ANNIVERSARY SYMPOSIUM

BIOMEDICAL R&D IN SINGAPORE
WHAT NEXT?
Thursday, 9 March 2017
Canning Ballroom
Raffles City Convention Centre
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“Biomedical R&D in Singapore – What Next?” is a research symposium jointly organised by ETC and D3 in celebration of ETC’s 10 years of establishment. As the title suggests, this symposium aims to explore some key issues that will guide how research enterprises position themselves for the future of biomedical research.

Our goal is to discuss:

- Where should we focus, considering the five priority domains (Cancer, Infectious Diseases, Diabetes, Heart disease, Stroke)?
- How do we achieve global competitiveness? What should be the balance of knowledge generation versus translational R&D?

“Biomedical R&D in Singapore – What Next?” was initiated by our CEO, Dr Alex Matter. Instead of looking back at the last 10 years, we were tasked to plan a forward-looking symposium that would be of interest to the wider scientific community in Singapore. This symposium would not have been possible without the enthusiastic support of the entire anniversary organising committee. Cecilia and her team merit particular mention for their invaluable perspective and logistical contributions; Shan Ho for his effort setting up the symposium webpage and Zhi Ying for directing us to potential sponsors.

Professor Edward Holmes deserves particular mention for his advice and help in identifying speakers. This symposium is appreciative of all the speakers, panelists, session chairs and moderators who have kindly agreed to grace this occasion, some of whom have travelled great distances. Lastly, we are grateful to our generous sponsors for funding this symposium.
# PROGRAMME SCHEDULE

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<th>TIME</th>
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<tr>
<td>0900 – 1000 hrs</td>
<td>Registration&lt;br&gt;Guests to be seated by 0955 hrs</td>
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<tr>
<td>1000 – 1015 hrs</td>
<td><strong>Opening and Welcome Speech</strong>&lt;br&gt;Prof. Alex Matter, M.D.&lt;br&gt;Chief Executive Officer – ETC and D3, A*STAR</td>
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<td>1015 – 1045 hrs</td>
<td><strong>Keynote Lecture:</strong>&lt;br&gt;“Translational R&amp;D in A<em>STAR – Driver of the Future”&lt;br&gt;Speaker: Prof. Edward Holmes, M.D.&lt;br&gt;A</em>STAR Senior Fellow</td>
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<td>1045 – 1115 hrs</td>
<td><strong>Tea Break</strong></td>
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<td>Chairperson for Plenary Session:&lt;br&gt;Prof. Sir David Lane, A*STAR Chief Scientist</td>
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<td>1115 – 1215 hrs</td>
<td><strong>Plenary Session</strong>&lt;br&gt;“Engineered T Cells as Cancer Therapeutics”&lt;br&gt;Speaker 1: Prof. Carl H. June, M.D.&lt;br&gt;Richard W. Vague Professor in Immunotherapy, University of Pennsylvania</td>
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<td>“Linking the Discovery of Cancer Vulnerabilities to Therapeutic Development”&lt;br&gt;Speaker 2: Prof. William Sellers, M.D.&lt;br&gt;Core Faculty Member at the Broad Institute, Dana-Farber Cancer Institute</td>
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<td>1215 – 1300 hrs</td>
<td><strong>Panel Discussion 1:</strong>&lt;br&gt;New Concepts and Technologies in Drug Discovery&lt;br&gt;Moderated by Prof. Patrick J. Casey (Duke-NUS)&lt;br&gt;Prof. Carl H. June, Prof. William Sellers, Prof. Sir David Lane, Prof. Huck Hui Ng (GIS)</td>
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<td>1300 – 1400 hrs</td>
<td><strong>Lunch</strong></td>
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<td><strong>Chairperson for Afternoon Session 1:</strong>&lt;br&gt;Prof. Thomas Dick, National University of Singapore</td>
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<td>1400 – 1500 hrs</td>
<td><strong>Infectious Diseases Track</strong>&lt;br&gt;“From Bench to PDC: The Story of ETC-670”&lt;br&gt;Speaker 1: Dr Brian Chia&lt;br&gt;Group Leader, Experimental Therapeutics Centre</td>
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<td>“New Drugs Against Nasty Bugs – Bortezomib Analogues for Drug-Resistant TB”&lt;br&gt;Speaker 2: Dr Anders Poulsen&lt;br&gt;Research Expertise Leader, Experimental Therapeutics Centre</td>
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<td>“SARS to Zika, A Decade in the Frontline of Medical Diagnostics”&lt;br&gt;Speaker 3: Dr Masafumi Inoue&lt;br&gt;Senior Research Scientist, Experimental Therapeutics Centre</td>
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<td>1500 – 1530 hrs</td>
<td><strong>Tea Break</strong></td>
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<td><strong>Chairperson for Afternoon Session 2:</strong>&lt;br&gt;Prof. David M. Virshup, Duke-NUS Graduate Medical School</td>
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<td>1530 – 1630 hrs</td>
<td><strong>Oncology Track</strong>&lt;br&gt;“Protein Methyltransferases as Targets for Anticancer Therapy”&lt;br&gt;Speaker 1: Dr Joma Joy&lt;br&gt;Group Leader, Experimental Therapeutics Centre</td>
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<td>“Proline Metabolism As a Target for Cancer Therapy”&lt;br&gt;Speaker 2: Dr Fui Mee Ng&lt;br&gt;Senior Research Fellow, Experimental Therapeutics Centre</td>
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<td>“Mnk Inhibition and Its Repercussion in Cellular Protein Phosphorylation”&lt;br&gt;Speaker 3: Dr Simone Dorfmueller&lt;br&gt;Research Scientist, Experimental Therapeutics Centre</td>
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<td>1630 – 1700 hrs</td>
<td><strong>Panel Discussion 2:</strong>&lt;br&gt;Potential and Challenges for Biomedical Innovation in Singapore&lt;br&gt;Moderated by Prof. Sir David Lane&lt;br&gt;Prof. Edward Holmes, Prof. David M. Epstein (Duke-NUS), Dr Jeffrey Hill (ETC) and Dr Chandra Verma (BII)</td>
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<td>1700 – 1745 hrs</td>
<td><strong>Cocktail and Networking Session</strong></td>
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MORNING SESSION
Alex Matter is CEO of the Experimental Therapeutics Centre since April 2009 and since January 2012 CEO of the newly created D3 platform, A*STAR, Singapore. Previously, he had spent five and a half years as Director of the Novartis Institute for Tropical Diseases (NITD), from October 2003 to February 2009. Prior to this role, Dr Matter was Global Head of Oncology Research for Novartis Pharmaceuticals Corporation. Dr Matter played an important role in the success of several anticancer drugs, including Gleevec/Glivec® and more recently, Tasigna®, building and leading the teams that discovered these and several other anticancer drugs as well as one HIV protease inhibitor (Reyataz®) that is marketed by another company.

Dr Matter received his medical degree from the University of Basel. He also had fellowships at the Swiss National Science Foundation and the Swiss Academy for Medical Sciences. He has published more than 100 scientific articles and several book chapters in the area of oncology and haematology. He is emeritus Professor of the Medical Faculty of the University Basel and an Honorary Adjunct Professor of the Department of Pharmacology, YLL School of Medicine, NUS in Singapore. He is also a member of the Board of the Health Sciences Authorities in Singapore.

He is a member of the American Association for Cancer Research, and member of the Board of Curiox, a Singapore-based start up company. He is also a chair/ member of several Scientific Advisory Boards. He is an elected member of the Swiss Academy of Medical Sciences.

Dr Matter is the recipient of the Life-time Achievement Award from IBC Life Sciences, the 13th Warren-Alpert prize and the AACR-Bruce F. Cain Memorial Award. Recently he was awarded the 2013 Szent-Györgyi Prize from the US National Foundation for Cancer Research.
Edward Holmes was appointed a Howard Hughes Medical Investigator at Duke University School of Medicine in 1974 and later became the James B. Wyngaarden Professor of Medicine. He was recruited to the University of Pennsylvania School of Medicine in 1991 as the Chair of the Department of Medicine and the Frank Wister Thomas Professor of Medicine and Genetics. In 1997 he became the Joseph Grant Professor in the School of Medicine, the Senior Associate Dean for Research, Vice President of Translational Medicine and Clinical Research, and Special Counsel to the President of the University on Biomedical Research at Stanford University. In January 1999 Dr Holmes returned to Duke University as the Dean of the School of Medicine and Walter Kempner Professor in Medicine and Genetics. Dr Holmes was appointed Vice Chancellor for Health Sciences and Dean of the School of Medicine at the University of California, San Diego in the fall of 2000 and served in this role until October 2006. He is currently a Distinguished Professor of Medicine at the University of California, Vice Chancellor/Dean of Health Sciences Emeritus at the University of California, San Diego, and CEO/President of the Sanford Consortium for Regenerative Medicine. Dr Holmes became the Executive Deputy Chairman of the Biomedical Research Council and the Executive Chairman of the National Medical Research Council in Singapore in October 2006; he is currently a Senior Fellow in A*STAR and Advisor to the National Research Council of Singapore. He also holds an appointment as the Lien Ying Chow Professor of Medicine at the Yong Loo Lin School of Medicine, National University of Singapore.

Dr Holmes has engaged in basic biomedical and clinical research throughout his academic career and his laboratory has focused on the molecular bases of human disease.

Dr Holmes has served on the Council of Advisors for the National Institute for Diabetes, Digestive, and Kidney Diseases of the National Institutes of Health, and he served as Chair of the Research Advisory Board of GlaxoSmithKline. He also served on the Grand Challenges Explorations Innovation Review Panel for the Gates Foundation. He has received Distinguished Alumnus Awards from the University of Pennsylvania and Duke University. He has been elected to membership in the American Society for Clinical Investigation, the Association of American Physicians, Fellow of the American Association for the Advancement of Science, and a member of the United States National Academy of Medicine.
Sir David Lane is one of the scientists credited with the landmark discovery of cancer gene p53 in 1979. p53, called the “Guardian of the genome” is the most frequently mutated gene in human cancer as more than half of human tumours contain mutations in the gene.

He was previously the Director of the Cancer Research UK Cell Transformation Research Group and Professor of Oncology at the University of Dundee in Scotland. He had also held the position of Chief Scientist with Cancer Research UK. In 1996 Sir David founded the biotechnology company Cyclacel now listed on NASDAQ.

Sir David is currently Chief Scientist of Singapore’s Agency for Science, Technology and Research (A*STAR) and also the Chairman of Chugai Pharmabody Research Pte Ltd (CPR) which he helped to attract to Singapore. CPR represents a $400 million 10-year investment by Chugai in research located in the Synapse building at the Biopolis, Singapore. The company currently employs over 90 highly qualified researchers developing new antibody therapeutics. Sir David's A*STAR p53 laboratory is working on peptide and antibody based therapies that target the p53 pathway and on the evolution and function of tumor suppressors. Much of the work has been in collaboration with Dr Chandra Verma's team at A*STAR BII.

For his efforts in cancer research, Sir David was knighted in 2000. He also received the Cancer Research UK Lifetime Achievement Award – a prize that recognises his pioneering research that led to the discovery of p53. Sir David has also been awarded a number of International Prizes including the Paul Erlich Prize, the Josef Steiner Prize and the Brupbacher Prize.
Carl June is the Richard W. Vague Professor in Immunotherapy in the Department of Pathology and Laboratory Medicine. He is currently Director of the Centre for Cellular Immunotherapies at the Perelman School of Medicine, and Director of the Parker Institute for Cancer Immunotherapy at the University of Pennsylvania. He is a graduate of the Naval Academy in Annapolis, and Baylor College of Medicine in Houston, 1979. He had graduate training in Immunology and malaria with Dr Paul-Henri Lambert at the World Health Organization, Geneva, Switzerland from 1978-79, and postdoctoral training in transplantation biology with E. Donnell Thomas and John Hansen at the Fred Hutchinson Cancer Research Centre in Seattle from 1983 - 1986. He is board certified in Internal Medicine and Medical Oncology. He maintains a research laboratory that studies various mechanisms of lymphocyte activation that relate to immune tolerance and adoptive immunotherapy for cancer and chronic infection.

In 2011, his research team published findings detailing a new therapy in which patients with refractory and relapsed chronic lymphocytic leukemia were treated with genetically engineered versions of their own T cells. The treatment has also now also been used with promising results to treat children with refractory acute lymphoblastic leukaemia. He has published more than 350 manuscripts and is the recipient of numerous prizes and honours, including election to the Institute of Medicine in 2012 and the American Academy of Arts and Sciences in 2014, the William B Coley award, the Richard V Smalley Memorial Award from the Society for Immunotherapy of Cancer, the AACR-CRI Lloyd J. Old Award in Cancer Immunology, the Philadelphia Award in 2012, the Taubman Prize for Excellence in Translational Medical Science in 2014 (shared w S. Grupp, B. Levine, D. Porter), the Paul Ehrlich and Ludwig Darmstaedter Prize (shared w J. Allison), the Novartis Prize in Immunology (shared w Z. Eshaar and S. Rosenberg), the Karl Landsteiner Memorial award, the Debrecen Award and a lifetime achievement award from the Leukemia and Lymphoma Society.
William Sellers is a renowned cancer researcher with a deep experience in cancer genomics and therapeutic discovery. He has returned to the Broad Institute of MIT and Harvard, Dana-Farber Cancer Institute (DFCI), and Harvard Medical School (HMS) as a faculty member. Effective January 1, 2017, Dr. Sellers will become a core institute member at the Broad and a senior advisor to the president for experimental therapeutics at DFCI.

At the Broad, he will lead a research laboratory, extending the Broad’s expertise in cancer genomics and translation. At Dana-Farber, he will provide advice and expertise on DFCI’s growing experimental therapeutics programme, which spans the drug discovery spectrum from chemistry to target validation, to lead optimisation, to early phase trials. Dr. Sellers has spent his academic career at the intersection of cancer biology and cancer genomics, joining the DFCI faculty and Harvard Medical School in 1997 and becoming a Broad associate member in 2004. His research efforts focused on investigating the basic mechanisms of tumor suppressor genes and oncogenes, and elucidating the molecular pathways of cancer, through high-throughput genetic sequencing and other genomics approaches.

Dr. Sellers earned his B.S. in biology from Georgetown University and his M.D. from University of Massachusetts Medical School. He completed his internship and residency in internal medicine at University of California San Francisco before completing a clinical oncology fellowship at DFCI. He has been recognised with numerous awards, including the Novartis Excellence Award for Innovation, the Abbott Bioresearch Award, the Tisch Family Outstanding Investigator Award, and the National Institutes of Health Physician-Scientist Award. He currently serves on the scientific advisory boards of Memorial Sloan Kettering Cancer Centre, the Neuroendocrine Tumor Research Foundation, and Mount Sinai Medical Centre, and was appointed by President Barack Obama as a member of the National Cancer Advisory Board.
Patrick Casey, is the Senior Vice Dean of Research at the Duke-NUS Graduate Medical School. He is also a James B. Duke Professor of Pharmacology and Cancer Biology at Duke University.

Dr Casey received his PhD in Biochemistry from the Brandeis University in 1986 and did postdoctoral work at the University of Texas Southwestern Medical Center in Dallas. He joined the Duke University Medical Center as an Assistant Professor of Molecular Cancer Biology and Biochemistry in 1990. A recognised authority in the fields of lipid modifications of proteins and in G protein signalling, Dr Casey has received several awards for his work. These include the Established Investigator Award from the American Heart Association in 1992 and the Amgen Award from the American Society of Biochemistry and Molecular Biology in 2000.

Dr Casey was the founding Director of the Duke Centre for Chemical Biology -- an organisation of Duke scientists who are dedicated to the research and training in the application of fundamental chemical principles to the study of biology and the basis of disease and therapies. He was also elected a Fellow of the American Association for the Advancement of Science in 2012.

Dr Casey relocated with his family, including his wife and scientific collaborator Mei Wang, M.D., PhD, to Singapore in 2005 to spearhead the development of the Signature Research Programmes at Duke-NUS. With his longstanding interest in interdisciplinary science, particularly in facilitating the exchange of ideas and fostering collaborations between laboratory-based scientists and clinicians delivering care, he led the recruitment of the key faculty members and established core research facilities during the initial stage of Duke-NUS. His current role involves overseeing the administration and strategic planning of these programmes, and mentoring of faculty and trainees. Dr Casey also serves on advisory panels for Agency for Science, Technology and Research (A*STAR), National Research Foundation (NRF) and National Medical Research Council (NMRC).
Huck Hui Ng is the Executive Director of the Genome Institute of Singapore.

Dr Ng graduated from the National University of Singapore with a first class Honours degree in Molecular and Cell Biology and obtained his PhD from the University of Edinburgh. He spent the next few years working at the Harvard Medical School as a Damon Runyon-Walter Winchell research fellow.

His laboratory works on different aspects of Systems Biology of Stem Cells. Specifically, his group uses genome wide approaches to dissect the transcriptional regulatory networks in embryonic stem cells with the aim to identify key nodes in this network. This had led to the first paper on the whole genome and unbiased mapping of key transcription factors in mouse embryonic stem cells. His group also conducted the whole genome genetic screen for human embryonic stem cells. More recently, his laboratory has begun to investigate the reprogramming code behind the induction of pluripotency in somatic cells.

His research work has earned him several prestigious national and international accolades including the Singapore Youth Award (2005 and 2010), the National Science Award 2007, the HUGO Chen’s New Investigator Award 2010, the President’s Science Award 2011 and EMBO Associate Membership.
AFTERNOON SESSION
Thomas Dick has 20 years of experience in mycobacteriology, drug discovery and R&D programme management. His research focuses on Tuberculosis (TB) and Non-Tuberculosis Mycobacterial (NTM) infections. Since 2011, he is Associate Professor at the National University of Singapore, where he is leading the TB drug discovery theme of the University’s TB programme which he co-founded in 2014 (http://www.sprinttb.org). Dr Thomas is teaching microbiology, antibiotics and drug discovery to undergraduate and graduate students, and is responsible for the university’s high containment facility.

Prior to his current position, Dr Thomas worked for eight years in the pharmaceutical industry where he established and led the TB disease area at the Novartis Institute for Tropical Diseases, Singapore. He completed his postdoctoral fellowship at the Institute of Molecular and Cell Biology in Singapore, where he became principal investigator heading the Mycobacterium Biology Laboratory. He studied biochemistry, genetics and microbiology at the University of Heidelberg where he obtained his PhD in molecular bacteriology.
Brian Chia graduated with first class honours followed by a PhD in organic chemistry from the University of Adelaide in 2000 under an Australian Overseas Postgraduate Research Scholarship in peptide chemistry under Prof. John Bowie. In 2001, he received a BBSRC research fellowship at Cambridge University studying glycopeptide drug-receptor interactions under Prof. Dudley Williams. In 2005, Dr Chia headed the Peptide Group at the Institute of Molecular and Cell Biology (IMCB) under Prof. Sir David Lane working on peptides with anti-cancer properties.

In 2007, he joined ETC as the Peptide Chemistry Group Leader focusing on drug discovery and development in the areas of infectious diseases and oncology. Currently, Dr Chia is spearheading the development of a novel topical drug candidate for nasal decolonisation and the treatment of skin infections caused by Mupirocin-resistant MRSA. His other research interests include developing new drugs for treating Tuberculosis, *Candida* infections and viral infections.

To date, Dr Chia has published over 40 peer-reviewed scientific publications and is a reviewer for Antiviral Research, Bioorganic and Medicinal Chemistry, ChemMedChem, Current Medicinal Chemistry, Emerging Microbes & Infections, the European Journal of Medicinal Chemistry, The International Journal of Peptide Research and Therapeutics, Molecules, Peptides, PLoS One, Scientific Reports and Tetrahedron Letters. He is an inventor/co-inventor of 7 granted or pending patents involving small-molecules and peptides with antimicrobial properties, anti-cancer properties and protease inhibitors.

Dr Chia was awarded the A*STAR long service award in 2012 and 2017. He also lectures at ETC’s annual Drug Discovery Course and the National University of Singapore’s Medicinal Chemistry course.
Anders Poulsen studied pure and applied chemistry at the Technical University of Denmark where he obtained a master degree specialising in catalysis. After working a year as a research engineer he enrolled in an industrial PhD programme at the Royal Danish School of Pharmacy. In his doctoral research in Prof. Tommy Liljefors computational medicinal chemistry group, Dr Poulsen studied pharmacophore and protein modelling of GPCRs.

After 4 years in the Danish pharmaceutical company H. Lundbeck, Dr Poulsen moved to Singapore in 2003 to work for S*BIO, a new biotech start-up that specialised in developing small molecule oncology therapeutics. In S*BIO he was group leader for drug discovery informatics. He worked mainly on kinase projects where he did the structure-based design that led to 3 of S*BIOs clinical candidates. In 2009 he started to work as a consultant for ETC where he is now employed. In ETC he works as a project leader for drug discovery projects and provides computational chemistry support to all stages of drug discovery.
In 1986, Masafumi Inoue joined the Molecular Pathology group at the Foothills Provincial Hospital in Calgary, Canada. As the head of the group, he developed several polymerase chain reaction-based assays for pathologists in the Department of Pathology. The detection and subtyping assay for human papilloma virus (HPV) in pap smear and cervical cells was one of his achievements.

In 1995, he moved to Singapore to join the Institute of Molecular and Cell Biology (IMCB). He served as the head of Translational Research Facility until October 2009. In 2003, he encountered SARS pandemic outbreak in Singapore which set him on the path towards medical diagnostics.

In November 2009, Dr Inoue joined Experimental Therapeutics Centre (ETC) as the leader of Technology Developmental Group. He developed many molecular-based assays for pathogens including a multiplex assay for the detection of influenza A/B viruses with subtyping information for pdmH1N1 and H3N2 with Tan Tock Seng Hospital (TTSH). He also worked with National University Health System (NUHS) to develop methods for the identification and quantification of genetic mutations that give rise to Hepatitis B virus (HBV) drug resistance. His research now includes detection of Mycobacterium tuberculosis (MTB), Dengue virus, Chikungunya virus as well as Hepatitis C virus (HCV) genotyping with NUHS & the identification of drug resistance mutations in human immunodeficiency virus (HIV) with CDC.

His latest achievement is simultaneous detection of Zika virus, Chikungunya virus and Dengue virus in one tube.

He has been blessed with good collaborators and quality staff in the past 8 years.
David Virshup is a Professor and the inaugural Director of the Programme in Cancer and Stem Cell Biology at the Duke-NUS Graduate Medical School in Singapore, and is Professor of Paediatrics at Duke University in North Carolina, USA.

Prior to moving to Singapore in 2007, he spent 17 years at the University of Utah, where he held an endowed chair at the Huntsman Cancer Institute. While spending the majority of his time on laboratory-based research, until arriving in Singapore he was also a practising paediatric haematologist/oncologist. Dr Virshup received his medical degree from Johns Hopkins University School of Medicine in 1981. He completed his clinical training in Pediatrics and Pediatric Haematology/Oncology at Johns Hopkins, while his research training was in the departments of Cell Biology and Anatomy, and Molecular Biology and Genetics at Johns Hopkins. He is a member of the American Society of Clinical Investigation, the Association of American Physicians, a Fellow of the American Association for the Advancement of Science and the Asia Editor for the Journal of Clinical Investigation. His laboratory studies cellular signalling pathways, with a strong focus on the Wnt signalling pathway.
Joma Joy obtained her PhD in Biochemistry from the Max Planck Institute of Biochemistry, Martinsried, Germany. Her research focused on functional and structural studies of signal transduction proteins involved in tumorigenesis. After graduation, she did her postdoctoral training at the Burnham Institute for Medical Research, USA.

Currently, she is a Group Leader of the Protein Biochemistry Group. Her team supports the hit identification to lead optimisation for multiple target classes by developing new assay platforms. The team plays a key role in the drug discovery process by understanding the mechanism of inhibition and evaluating the drug-target interaction using biophysical and functional cell based assays.
Ng Fui Mee came to Singapore in 1997 when she was awarded the ASEAN Scholarship by the Ministry of Education Singapore to study in Hwa Chong Institution. It was during a school holiday attachment programme with Glaxo Wellcome (now GSK) that inspired her to pursue her undergraduate studies in Pharmacy at the National University of Singapore (NUS). After completing her Bachelor of Science (Pharmacy) (Hons.) in 2003, she continued to pursue her PhD in the Faculty of Medicine (Pharmacology) under the prestigious NUS Postgraduate Scholarship. She spent four years in the research of N-methyl-D-aspartate (NMDA) receptor, when she studied the biochemical and structural properties of NR2B subunit and potential NMDA-targeted therapies for neurological diseases. After receiving her PhD, Dr Ng joined ETC Protein Biochemistry and Enzymology group in 2009 as a research fellow to pursue her passion in drug discovery and translational research. Her current research interests include antimicrobial and anticancer drug discoveries. Dr Ng has been appointed the project leader for ETC’s anti-infective and oncology projects. She was awarded Outstanding Oral Presentation Award in the International Conference on Pharmacology and Drug Development (Singapore, 2013) and A*STAR long service award (2013).
Simone Dorfmueller (Dr. rer. nat. Ir.) is a trained Antibody engineer working in the field for more than 15 years, half of them in Industry. She started working as a Research Scientist at the Experimental Therapeutics Centre in 2011. Her first project involved the successful generation of a human Cornea endothelium specific antibody in collaboration with the Singapore National Eye Centre. Since January 2013 she is the responsible scientist for an antibody based Companion Diagnostics project (CDIC) for one of ETC’s cancer drug candidates. Previously Dr Dorfmueller worked for 6 years as a Senior Scientist at Devgen Pte Ltd (now part of Syngenta) on Antibody and RNAi based plant resistance in rice. For the latter a patent was filed in 2011 and granted. Before moving to Singapore in 2005, Dr Dorfmueller worked as research fellow at the Fraunhofer Institute of Molecular Biology (IME) on a feasibility study of an in planta produced monoclonal antibody for cancer diagnostics in collaboration with Boehringer Ingelheim. She received her PhD from the RTWH Aachen University, the largest technical University in Germany and one of the nine German Universities of Excellence. She generated fungal specific antibodies which were fused to proteins of plant defence. These immunotoxins were integrated in crop plant genomes to enhance fungal plant resistance. A patent was filed and granted for this work. Her agricultural engineer degree was obtained from Wageningen Agricultural University in the Netherlands.
David Epstein joined the faculty and leadership at Duke-NUS Graduate Medical School, Singapore, in 2013. Dr Epstein is Director of Duke-NUS’s Centre for Technology & Development (CTeD), whose aim is to advance healthcare innovations by commercialising Duke-NUS intellectual property. Dr Epstein’s work within CTeD focuses on mentoring entrepreneurs and developing new models of value creation and value capture for Singapore. In 2014, he was named the founding Director of Singapore’s National Health Innovation Centre (NHIC) which is funded by the National Medical Research Council (NMRC) with the aim of providing the clinical research sector long-term financial support and strategic guidance related to innovation and commercialisation. Dr Epstein is Associate Professor in the Cancer & Stem Cell Biology Program, where his NMRC-funded research focuses on mechanisms of tumorigenesis through alternative splicing. He is Associate Dean of Research for the medical school.

Over the past 20 years Dr Epstein has served as a biopharma discovery and translational science leader and executive. He has a strong track record of successes in leading large and small R&D teams in academic, virtual, start-up, mid-size and global large-pharma settings, several of which also entailed transformational change leadership. Dr Epstein’s teams have progressed seven novel agents in to clinical development in diverse disease areas including cardiovascular, retinal degeneration and oncology. Prior to joining Duke-NUS, he was the Chief Scientific Officer at OSI Pharmaceuticals. He is founder of ASET Therapeutics, a biotechnology start-up in New York focused on targeting locked-dimer oncogenes. He was a founder of Archemix Corp., an aptamer therapeutics company with two agents in late-stage clinical development. He earned his PhD in Biochemistry at Brandeis University with Robert Abeles, completed his postdoctoral fellowship establishing a joint project between the labs of Steven Benkovic (Penn State) and Peter Wright at The Scripps Research Institute in La Jolla.
Chandra Verma joined the Bioinformatics Institute (BII) A*STAR, Singapore, in November 2003. He heads the division of Biomolecular Modelling and Design and leads a group that applies physics based models to understand the links between protein sequence, structure and biological function. His group works closely with experimental laboratories where the hypotheses generated are tested. In addition, the group is also involved in designing peptides and small molecules (through virtual screening) both for interrogating biology as well as for therapeutic purposes. Prior to joining Singapore, he worked at the Structural Biology Laboratory in York, UK. He obtained his undergraduate degree at the Indian Institute of Technology, Kanpur and his PhD at the University of York. He has around 25 years of experience and holds several patents on novel antimicrobials and oncology products.
Jeffrey Hill performed his doctoral research at Cardiff University in the field of aspartic proteinases where he developed an interest in drug discovery for tropical diseases. After completing a WHO funded postdoctoral project on Plasmodial proteinases he relocated to Thailand and was involved in the characterisation of proteinases from a number of viruses including dengue.

On returning to Europe he began work for SmithKlineBeecham Pharmaceuticals which then became GlaxoSmithKline Pharmaceuticals. During his time at GSK he worked in both the Discovery Research and the Genetics Research Divisions where he was involved in many aspects of target validation, assay development and biomarker discovery.

In 2006 Dr Hill returned to South East Asia and began working for the Agency for Science, Technology and Research (A*STAR) Singapore, first in the Bioinformatics Institute and then in the Experimental Therapeutics Centre. Currently he is a member of the senior management team and head of biology.
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