Challenge – Metabolic Disease Innovation and the first public presentation of their research.

To our attendees, thank you for joining us. We hope that all will have a great experience and benefit greatly from Ecosystem Day.

Yours sincerely,  
Organisers of the Ecosystem Day

# 2017 PROGRAMME

TIME	ITEM	BY
11:00 - 11:10 am	Opening of Ecosystem Day	Professor Salvatore Albani, Director, SingHealth Translational Immunology and Inflammation Centre (STIIC) & President, Eureka Institute
<b>Singapore QuickFire Challenge - Metabolic Disease Innovation</b>		
11:10 - 11:15 am	Welcome address	Mr. Philip Lim, CEO, Exploit Technologies Pte Ltd (ETPL)
11:15 - 11:30 am	Insights into Singapore's Innovation and Enterprise Ecosystem	
11:30 - 11:45 am	Overview of Asia Pacific Innovation Ecosystem	Mr. Dong Wu, Head, Asia Pacific Innovation Center, Johnson & Johnson Innovation
11:45 am - 12:25 pm	Keynote Speaker I: Catalyzing Innovation to Deliver Transformational Solutions to People Globally	Ms. Melinda Richter, Global Head, Johnson & Johnson Innovation, JLABS
12:25 - 12:40 pm	Introduction to the Singapore QuickFire Challenge and Winners	
12:40 - 1:10 pm	Ecosystem Building: Audience Dialogue	Panelists: Mr. Philip Lim, Mr. Dong Wu, and the Singapore QuickFire Challenge winners Moderator: Ms. Melinda Richter
1:10 - 2:00 pm	Networking Lunch	-
<b>Nature SciCafe Asia 2017</b>		
2:00 - 2:05 pm	Introductory address	Dr. Andrew Marshall, Chief Editor, <i>Nature Biotechnology</i>
2:05 - 2:20 pm	Building bridges within & across Ecosystems - A Eureka Institute Experience	Professor Salvatore Albani, Director of SingHealth Translational Immunology and Inflammation Centre (STIIC) & President of Eureka Institute
2:20 - 2:40 pm	Selected Presentation I: G protein-coupled receptors: new targets for leukemia stem cell eradication	Dr. Jenny Wang, Head of the Cancer and Stem Cell Laboratory, University of New South Wales



# 2017 PROGRAMME

TIME	ITEM	BY
<b>NATURE SCICAFE ASIA 2017</b>		
<b>2:40 - 3:00 pm</b>	Selected Presentation II: A research translation journey, and inviting others along for the ride	A/Prof Kevin Pflieger, Head of Molecular Endocrinology and Pharmacology, Harry Perkins Institute of Medical Research & Centre for Medical Research, The University of Western Australia
<b>3:00 - 3:20 pm</b>	Selected Presentation III: Application of high throughput functional genomics in cancer drug-target discovery	A/Prof Wensheng Wei, Investigator, Biodynamic Optical Imaging Center, Beijing Advanced Innovation Center for Genomics, and Peking-Tsinghua Center for Life Sciences, Peking University
<b>3:20 - 3:50 pm</b>	Coffee break	-
<b>3:50 - 4:10 pm</b>	Selected Presentation IV: Using patient-derived induced pluripotent stem cells and neural organoids to understand neurodegeneration	Dr. Shi-Yan Ng, Junior Principal Investigator, Institute of Molecular and Cell Biology & Adjunct Assistant Professor, NUS (Yong Loo Lin School of Medicine)
<b>4:10 - 4:30 pm</b>	Selected Presentation V: Biodegradable Polymer Nanoparticles for Molecular Imaging	Dr. Kanyi Pu, Associate Professor, School of Chemical and Biomedical Engineering, Nanyang Technological University
<b>4:30 - 4:50 pm</b>	Selected Presentation VI: A novel approach for pulmonary arterial hypertension	Dr. Nam Hoon Kwon, Senior Researcher and Research Professor, Medicinal Bioconvergence Research Center (Biocon), Seoul National University
<b>4:50 - 5:50 pm</b>	Keynote Speaker II: Challenges & Opportunities in the Commercialisation of Academic Science	Dr. Juan Carlos López, Founder, Haystack Science
<b>5:50 - 6:00 pm</b>	Summary & Closing Session	Dr. Benjamin Seet, Executive Director, Biomedical Research Council, A*STAR



# GUEST SPEAKERS

## **SPEAKER I**

**SPEAKER: MR. PHILIP LIM**

**TITLE: INSIGHTS INTO SINGAPORE'S INNOVATION AND ENTERPRISE ECOSYSTEM**

**SYNOPSIS:** ETPL is the commercialisation arm of A\*STAR – Singapore's lead agency for science and research and development, which engages the industry to drive innovation and advance technology for economic and social impact. ETPL aims to be the one-stop coinnovation partner of choice to grow businesses in Singapore and beyond through translating inventions and intellectual capital into marketable products, processes and services.

In his talk, Philip will speak more on the progress and developments of Singapore's innovation and enterprise ecosystem. We would also share ideas and insights on growing the local ecosystem, and how to leverage the ecosystem to achieve commercialisation success.

## **SPEAKER II**

**SPEAKER: MR. DONG WU**

**TITLE: OVERVIEW OF ASIA PACIFIC INNOVATION ECOSYSTEM**

**SYNOPSIS:** Asia Pacific is a global technology powerhouse with rapidly growing capabilities in life science research, development, and commercialisation. The Asia Pacific Innovation Center, under the Johnson & Johnson Innovation umbrella of businesses, plays a key role in identifying and nurturing innovation in the region with the aim of accelerating early-stage solutions that address the world's most pressing healthcare needs. Dong Wu, Head of Johnson & Johnson Innovation's Shanghai-based Asia Pacific Innovation Center, will provide an overview of the business' open innovation strategy and discuss how current innovation and entrepreneurship are paving the way for Asia Pacific to become the next global hotspot for life science innovation.

## **SPEAKER III**

**SPEAKER: MS. MELINDA RICHTER**

**TITLE: CATALYZING INNOVATION TO DELIVER TRANSFORMATIONAL SOLUTIONS TO PEOPLE GLOBALLY**

**SYNOPSIS:** Advances in science and technology make it possible to deliver transformational products that can help patients live longer, more productive lives. Unfortunately, many great healthcare ideas never get to see the light of day. How do we solve this problem? What sort of global ecosystem must be in place for innovation to succeed, and what does it take to play in that ecosystem? Hear from Melinda Richter, Global Head of Johnson & Johnson Innovation, JLABS, what important pieces are necessary to make the global innovation ecosystem successful for entrepreneurs to deliver much needed solutions to patients.

## **SPEAKER IV**

**SPEAKER: PROFESSOR SALVATORE ALBANI**

**TITLE: BUILDING BRIDGES WITHIN & ACROSS ECOSYSTEMS - THE EUREKA INSTITUTE EXPERIENCE**

**SYNOPSIS:** The Eureka Institute for Translational Medicine is a non for profit foundation whose mission is to develop translational medicine in order to harness technologies and develop knowledge and competences to ultimately address unmet medical needs, and whose vision is to build and foster a global community of translational medicine professionals sharing its mission for the tangible benefit of patients and society as a whole.

Eureka will achieve its mission by catalysing and integrating education, research and policy making in an international Translational Medicine Ecosystem which must be impactful for Society. In this talk, we will discuss the importance of creating local ecosystems which are integrated into a global Network, and discuss our experience and future plans.

## **SPEAKER V**

**SPEAKER: DR. JUAN CARLOS LÓPEZ**

**TITLE: CHALLENGES & OPPORTUNITIES IN THE COMMERCIALISATION OF ACADEMIC SCIENCE**

**SYNOPSIS:** For the past few years, there has been a strong drive to commercialise the discoveries that emerge from academic institutions. In a relatively short time, investors and Pharma companies have explored a large number of models looking for the best way to interact with academia. At the same time, governments have become more active in this space, promoting the creation of biotech ecosystems as engines of economic development, but many challenges remain.

In this talk, I review the current state of play in this field, the obstacles that prevent progress, and possible ways in which the relationship between academia and investors can be optimised.



# NATURE SCICAFE ASIA 2017 SELECTED PRESENTATIONS

## SELECTED PRESENTATION I

**SPEAKER: DR. JENNY WANG**

**TITLE: G PROTEIN-COUPLED RECEPTORS: NEW TARGETS FOR LEUKEMIA STEM CELL ERADICATION**

**SYNOPSIS:** While G protein-coupled receptors (GPCRs) represent one of the most successful and important drug targets – approximately 36% of currently marketed drugs target human GPCRs, their role in cancer stem cells has only begun to be appreciated. We have recently reported an essential role for G protein-coupled receptor 84 (GPR84) in regulating oncogenic  $\beta$ -catenin signaling and in maintaining leukemia stem cell properties in acute myeloid leukemia (a lethal blood cancer); inhibition of GPR84/ $\beta$ -catenin signaling impairs leukemia stem cell selfrenewal, underlining its therapeutic value in developing novel targeted therapies for AML treatment.

## SELECTED PRESENTATION II

**SPEAKER: ASSOCIATE PROFESSOR KEVIN PFLEGER**

**TITLE: A RESEARCH TRANSLATION JOURNEY, AND INVITING OTHERS ALONG FOR THE RIDE**

**SYNOPSIS:** Our development of a molecular pharmacology profiling platform, including the proprietary 'Receptor-HIT', is providing an engine for discovering new, and repurposing old, pharmaceuticals and combinations thereof, recently validated by successful Phase 2a clinical trial results. Furthermore, having travelled the path of translating research out of an academic setting for over a decade, I am now leading 'Accelerating Australia', a national consortium helping others to do the same.

## SELECTED PRESENTATION III

**SPEAKER: ASSOCIATE PROFESSOR WENSHENG WEI**

**TITLE: APPLICATION OF HIGH-THROUGHPUT FUNCTIONAL GENOMICS IN CANCER DRUG-TARGET DISCOVERY**

**SYNOPSIS:** We have developed a series of CRISPR-based screening technical platforms which could be applied for novel cancer drug-target discovery. These include: 1) genome-wide functional screen of coding genes; 2) genome-wide functional screen of lncRNAs; 3) pgRNA library for large-fragment deletion screening and synthetic lethality gene-pair identification; 4) novel method for the mapping of functional domain with single amino acid resolution - this method could also identify all potential amino acids whose mutations confer cancer drug resistance; and 5) novel barcoding system for much improved CRISPR/Cas9 screening — this new design has dropped the screening cost over 20 times, with much improved efficiency.

## SELECTED PRESENTATION IV

**SPEAKER: DR. SHI-YAN NG**

**TITLE: USING PATIENT-DERIVED INDUCED PLURIPOTENT STEM CELLS AND NEURAL ORGANIDS TO UNDERSTAND NEURODEGENERATION**

**SYNOPSIS:** Age-onset neurodegeneration is one of the top causes of death globally in 2015 (World Health Organization). Using an established stem cell-based system to model Amyotrophic Lateral Sclerosis, we show that metabolic dysfunctions in the diseased motor neurons can be partially corrected by a small molecule.

## SELECTED PRESENTATION V

**SPEAKER: DR. KANYI PU**

**TITLE: BIODEGRADABLE POLYMER NANOPARTICLES FOR MOLECULAR IMAGING**

**SYNOPSIS:** The convergence of medicine and nanotechnology has been providing new opportunities to better understand fundamental biology, monitor health, perform diagnosis and treat diseases. Semiconducting polymer nanoparticles (SPNs) transformed from optically and electrically active polymers have emerged as a new class of optical nanomaterials. As those polymers are completely organic and biologically inert, SPNs essentially circumvent the issue of heavy metal ion-induced toxicity to living organisms, possessing good biocompatibility. In this talk, I will present a new kind of biodegradable SPNs for ultrasensitive molecular imaging. The potential clinical applications of these SPNs will be discussed in imaging-guided surgery including lymph node mapping and tumor imaging. In addition, these nanoparticles can be developed into useful tools for real-time in vivo evaluation of drug-induced hepatotoxicity, a long-standing concern of modern medicine.

## SELECTED PRESENTATION VI

**SPEAKER: DR. NAM HOON KWON**

**TITLE: A NOVEL APPROACH FOR PULMONARY ARTERIAL HYPERTENSION**

**SYNOPSIS:** Pulmonary arterial hypertension (PAH) is a rare disease with a 3-year survival rate of about 50%. Chronic inflammation due to immune cell infiltration is known as an initiation events in most of fibrosis-related diseases such as PAH, but there is no treatment to eliminate the root cause of PAH. Here we suggest a novel approach for PAH, which can modulate monocytes/macrophages infiltration into damaged tissue. We identified an aminoacyl-tRNA synthetase which has a crucial role in the infiltration of monocytes/macrophages and are developing compounds and monoclonal antibodies that inhibit the target protein. Our antibody significantly reduced PAH symptoms in vivo without toxicity. We expect that our novel approach can be an effective treatment for PAH meeting the unmet need.

## BIOGRAPHIES OF SPEAKERS, MODERATORS AND PANELISTS



**Dr. Andrew Marshall** has been Chief Editor of *Nature Biotechnology* since 2000. Since that time, the journal's impact factor has increased from 11.0 to 43.1. It is currently among the top 10 primary research journals in the world. As well as frequently speaking on biotechnology issues at international meetings, he also regularly heads and organises conferences and symposia for the journal. He has over 24 years of experience in scientific publishing, and was previously Editor of *Current Opinion in Biotechnology* from 1992 to 1996. He has written over 150 articles and editorials on science and technology for the popular media, including *The Economist* and *Popular Science*, and for trade publications.

In 2003, he launched Bioentrepreneur ([www.nature.com/bioent](http://www.nature.com/bioent)), a free web portal that provides didactic information and advice to aspiring entrepreneurs seeking to start biotech companies. He also runs a series of networking events (SciCafes) in Boston, New York, San Francisco, San Diego, Houston, London and Singapore to promote pioneering translational work by junior faculty. He is currently a Voluntary Professor of Biochemistry and Molecular Biology at the University of Miami. He obtained his PhD and postdoctoral experience in molecular biology and microbiology at King's College London and is the recipient of the Helen White Prize.



**Dr. Benjamin Seet** joined A\*STAR in 2011 and assumed the position of Executive Director, Biomedical Research Council a year later. He currently oversees the council's 10 research institutes which engage in scientific and translational research & development that span the pharmaceutical, medical technology, food & nutrition, and consumer care industries. Prior to joining A\*STAR, Dr. Seet served in the Singapore Armed Forces for over 20 years before retiring as the Chief of the SAF Medical Corps as a Brigadier General. Dr. Seet also served as Chief Medical Officer of the United Nations Department of Peacekeeping Operations in New York, where he oversaw medical support for UN personnel in 16 post-conflict countries.

Dr. Seet has served on various boards and advisory committees, including for the Ministry of Health, National Medical Research Council, Health Promotion Board, Agri-food and Veterinary Authority, Nanyang Technological University, and Singapore Technologies Engineering. Dr. Seet graduated with a Bachelor in Medicine and Surgery, and Master of Medicine in Ophthalmology from the National University of Singapore. He was a Fellow of the Royal College of Surgeons in Edinburgh, and holds a Master of Public Health from Johns Hopkins University.





**Mr. Dong Wu** is the Head of Asia Pacific Innovation Center, Johnson & Johnson Innovation. Dong joined the Innovation team from Johnson & Johnson's Consumer business where he was Vice President of R&D, responsible for the Global Engineering Organization and leading the transformation of the emerging markets R&D groups. Dong joined Johnson & Johnson as the Head of Emerging Markets R&D where he focused on developing personal care products for emerging markets. Dong facilitated programs aimed at developing high value products and driving a culture of innovation. Dong has a Bachelor of Science degree from Fudan University and a MBA from China Europe International Business School.



**Dr. Howard Califano** leads and manages the overall operation of the Innovation Centre. He brings experience from the academic, industry and financial sectors focused on developing businesses around emerging technology. He has founded, held executive management positions, acted as Member of the Board of Directors and CEO of multiple companies in the United States and Asia. He was Consulting Director of Bio\*One Capital Pte Ltd and acted as the interim CEO of several of their portfolio companies.

Dr. Califano was the CEO of Johns Hopkins Singapore and The Johns Hopkins-NUH International Medical Centre. At Johns Hopkins Singapore, he led and managed a team of 80 researchers, physicians, administrators and staff, to establish a Center of Excellence in research, education and patient care. From 1995 to 1999, Howard was Assistant Dean of The Johns Hopkins University, School of Medicine, where he was responsible for its business development activities, including the Office of Technology Licensing which is tasked to commercialise all medical discoveries originating at Hopkins.



**Dr. Juan Carlos López** is Founder of Haystack Science, a firm focused on connecting up-and-coming scientists working in novel research areas with knowledgeable investors interested in developing valuable advances in biomedicine. A native of Oaxaca, Mexico, Juan Carlos obtained his B.S. degree at the Universidad Nacional Autónoma de México, majoring in neuroscience. He got his Ph.D. degree from Columbia University (New York), working in the laboratory of Nobel Laureate Eric Kandel, and carried out postdoctoral research at the Instituto Cajal (Madrid).

In 2000, Juan Carlos helped launch and became Chief Editor of Nature Reviews Neuroscience in London. Four years later, he returned to New York as Chief Editor of the prestigious journal *Nature Medicine*. In 2014, Juan Carlos joined Hoffmann-La Roche as Global Head of Academic Relations and Collaborations, leading a team in charge of fostering scientific interactions between the company and academic institutions worldwide. Juan Carlos has served on the Boards of multiple biotechnology and non-profit organisations, most recently on the Board of Directors of Keystone Symposia.



**Ms. Melinda Richter** is the Global Head of Johnson & Johnson Innovation, JLABS, fostering the Johnson & Johnson Family of Companies external R&D engine and supporting the innovation community by creating capital-efficient commercialisation models that give early stage companies a big company advantage. By providing infrastructure, services, educational programs and networks in global hotspots, JLABS is the best place to start a biotech company.

Prior to joining JLABS, Melinda was Founder and CEO of Prescience International, an award-winning firm dedicated to accelerating research to the patient. Melinda founded Prescience after she had a medical emergency that left her questioning the efficiency and efficacy of the healthcare system. With the tenacity and resolve of a patient looking for a better solution, she set out to create a better model, which now forms the basis for JLABS' operational infrastructure. Prior to starting Prescience, Melinda held posts across a variety of functional areas with a global corporation, Nortel Networks, in locations such as Research Triangle Park, New York, Toronto, London, Hong Kong and Beijing before arriving in San Francisco. She also initiated, raised capital and secured large corporate deals for several companies in both the life science and technology space. She holds a Bachelor of Commerce from the University of Saskatchewan in Canada and a MBA from INSEAD in France. Melinda is an active board member and Treasurer of the California Life Sciences Association (CLSA).



**Mr. Philip Lim** is currently the Chief Executive Officer of Exploit Technologies (ETPL), which manages all A\*STAR intellectual properties through to commercialisation. He has led the company in performance outcomes that exceeded world benchmarks especially in licensing agreements and start-ups formed. He was also instrumental in introducing several innovation and productisation initiatives such as the Diagnostics Development Hub and the A\*STAR Central Incubation. These brought new impact to the innovation and enterprise ecosystem on collaboration and joint programmes. These are aimed at building long term value to innovative enterprises in Singapore. Under his leadership, ETPL concluded over 1,200 license agreements mostly with local companies. A\*STAR's startup raised over \$100m collectively.

Mr. Philip Lim currently sits on the boards of IP Academy and CommonTown Pte Ltd. Mr. Philip Lim spent 20 years with the Ministry of Defence (MINDEF). In his last appointment as Brigadier General/Head Joint Logistics, he was the leading senior specialist on logistics and engineering matters to the Chief of Defence Force. Prior to this, he was Chief of Logistics in the Army, where he led the operations and development of Army logistics, engineering and maintenance functions.

He received his MBA from the National University of Singapore in 2008 and holds a Master of Science from Cranfield Institute of Technology in the UK. He graduated with a Bachelor of Science in Mechanical Engineering (Hons) from the National University of Singapore. In recognition of his significant contributions to the SAF, Mr. Philip Lim was awarded the Commendation Medal (Military) in 1995 and the Public Administration Medal, Silver (Military) in 2004.



**Professor Salvatore Albani**, Professor at Duke-NUS Graduate Medical School Singapore, Director of the SingHealth Translational Immunology & Inflammation Centre, and Senior Clinical Scientist with the Paediatrics Academic Clinical Program. Professor Albani is an internationally renowned rheumatologist and immunologist. His fundamental research interest is in understanding human immunity and contributing the knowledge to therapeutic and diagnostic advancements. He developed several innovative approaches in the area of induction and maintenance of immune tolerance in humans, being responsible for the whole translational process from idea to conclusion of Phase II clinical trial in autoimmune inflammatory diseases, which have a large impact on society and individuals. This translational research itinerary has been the original backbone of his career, as witnessed by a rich publication trail (among others *Nature Medicine*, *Lancet*, *JCI*, *PNAS*, *Nature Rheumatology*, *A&R*, *ARD*, etc) and by approximately 100 patents, disclosures and applications.

## NATURE-SELECTED SPEAKERS



**Dr. Jenny Wang** is Head of the Cancer and Stem Cell Laboratory at the University of New South Wales, Sydney, Australia. She returned to Australia in 2011 from Harvard Medical School, where she undertook postdoctoral research in Leukemia Stem Cell Biology (2005-2011). The main research focus in Dr Wang's Laboratory is to develop novel therapeutic strategies specifically targeting leukemia stem cells that are often resistant to commonly used cancer therapies and that are now believed to be the engine driving the growth of a tumour and the root cause for treatment failure and relapse in leukemia with poor outcome.



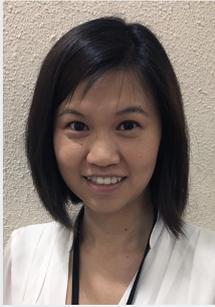
**Associate Professor Kevin Pflieger** is Head of Molecular Endocrinology and Pharmacology at the Harry Perkins Institute of Medical Research ('Perkins') and Centre for Medical Research, The University of Western Australia (UWA). He is a National Health and Medical Research Council RD Wright Biomedical Research Fellow (Level 2), as well as being Chief Scientific Advisor of ASX-listed Dimerix Limited, a spin-out company from the Perkins and UWA that has recently announced successful Phase 2a clinical trial results. He was Chief Scientific Officer of Dimerix Bioscience Pty Ltd from 2008-2014. A/Prof Pflieger is Chair of the Executive Committee of Accelerating Australia, a life sciences consortium working to advance the biomedical innovation ecosystem across Australia, supported by the MedTech and Pharma Growth Centre (MTPConnect). He is also Chair of the Australasian Society of Clinical and Experimental Pharmacologists and Toxicologists Scientific Advisory Committee, member of the International Advisory Group of the British Pharmacological Society, member of the Western Australian State Committee of AusBiotech, and member of the Western Australian Health Translation Network (WAHTN) Management Committee.



**Associate Professor Wensheng Wei** received his bachelor degree of Biochemistry from Peking University, and his Ph.D. degree of Genetics from Michigan State University. He then went to Prof. Stanley Cohen's lab at Stanford University School of Medicine for post-doctoral training, and became a research associate in 2005. Dr. Wei returned to Peking University in 2007 and became a principle investigator at the School of Life Sciences. He is currently jointly appointed as Investigator by Biodynamic Optical Imaging Center (BIOPIC), Beijing Advanced Innovation Center for Genomics (ICG), and Peking-Tsinghua Center for Life Sciences (CLS) at Peking University.

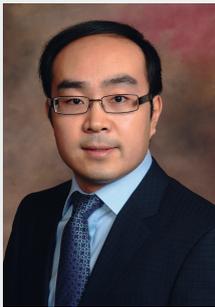
Wei group is mainly focused on the development of eukaryotic genome editing technology, especially their applications in dynamic imaging and high-throughput functional genomics. The combination of forward and reverse genetic means is employed, often in a high-throughput fashion, for the identification of genes or non-coding RNAs important for host response during microbial infections or tumorigenesis. Wei has made major contributions in the establishment of CRISPR-based functional screening techniques for both coding genes (*Nature* 2014) and lncRNAs (*Nature Biotechnology* 2016) in human cells. He has been granted four patents. Wei's honors include China Patent Award, Tan Jiazhen Life Science Award, Scientific Chinese Man of the Year, Zheng Changxue Teaching Award, Bayer Investigator Award, Roche Chinese Young Investigator Award, Peking University Dongbao Fellowship, and the most popular teacher of School of Life Sciences award.





**Dr. Shi-Yan Ng** is a junior Principal Investigator at the Institute of Molecular and Cell Biology (IMCB) and adjunct Assistant Professor at National University of Singapore (Yong Loo Lin School of Medicine) since October 2015. Her research work centers around using patient-derived induced pluripotent stem cells (iPSCs) and more recently neural organoid technologies to unravel early events in human neurodegeneration that can be therapeutically targeted. Dr. Ng has more than 10 years of experience with human pluripotent stem cells and neuronal differentiation, and has published a number of high impact studies that are highly cited. For her research excellence, Dr. Ng has won the Merck Millipore Young Scientist Award (Third Prize) in 2011 and the A\*STAR International Fellowship in 2012.

During her postdoctoral training in Professor Lee Rubin's lab at Harvard University, she was also involved in several collaborations with biotech companies including Vertex Pharmaceuticals, Evotec A.G and Syros Pharmaceuticals. As such, she aims to close the translational gap through her research using patient-derived stem cells.



**Dr. Kanyi Pu** has been an Associate Professor in the School of Chemical and Biomedical Engineering (SCBE) at Nanyang Technological University since June 2015. He did his MS (2007) with Professor Wei Huang (CAS member) at Fudan University in China. He then came to Singapore and did his PhD (2011) at National University of Singapore. He moved to Stanford University School of Medicine for his postdoctoral study in 2011, under the supervision of Professor Jianghong Rao and the directorship of Professor Sanjiv Sam Gambhir at the molecular imaging program at Stanford (MIPS).

As an active member of MIPS and the Center for Cancer Nanotechnology Excellence and Translation (CCNE-T), he made significant contributions to organic polymer based imaging probes and technologies, such as photoacoustic imaging, chemiluminescence imaging and in vivo imaging of reactive oxygen and nitrogen species. Dr. Pu has published more than 70 journal papers, 2 book chapters and 6 patents. With a h-index of 40, his work has been highlighted by many world-renown scientific journals such as *Nature Biotechnology*, *Nature Methods*, and *Cell Express* et al.. He also sits on the Editorial Board of *Advanced Biosystems*.



**Dr. Nam Hoon Kwon** graduated from College of Natural Sciences and College of Veterinary Medicine, Seoul National University (Korea). She received her PhD in Veterinary Microbiology from Seoul National University. She worked at the University of Idaho as a visiting scholar from 2005 to 2007. She has been working as a team leader and senior researcher at Medicinal Bioconvergence Research Center (Biocon), Seoul National University from 2011. At Biocon, she investigated disease-related functions of ARSs and became involved in early drug development, such as mechanism study, target validation, assay development and drug screening. She is in charge of Biocon Practical Development Project.

At Biocon she has worked in the field of translational machinery focusing on the catalytic and non-catalytic functions of aminoacyl-tRNA synthetases (ARSs) in diseases for more than 8 years. She published dozens of papers on the mechanism of ARSs and POC of lead compounds in the journals of *PNAS*, *J. Cell Sci.*, *Cell*, *Top. Curr. Chem.*, *Nat. Chem. Biol.*, etc. She was awarded "A men of Merit (R&D)" by Korean Ministry of Science in 2013.

# PIGEONHOLE LIVE

We have engaged Pigeonhole Live, an interactive Q&A platform to create a more dynamic session for our attendees. With this platform, you can post questions to the speakers, and vote for questions that others have asked - all by using your mobile, tablet or laptops.

Here's how to get started.

STEP 1: Go to [www.pigeonhole.at](http://www.pigeonhole.at)

STEP 2: Enter the event passcode - **EC02017**

STEP 3: Click on the session

STEP 4: Start posting your questions or like what others have posted.

Questions with more likes will automatically move up the list.

**EC02017**



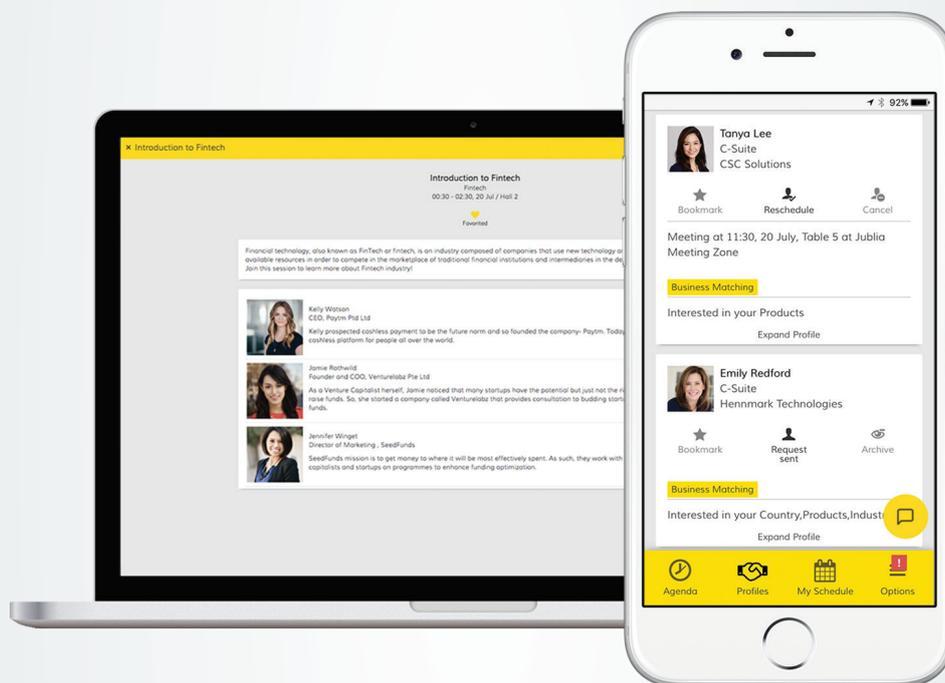
# JUBLIA

To create a more valuable experience, all our attendees will have access to JUBLIA - an exclusive match-making program that allows you to organise meaningful meetings with your fellow attendees - all based on your interest.

With the program, you can find potential clients, locate investment opportunities, forge lucrative partnerships or simply broaden your personal network. A human concierge will also be available to assist you each step of the way.

Prior to the event, all attendees will receive an exclusive email invite to your registered email on how to access it.

*All personal contact information will be kept confidential, and will not be shared via the platform.*



# WIFI

WIFI has been made available for all our guests. Please enquire for the log-in details when you register at the event.

# SPECIAL ACKNOWLEDGEMENT TO THE ORGANISERS OF ECOSYSTEM DAY 2017

**Dr. Sidney Yee**, CEO, Diagnostics Development Hub & Executive Vice President, Exploit Technologies Pte Ltd (ETPL)

**Dr. Stefan Hart**, Senior Director, New Ventures, Singapore and India, Johnson & Johnson Innovation

**Professor Salvatore Albani**, President, Eureka Institute of Translational Medicine & Director, SingHealth Translational Immunology and Inflammation Centre (STIIC), SingHealth

**Dr. Howard Califano**, Director, Singapore-MIT Alliance for Research & Technology (SMART) Innovation Centre

**Mr. Julien Dedman**, Asia- Pacific Innovation Communication Leader, Johnson & Johnson Innovation

**Ms. Jenny Oan**, Communication Specialist, Johnson & Johnson Innovation

**Ms. Brittney Sabbah**, Innovation Activation Specialist, Johnson & Johnson Innovation, JLABS

**Dr. Yongfeng Li**, Principal Manager, Diagnostics Development Hub, Agency for Science, Technology and Research (A\*STAR)

**Ms. Tay Ru Yan**, Assistant Head, Agency for Science, Technology and Research (A\*STAR)

**Ms. Serene Lee**, Manager, Exploit Technologies Pte Ltd (ETPL)

**Ms. Candy Eevie Yeo**, Events and Programs Executive, Singapore-MIT Alliance for Research & Technology (SMART)

**Ms. Lydia Ng**, Communication Specialist, Singapore Health Services (SingHealth) Office of Research, Singapore Health Services (SingHealth)





## Nature SciCafe Asia

Biotech Science & Investment Forum

An Eureka Institute initiative



SINGAPORE

# QUICKFIRE

CHALLENGE

## METABOLIC DISEASE INNOVATION



Johnson & Johnson INNOVATION | JLABS



### ORGANISED BY:



### SUPPORTED BY:



### IN ASSOCIATION WITH:

