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ACCELERATING RESEARCH



Inaugural Singapore Research Ethics Conference (SREC) 2018



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Furthering Research in Depression and Psychosis Frontiers in Mental Health Symposium



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Large Scale Genetics Study Reveals Biological Insights for Cognitive Abilities



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Assoc Prof Melvin Leow conferred Fellow of the Royal College of Pathologists of London



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Clinical Epidemiology Research Seminar on the Measurement of Disease Frequency, Prediction and Detection



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Broadening Horizons through PhD



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Results for the FY2018 Call for NHG-LKCMedicine Clinician-Scientist Preparatory Programme (CSPP) Applications

The NHG-LKCMedicine Clinician-Scientist Preparatory Programme (CSPP) is a joint programme that aims to provide research exposure for clinicians at an early stage of their career through research training, project experience and mentorship.

The **FY2018 Call for NHG-LKCMedicine CSPP Applications** was open from 16 October 2017 to 20 November 2017.

Congratulations to the following awardees:

Tan Tock Seng Hospital

Dr Chee Ying Jie, Medical Officer
Dr Jeremy Hoe Kian Ming, Senior Resident
Dr Justin Chew Linghui, Associate Consultant
Dr Louis Lim Wei Yi, Resident
Dr Benjamin Ding Tze Keong, Resident
Dr Ernest Fu Weizhong, Associate Consultant
Dr Elvina Tay Kai Wen, Senior Resident
Dr Kwok Jialun, Senior Resident

Institute of Mental Health

Dr Zheng Shushan, Senior Resident
Dr Christopher Chan, Associate Consultant

National Healthcare Group Polyclinics

Dr Quek Jing Sheng, Resident
Dr Vivek Bansal, Family Physician

National Skin Centre

Dr Cheng Hui Mei, Seamless Trainee
Dr Lydia Tang-Lin, Seamless Trainee
Dr Wong Yisheng, Seamless Trainee

Congratulations to Assoc Prof Melvin Leow for being conferred the title of Fellow of the Royal College of Pathologists of London on 1st Feb 2018!



Assoc Prof Melvin Leow
 Senior Consultant, Tan Tock Seng Hospital
 Associate Professor, NTU/LKCMedicine
 Clinical Principal Investigator, Singapore Institute
 for Clinical Sciences, A*STAR

The Royal College of Pathologists oversees the training of pathologists and scientists working in various different specialties and has over 11,000 members worldwide. Together, they are involved in over 70% of all diagnoses, and play an important role in disease prevention, treatment and monitoring.

Assoc Prof Leow is one of the handful of physicians besides pathologists to be conferred this title. In addition, Assoc Prof Leow is also a recipient of the prestigious Clinician Scientist Award from the National Medical Research Council.

Congratulations to the Awardees of NMRC Research Training Fellowship (RTF) – Nov 2017 Call



Dr Chia Po Ying
 Senior Resident
 Infectious Diseases
 TTSH

Project Title:
 The Role of the Endothelial
 Glycocalyx, Mast Cells and Vascular
 Nitric Oxide in the Pathogenesis of
 Dengue



Dr Chan Lai Gwen
 Consultant
 Psychological Medicine
 TTSH

Project Title:
 The Trajectory of Sleep Pattern
 Changes after Traumatic Brain Injury
 and its Associations with
 Neurocognitive Outcomes and
 Biomarkers of Neuronal Dysfunction

Please click [here](#) to find out more about the NMRC Research Training Fellowship (RTF)

GOOD TO READ!

Management of Hidradenitis Suppurativa in Patients with Metabolic Comorbidities

Find out how hidradenitis suppurativa is managed and understood to reduce the development of a chronic inflammatory skin condition associated with an increased prevalence of individual metabolic conditions.

Click [here](#) to find out now!

Highlights of the Inaugural Singapore Research Ethics Conference (SREC) 2018



On 1 March 2018, the National Healthcare Group, Singhealth and National University of Singapore co-organised the inaugural Singapore Research Ethics Conference (SREC) 2018 at the Academia. **The 2-day conference was attended by over 350 practitioners engaged in human subject research, who gathered to hear from 38 local and overseas speakers** with diverse backgrounds and expertise in research ethics and human subject protection.

This collaboration is a **milestone event to foster inter-institutional dialogue and share best practices** in pertinent areas such as Research Ethics and Integrity, Human Subject Protection and Regulations for Human Subject Research.

Themed 'Collaborating for Progress, Promoting Safe & Efficient Research', SREC 2018 explored

how research oversight systems and Institutional Review Boards (IRBs) could ensure adequate protection for subjects through balancing the needs for efficient administration with legal and ethical requirements.

The 4 plenary sessions focused on balancing research ethics and administrative duties, data management challenges and the Human Biomedical Research Act - Human Biomedical Research Framework and Human Tissue Framework.

Overseas plenary speaker Prof Graeme Laurie from University of Edinburgh shared on navigating regulatory spaces, data ownership and data sharing issues in health research environment while keynote speaker Dr Pearl O'Rourke from Partners HealthCare Systems, US presented on the topic

'Navigating the Expanding Ocean of Digital Health Apps', touching on both clinical care and research and their related concerns.

Apart from the plenary sessions, there were 12 breakout sessions focused on the following sub-topics:

1. Research Ethics and Integrity;
2. Clinical Trials and Research Conduct;
3. IRB & IRB Administration; and
4. Quality Management and Training.

Over the two days, the conference had brought together clinical research professionals and research stakeholders across Singapore to learn from one another, with a common objective of raising the local standard of research ethics, quality and practice.

Contributed by: **Doreen Lim**, Assistant Manager, Office of Human Research Protection Programme, NHG Research & Development Office

Clinical Epidemiology Research Seminar on the Measurement of Disease Frequency, Prediction and Detection

The clinical epidemiology research seminar, second in the series, was organised by NHG Research & Development Office (RDO), **to cater to clinicians who are keen to embark on clinical epidemiology research and at the same time, to provide opportunities for collaboration with the Health for Life in Singapore (HELIOS) Study** – a joint prospective population cohort study led by Lee Kong Chian School of Medicine (LKCMedicine) in collaboration with NHG and Imperial College London (ICL).

The seminar, which was held on 27 February 2018 at the LKCMedicine Clinical Sciences Building, was jointly organised with the NHG Clinician-Scientists Networking Session – a regular networking platform organised by RDO. The seminar started with the networking over light refreshments. Over 40 participants from various NHG institutions as well as LKCMedicine attended the session, which was opened by Prof Lim Tock Han

(Deputy Group CEO, Education & Research, NHG) and Prof James Best (Dean, LKCMedicine).

Prof Paul Elliott (NHG Visiting Expert and Chair in Epidemiology and Public Health Medicine, ICL) spoke on the topic of measures of disease frequency and risk, with examples of how estimates can be derived from population disease registries, clinical and epidemiological studies. **Prof Elio Riboli (NHG Visiting Expert and Director of the School of Public Health, ICL) spoke on the topic of disease detection and prediction**, covering areas such as diagnostic tests, information bias, diagnostic test metrics and diagnostic cut-off points.

Prof John Chambers (Professor of Cardiovascular Epidemiology, LKCMedicine and Lead Principal Investigator, HELIOS Study) followed on to present an update on the HELIOS Study, which has ended its pre-pilot and pilot phases and is scheduled to embark on

its main study in April 2018. Prof Chambers also welcomed participation and collaboration from interested clinicians, especially in following up with the participants in sub-studies through early disease cohort studies.



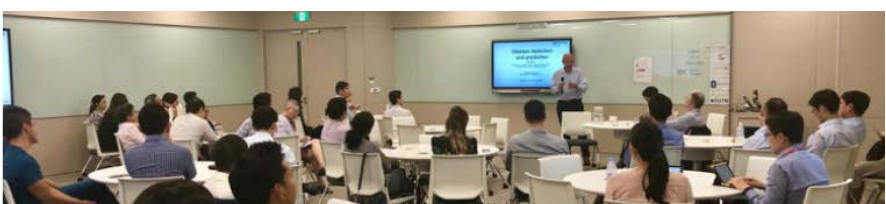
Professor Elio Riboli
Director, School of Public Health, Imperial College London



Professor Paul Elliott
Chair in Epidemiology & Public Health Medicine, Imperial College London



Prof Lim Tock Han (left) and Prof James Best (right) giving the opening statements for the session.



Prof Riboli engaging the attendees with his interactive sharing on disease detection and prediction.

Contributed by: **NHG Research & Development Office**

Furthering Research in Depression and Psychosis Frontiers in Mental Health Symposium

Leading researchers, neuroscientists, clinicians and academics with a keen interest in research converged on 6 March 2018 at the second **Frontiers in Mental Health Symposium (FMHS) 2018**, jointly organised by the Institute of Mental Health (IMH) and the Nanyang Technological University (NTU) Lee Kong Chian School of Medicine (LKCmedicine).

Themed “**Advancing Research in Depression and Psychosis**”, FMHS 2018 sought to create a lively platform for updates and discussions on recent research on depression and psychosis.



Panel discussion on Depression chaired by Adj Asst Prof Tor Pheem Chern (leftmost).

Sir Philip Campbell, Editor-in-Chief of Nature and the Nature Publishing Group and Chair, Board of Trustees of the mental health research-funding charity ‘MQ: Transforming Mental Health’, was the keynote speaker and he discussed the “Impact of Mental Health Research and How It Relates to Research Fund-Raising”.



Keynote Speaker, Sir Philip Campbell, Editor-in-Chief of Nature and Nature Research presenting at the Symposium

Overseas speakers from Karolinska University Hospital (Sweden), National Centre for Mental Health (South Korea), National Centre of Neurology and Psychiatry (Japan), as well as speakers from IMH and LKCmedicine shared their expertise on topics such as:

- The epidemiology of depression in Singapore
- Defining depression and its implications
- Harnessing the brain's naturally produced neuroactive steroids for the treatment of anxiety and depression
- Molecular imaging in psychiatric disorders
- Early intervention into cognitive disturbances of psychosis; and
- Treatment outcomes in schizophrenia.



Assoc Prof Mythily Subramaniam, Director of Research, IMH presenting at the Symposium.

“This event provides an excellent platform for the delegates to network, learn and explore potential collaborations in mental health research to better understand the mechanisms of these disorders which will pave the way for better and safer treatment.” in Singapore and beyond.”

- Prof Chong Siow Ann, Vice Chairman, Medical Board (Research), IMH

“We are determined to shed light on the intricate brain processes involved to offer new diagnostics and better tolerated therapeutic approaches to depression and other mental health conditions to improve the quality of life for patients”

- Prof James Best, Dean, NTU LKCmedicine



Panel discussion on Psychosis with (from left to right) Assoc Prof Swapna, Asst Prof Jimmy Lee, Dr Choi Hyung Joon (Korea) and Dr Tomiki Sumiyoshi (Japan).

Contributed by: Institute of Mental Health

Life as a Research Assistant

“Life is good here!”

People may perceive the work of a Research Assistant (RA) to be all about data management, adherence to Good Clinical Practice (GCP) and hitting the recruitment target, but we are proud to say that the **Principal Investigators (PI) of NHG Eye Institute make our work here more meaningful by involving us also in data analysis and paper publications.** It allows us to appreciate our work more upon knowing that we are getting insights into how to help the future population better. And yes, when job satisfaction is present there isn't a need to work a day!

It is **critical in our job that the RA and PI communicate regularly and effectively** to prevent delay in the wonderful research works. Also, it is an enticing environment to be in, with the growing unit where there are new team

members and projects almost every day. The work becomes manageable once you get the hang of things, and **we develop a stronger team spirit as we have to be conscious of our role in the team** as well as in NHGEI, in order to help each other scale greater heights.

The motivating moments even in the most mundane screening work are such as when you receive the occasional referral of eligible patients from different doctors. It is a great feeling to know that everyone is working towards a common goal of improving healthcare knowledge.

“**We really enjoy our job but if we had to pick a favorite part, it's the fact that we're always learning.**”

Lastly, healthy human interaction is a skill to start off with. Needless to say, sometimes we might get discouraged by difficult patients, but **having a**

supportive team help us overcome these trying moments. Kudos to the very appreciative and hardworking doctors who choose to dedicate their time to research!



Contributed by:
Ms Teo Hwei Yee, Ms Neha Khandelwal and Ms Ivy Ong Jing Wen (in picture, from left to right) Research Assistants
Department of Ophthalmology
Tan Tock Seng Hospital

NHG-LKCMEDICINE RESEARCH CAREER DEVELOPMENT PROGRAMMES

FY2018 Call For Applications is now open!

NHG-LKCmedicine Clinician–Scientist Career Scheme (CSCS)

Submission Deadline for LOI, Abstract & CV: Friday, 25 May 2018, 12pm*

Submission Deadline For All Other Application Materials: Tuesday, 05 June 2018, 12pm*

*Please check with your respective institutions' Clinical Research Unit (CRU)/Clinical Research and Innovation Office (CRIO) for the internal deadline set for submission of your application documents. Stay tuned on www.research.nhg.com.sg for the latest information (under Announcement section)!

A Field Epidemiologist's Journey in Infectious Disease Research

After obtaining a BSc in Pharmacy from the National University of Singapore (NUS) and an MSc in Infectious Diseases, Vaccinology and Drug Discovery from NUS and the University of Basel, Switzerland, I completed a PhD in Epidemiology from the Swiss Tropical and Public Health Institute (Swiss TPH) in Basel. Subsequently, as a field epidemiologist at the Swiss TPH, I conducted randomised controlled trials to assess efficacy of treatments against intestinal worms, a cluster-randomised controlled intervention trial to investigate the use of cartoons in health education, a 5-year multi-interventional trial looking at control of intestinal worms and a multi-country case-control study, which look at the development of diagnosis-treatment algorithms for persistent digestive disorders, in low and middle income countries in Asia and Africa.

Having relocated to Singapore in early 2016, I tried to apply my extensive field experience to the local infectious disease research landscape and started working on three projects, namely one, which aims to determine the prevalence of and risk factor associated with latent tuberculosis among migrant workers in Singapore; a second, which investigates the use of a mobile application for flu surveillance among working adults; and a third, which aims to understand our community's resilience against threats from emerging infections and develop interventions to improve their responses in times of outbreaks. **I am particularly interested in topics where community-based research is vital, and where interventions must adopt a holistic view of how the disease interacts with socio-behavioural factors in targeted populations.** As such, I applied for the Health

Services Research New Investigator Grant under NMRC last July, proposing **a mixed-methods study to obtain evidence-based information on how to develop and implement an effective HIV Self-Testing intervention in Singapore** in the hope of improving testing rates among high-risk men. The proposal has now been recommended for funding and the grant will serve as a start in establishing my research niche of implementation research in chronic infectious diseases.



Contributed by:
Dr Yap Peiling
Senior Epidemiologist
National Centre for
Infectious Diseases

Large Scale Genetics Study Reveals Biological Insights for Cognitive Abilities

Researchers from the Institute of Mental Health (IMH), and the Feinstein Institute for Medical Research, New York, have jointly discovered dozens of new genetic variations associated with an individual's general cognitive ability. Dr Max Lam, a research fellow from IMH, is the lead author of the publication in Cell Reports that highlighted these findings. The results of the consortium-based research have the potential to help researchers develop more targeted treatments for cognitive and memory disorders.

For the first time, researchers are able to use genetic information that may aid specific drug development for cognitive disorders of the brain, including Alzheimer's disease, Schizophrenia and Attention Deficit Hyperactivity disorders. In the largest peer-reviewed study of its kind, an international

team of scientists studied genes associated with cognitive ability by examining the human genomes of more than 100,000 individuals who had their cognitive ability measured by standardized tests. These data were then combined with genomes from 300,000 people measured against those whom have achieved the highest level of education, a proxy for cognitive ability.

While profiling cognitive ability, researchers also discovered a genetic overlap with longevity, whereby **higher cognitive ability was associated with longer lifespan. A new genetic overlap between cognitive ability and risk for autoimmune disease** was also identified. These findings were uncovered less than a year after the same team of scientists published a similar but smaller study in Molecular Psychiatry identifying only a few key genes associated with cognitive ability.



Dr. Max Lam
Research Fellow,
Research Division,
IMH

The field of cognitive and psychiatry genomics is growing by leaps and bounds, because the number of genes we can discover is a direct function of the sample size available. Further research with additional samples is likely to provide even more insight into how our genes play a role in cognitive ability. Dr Lam is currently the lead analyst for international consortiums such as the Cognitive Genomics Consortium; and the Psychiatric Genomics Consortium which is currently investigating data from over 100,000 individuals on how the human genome might implicate Schizophrenia in Asian populations.

Contributed by: **Institute of Mental Health**

Associated Publications:

- Lam, M., Trampush, J. W., Yu, J., Knowles, E., Davies, G., Liewald, D. C., ... Lencz, T. (2017). Large-Scale cognitive GWAS Meta-analysis Reveals Tissue-Specific Neural Expression and Potential Nootropic Drug Targets. *Cell Reports*, 21(9), 2597-2613.
- Trampush, J. W., (Lam, M) Yang, M. L. Z., Yu, J., Knowles, E., Davies, G., Liewald, D. C., ... Lencz, T. (2017). GWAS meta-analysis reveals novel loci and genetic correlates for general cognitive function: a report from the COGENT consortium. *Molecular Psychiatry*, 22(3), 336-345. <https://doi.org/10.1038/mp.2016.244> *Joint First Authorship.

Broadening Horizons through PhD

I have been involved in the development and evaluation of care models in NHG Polyclinics since 2014. In the last 4 years, with the strong support of NHGP's leadership and together with a multi-disciplinary team, I led the development, evaluation and implementation of a team-based chronic disease care model, named teamlets, that aimed to improve the care and health outcomes of patients through patient empanelment, team-based care and monitoring of outcomes. **Through the teamlet project, I learnt important lessons in development of a complex intervention, rigorous evaluation of outcomes, and collaboration within a multi-disciplinary team.** The implementation of teamlets has benefited a large number of patients with chronic diseases in our polyclinics and the improved health outcomes of these patients has been encouraging to our team, who have worked hard at this large project.

Leading the teamlet project has strengthened my research interest in developing primary care interventions that will improve the care of patients

with chronic diseases. **In embarking on a PhD with LKCMedicine, I am seeking to develop a patient-centered approach for patients living with diabetes mellitus.** Patients with diabetes frequently report distress and have a reduced quality of life. Therefore, I am looking to further understand the issues faced by patients with diabetes and to involve patients and their primary health care team in developing an intervention, acceptable to both patients and providers, that will help patients achieve better health outcomes psychologically and physically.

I have enrolled into the PhD programme at LKCMedicine to further refine my research skills and to learn new ones. The journey to developing and evaluating a complex intervention using rigorous research methodologies will help me develop skills necessary for developing primary care interventions, which are usually complex and conducted in a real-world setting. I am looking forward to learning from experienced colleagues in other faculties, such as the School of Humanities, Arts and Social Sciences, and to

the many thought-stimulating conversations with my PhD supervisor, Professor Helen Smith, who heads the Family Medicine and Primary Care Department in LKCMedicine.

Dr Sabrina Wong is an FY2017 awardee of the NHG-LKCMedicine Clinician-Scientist Fellowship (CSF) and NMRC Research Training Fellowship (RTF).

For more information on the programmes, please click on the respective links below:

- [NHG-LKCMedicine CSF](#)
- [NMRC RTF](#)



Contributed by:
Dr Sabrina Wong
Consultant Family Physician
and Assistant Director
Clinical Services
NHG Polyclinics

LKCMedicine and Changi General Hospital Launch Graduate Diploma in Sports Medicine



With an ageing population and more people taking up exercise to stay healthy, demand for sports medicine services and ageing-related musculoskeletal injuries are set to rise, but such expertise is currently only available in specialist clinics.

To meet this need, Nanyang Technological University, Singapore's **Lee Kong Chian School of Medicine (LKCMedicine) and Changi General Hospital (CGH) launched Asia's first Graduate Diploma in Sports Medicine**. The diploma caters to medical practitioners interested in **sports nutrition, biomechanics and physiology**. The

first intake of students will start in late July.

The diploma is led by LKCMedicine Associate Professor Fabian Lim, Programme Director, and Adjunct Associate Professor Roger Tian, Course Director (Clinical) and Senior Consultant, Sports Medicine, CGH.

Assoc Prof Lim, who is also Assistant Dean for Research and Associate Professor of Exercise Physiology at LKCMedicine, said that besides caring for athletes, **sports medicine "can also play important roles in chronic disease prevention and management, and caring for the elderly who are prone to musculoskeletal injuries."**

Equipping medical practitioners with this skill set brings **care to the heartlands**, so that injuries can be prevented and managed at the primary care level, and more complicated cases can be promptly referred to the specialist clinics, added Assoc Prof Lim.

Assoc Prof Tian said, "The Graduate Diploma in Sports Medicine will provide doctors who are interested in sports and exercise medicine with

accessible and professionally recognised training that benefits both their practice and patients.

"Furthermore, there is increasing evidence regarding the role of physical activity in preventing and managing chronic diseases.... The skills will enable doctors to confidently use exercise as a tool against these diseases."

The one-year part-time diploma, which includes e-learning modules, workshops and clinical attachments at local sports medicine clinics, is delivered by a **stellar panel of local and international experts**.

Graduates of the **Singapore Medical Council-accredited** programme can display the credentials and will be better equipped to provide medical support for sports programmes and events.

For more information or to apply, please visit: www.lkcmmedicine.ntu.edu.sg/Programmes/GDSM

Contributed by:
The Lee Kong Chian School of Medicine

Training Calendar

	Training Programme	Course Provider
Monthly	Good Clinical Practice (Online)	NHG RDO
	(PCR100) Study Start-Up: Budgeting, Case Report Form Design and Database Design *	
	(PCR200) Study Conduct I: Subject Recruitment and Informed Consent *	
	(PCR300) Study Conduct II : Documentation, Safety Reporting and Investigational Products *	
	(PCR400) Monitoring, Audits and Inspections *	
17 May 18	Research Preparatory & Study Design	NHG RDO
23 - 25 May 18	Biostatistics	
09 - 10 Jul 18	Good Clinical Practice (Classroom)	
16 Jul 18	Grant Writing and Management Seminar	
24 - 25 Jul 18	Project Management for Clinical Research Professionals	
16 May 18	How To Start a Research Project?	TTSH CRIO
09 Jul 18	EndNote X7 for Research Workshop	
23 Jul 18	Understanding Study Design	
25 Jul 18	Excel for Research Workshop	

* **Blended learning courses involving Online Lectures coupled with a Classroom Workshop at the stipulated date.**

Dates are subject to changes without prior notice.

For registration and full details on courses by:

~ NHG Research & Development Office (RDO), please visit www.research.nhg.com.sg (Training & Education → Register for Courses and Other Events)

~ TTSH CRIO, please contact Ms Siti Aisha Binte Jaffar Siti_Aisha_JAFFAR@tsh.com.sg.

Qualité (Issue 30, Apr 2018)

Education to facilitate high standards of research conduct

1. **[Update 2] Is My Study Human Biomedical Research? Determine if your study is HBR**

Unsure if your study might fall under the Human Biomedical Research Act or Restricted Human Biomedical Research?

Click [HERE](#) to use the checklist to ascertain.

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