

# catalyst



## ACCELERATING RESEARCH

Jan-Feb 2011

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# Integration of Research in the Community

Research on the Ground



National  
Healthcare  
Group

Adding years of healthy life

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## From The Editor-in-Chief



Dear Readers,

Happy New Year. Time flies, and we are already in the second decade of the 21st Century. Thank you for your great support in 2010.

In 2011, we strive to bring you even more news, stories and updates of local research happenings.

We kick off this year by bringing to you our exclusive interview with Professor Edward Holmes, Executive Chairman of the National Medical Research Council (NMRC) in Singapore. It is indeed our pleasure to hear from Prof Holmes what he thinks about the local biomedical research climate, strategies and challenges. Prof Holmes also shared candidly about his personal and family life and how it supported his achievements and career development.

The theme for this issue is community and population based research in Singapore. Research cannot be done solely for the sake of science or personal glory. Research must be done for the sake of the patients' and population's benefit. Therefore, we need to learn how to effectively translate research findings into useful clinical applications for both patients and healthy subjects. In sync with the Ministry Of Health's focus on population wellness, health research can also help to identify better solutions to improve community health and vitality.

We will continue to focus on this theme for the next few issues. Happy Reading.

Yours Sincerely,

**Kin Poo**

## Your Newsletter, Your Comments

Do you have any of these:

- Research articles to share?
- Research topics that you want covered?
- Comments/Feedbacks on published contents of this newsletter?
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If you have answered "YES" to any of the above, we invite you to write in and share with us your thoughts, feedback on published articles or cartoon clips (original materials, jpeg format please).

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appreciation, with compliments from the Editorial team!

Do remember to add in your contact details, where applicable, for our future communications with you.

**The Editorial Team**

# Intra-Uterine Stem Cell therapy in a model of Thalassaemia Major



**Dr Citra Mattar**

Associate Consultant, Obstetrics and Gynecology  
National University Health System

**B**-thalassaemia is a haemoglobinopathy that leads to severe anaemia, and is caused by an autosomal recessive monogenic defect. Annually there are 80-90 million carriers worldwide, 1.3 million at-risk pregnancies, 50-60,000  $\beta$ -thalassaemia births and 5500 stillbirths from  $\beta$ -thalassaemia. The carrier rate averages 5% in South-East Asia<sup>1</sup>. The only cure is a haemopoietic stem cell (HSC) transplant, of which a bone marrow transplant is the most commonly practiced. Only 25-30% of patients can find suitable bone marrow donors, and good results are achieved only if recipients are transplanted before significant end-organ damage has occurred<sup>2</sup>. Patients who are ineligible for transplant have to rely on regular blood transfusions and iron chelation therapy, and long-term side effects may arise from suboptimal replacement therapy or toxic effects of conditioning therapy prior to transplantation. Data from murine<sup>3</sup> and human<sup>4</sup> thalassaemic HSC transplant recipients suggest that a small degree of HSC chimerism of about 10% can result in significant increase in haemoglobin levels (~2-3g/dL), and resolution of extramedullary haemopoiesis (EMH) and iron loading, presumably due to the survival advantage of normal over thalassaemic red blood cells<sup>5</sup>.

The primary objective in of our study is to determine the effectiveness of intrauterine xenogeneic 2<sup>nd</sup> trimester human fetal liver-derived HSC therapy (IUHSCT) in a murine fetal model of  $\beta$ -thalassaemia major. We hypothesize that intrauterine transplant of 2<sup>nd</sup> trimester CD34+ human fetal liver-derived HSC will correct or ameliorate the anaemia and EMH of thalassaemic

mice. Specifically, we aim to (1) deliver an IV dose of  $2 \times 10^5$  cells/pup to E14 murine fetuses and to determine postnatal survival of genotyped th3-/- homozygotes and th3-/+ heterozygotes, (2) analyse chimerism, engraftment and repopulation of recipient haemopoietic compartment with donor HSC, and (3) determine reconstitution of Hb in hetero- and homozygote transplanted fetuses as a determinant of therapeutic success.

As the study is in its infancy we hope that the data will eventually be informative of the role of HSC transplant in this model of haemoglobinopathy, and if rescue of mice with this disease is possible.

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*Dr Citra Mattar was awarded the NHG-NUHS Clinician Leadership in Research (CLR) Award in 2008. Subsequent to receiving the CLR Award, Dr Citra secured larger grants such as the New Investigator Grant in May 2009 from NMRC.*

*Dr Citra Mattar graduated from the National University of Singapore (NUS), Yong Loo Lin School of Medicine in 1999 and later obtained her post-graduate degrees in 2004 and 2005.*



# Community Research

**A/Prof Chong Siow Ann**  
Vice Chairman, Medicine Board (Research)  
Institute of Mental Health

We have always believed that our research should be actionable and relevant to our local community and so within our research portfolio, there is a focus on community mental health research that generates knowledge to address the real-world questions that persons living with mental illness, their families, providers, payers and policymakers face in selecting, delivering, and financing optimal care.

To achieve this, we have made it our modus operandi to seek out and work with governmental and non-governmental agencies, decision-makers and various stakeholders in the community, presenting research findings as evidence to inform service development, policy formulation, improving access, coordinating systems of care, and allocation of resources. With this intent, we have partnered various agencies in conducting studies including Ministry of Health, Ministry of Community Development, Youth and Sports, Ministry of Defence, Singapore Armed Forces, Singapore Prison Authority and Singapore Millennium Foundation.

At this present moment, there is a dearth of comprehensive and good quality data on the mental health status of the Singapore population. The problems of those people in our community suffering from serious mental illness are not fully known – for that matter, we do not have accurate estimates of the number of people with mental disorders, we do not know how many have been rightly diagnosed and are

receiving treatment (let alone appropriate treatment), we have not identified the barriers to care although stigma is certainly an important factor, and we do not know what are the social and economic costs of these mental disorders which are necessary for the sensible allocation of limited resources and the shaping of better informed policies. Another important aspect of mental health is positive mental health which is fundamental to the well-being of individuals, their families, and the community at large. The concept of well-being refers to optimal psychological functioning and experience and is proven to be more than just the absence of mental illness. The recently launched National Mental Health Policy and Blueprint has stressed the importance of promoting mental well-being and building resilience among the different population groups. Currently there are few instruments that measure positive mental health and there is uncertainty about the validity of these instruments due to the differences in the cultural, social and behavioral contexts. The development of a culturally appropriate scale is hence crucial for monitoring the state of well-being and evaluating public mental health promotion programs.

Community-based research requires close collaboration between researchers, the relevant players in the government and community so that there would be a convergence of goals and the generation of relevant actionable information. The Singapore Mental Health Study is an example of such a model.



# in Mental Health

## SINGAPORE MENTAL HEALTH STUDY (SMHS)

This is a 3-year project that comprises of:

1. A nationwide household survey to establish the prevalence of mental disorders in the Singapore adult population, utilisation of mental health services, level of unmet needs; and to identify barriers to mental health treatment.
2. Development and validation of an instrument to measure the level of positive mental health in the Singapore population. This study was undertaken after a series of discussions and negotiations with the funders, Singapore Millennium Foundation and the Ministry of Health, to understand their priorities and expectations. For policy makers in the Ministry, the study would provide a high quality baseline data to track the trends of the mental health status of the population as well as to help evaluate some of the initiatives of the First National Mental Health Blueprint implemented a few years ago. The study also has a Stake-Holders Board comprising representatives from the major stakeholders including those from the three main ethnic communities in Singapore whose views are actively sought for the implementation of the study and the dissemination of findings. In a way, this study has elements of a Community-Engaged Research which works collaboratively with communities to address issues affecting the well-being of people within those communities and seeks to form partnerships, cooperation and collaboration with these community partners on research that is of interest and importance to them, while sharing a commitment to address local health issues.

We have established a critical core of investigators from different disciplines including mental health, economics, sociology, epidemiology, public health, survey methodologies, instruments and scale development and statistics from the Yong Loo Lin School of Medicine, NTU and RAND Health USA. The study is led by the team from the Institute of Mental Health (Principal Investigator: Associate Professor Chong Siow Ann).

The household survey for assessing prevalence of mental disorders was launched in the year 2009 and will be completed by early 2011. Till date, 6200 Singapore residents have been interviewed for the study. Concurrently, the positive mental health instrument is being developed using a combination of qualitative and quantitative methods. Focus group discussions and a population based survey (independent of the household survey) have been completed to identify the concepts and to generate a shorter instrument. Further validation of the instrument will be conducted in the local population and will be completed by early 2011.

Integral to our work is the concept of sharing findings, skills, knowledge and expertise. It is also important to us to be able to communicate effectively the importance of this study to the community in order to educate and engage them, and to enlist their support. We do this through teaching, presentations, consulting and working with the media, non-governmental organisations, service user groups, and other academic institutions. This study has been extensively reported on and commented upon by the various mass media. Presentations have been made in local and international meetings, and manuscripts have been submitted to peer-reviewed journals. We anticipate that the eventual findings will be of even greater interest and relevance to the scientific community, care providers, policy makers and the general public.

The IMH Clinical Research Team led by A/Prof Chong Siow Ann (Bottom row, third from left).





# Agency for In



AIC's Research, Health Information Management and Evaluation Department led by Dr Wee Shiou Liang (Third from left).

## Dr Wee Shiou Liang

Head, Research, Health Information Management and Evaluation Department  
Agency for Integrated Care (AIC)

The cost of acute care at tertiary hospitals is high and we cannot rely on acute care infrastructure to provide long-term care. For patients who no longer require acute care services but require treatment and care support for their medical conditions, they may receive treatment and care from the intermediate & long-term care (ILTC) services to continue their treatment. Seamless delivery of healthcare services will allow treatment to be provided in the most cost-effective location and coordinated over a patient's lifetime by a healthcare team.

Agency for Integrated Care (AIC) was corporatised by Ministry of Health (MOH) in August 2009. We are the national agency to implement care integration policies on the ground from primary to acute to long-term care, and to foster the development of the community and primary care sectors. MOH's current vision for delivery of integrated care is through the regional health systems (RHS), anchored by the restructured hospitals (RHs) working in close partnership with other healthcare providers including the general practitioners (GPs), polyclinics, community hospitals

(CHs), nursing homes (NHs), and day rehabilitation/ care and home care providers.

AIC's key challenge is to effectively work with the many providers of primary and intermediate-long term care that MOH or RHs did not control or own, so as to foster care integration and provide optimal care at the appropriate setting nationally.

AIC's Department of Research, Health Information Management and Evaluation (RHIME) has the mission to enable integrated care through robust, collaborative health services research, evaluation and knowledge management. To draw attention to the sector's needs and improve intermediate-long term care, we seek to actively partner other agencies and researchers to enable research and facilitate knowledge translation. In this article, we share two examples of how we are doing this.

### AIC Study on Demand Factors Influencing the Use of ILTC Services

In Singapore, most long-term care is provided by family caregivers or foreign domestic helpers. Formal intermediate-long term healthcare (ILTC) services involve home and community-based services as well as institutional care in community hospitals and

# Integrated Care

nursing homes. The demand for formal ILTC services depends on a number of factors including awareness, knowledge, location, mobility/transport, social, financial and cultural considerations. Depending on the service, about 10-65% of AIC referrals do not result in eventual use of the respective services due to patient withdrawal of application. It is also not known whether the use of formal ILTC services influence subsequent health outcomes and health service utilisation.

Presently, little is known of the elderly population's or potential users' views on the available ILTC services. In collaboration with A/Prof Angelique Chan of Duke-NUS Graduate Medical School, we are conducting a two-stage Community Study to examine how awareness, knowledge, social and other factors influence the decision to use these ILTC services. We will also compare the health outcomes and health services utilisation of people who do and do not take up nursing home, day rehabilitation and home care services. The study will employ qualitative in-depth interviews and quantitative surveys. Rather than the general population, the target of the study will be people deemed to have care needs and who have been referred by AIC to the various services. We will also include the main unpaid-caregiver in the study. This population is chosen because it would have gone through more careful deliberations on the use of formal care services compared to the general elderly population. Their responses are likely to reveal more insights for awareness, education programmes and service planning compared to the general elderly population<sup>1</sup>. As the national referral agency for these ILTC services, the AIC referral population is a good representation of a segment of population that may benefit from formal ILTC care services.

In-depth interviews (IDIs) will help map out the various factors considered by the ILTC population in using the services. The findings will be used to develop relevant research hypotheses and formulate questions for the survey. For example, it is not known if the low take-up of day rehabilitation service is mainly due to a lack of understanding of the value of rehabilitation by the patient/caregiver or travel inconvenience. Information to be gathered from the IDIs includes perceptions on how these services relevant to the care needs, alternative/complementary care options considered, decision dynamics regarding whether

to use the services, relative role of the various factors influencing accessibility and preference of community-based services vis-à-vis institutional care, perceived health outcomes and utilisation of other health and/or social care services. Importantly, we gain a quick but good understanding of the differences between users and non-users of the services. For the users, other useful information includes reasons for continued usage of services and other factors relevant to continued usage. For the non-users, useful information includes factors that could shift them towards considering usage.

## **The ILTC Innovation Fund (ILTC-IF): A Fund for ILTC Providers**

A new fund will soon be dedicated to all providers of ILTC providers. In recognition of their importance within our national healthcare system. The ILTC Innovation Fund (ILTC-IF) will support projects that use innovation and evidence-based care practices to improve patient care or service delivery. Through this fund, we hope to help ILTC providers embark on innovative or research projects to develop better care and service practices and improve quality of care.

AIC, other healthcare providers and academics can also have a role in project collaboration. The fund encourages ILTC providers, including both private and Voluntary Welfare Organisations, to collaborate with other healthcare professionals and cross-sector partners to share expertise and resources. This allows smaller and more inexperienced ILTC providers to leverage on the strengths of other institutions in areas such as advising on suitable topics, design and implementation of projects, and providing other support necessary for the project's success. Upon project completion, we intend to organise forums to share new knowledge.

The first grant call for the ILTC-IF opens on 17 January 2011. We invite interested parties to get in touch with us early to discuss any preliminary ideas. Please contact Mr Joel Yong at DID: 66036832 or joel.yong@aic.sg for more information.

<sup>1</sup> 6% of local population aged 60+ years need assistance in at least one activity of daily living (ADL); corresponding proportion is 16% for population aged 75+ (Social Isolation Survey 2009 and Caregiver Survey 2010). Not all of these would have needs for formal ILTC care services.



# Interview with Professor Edward

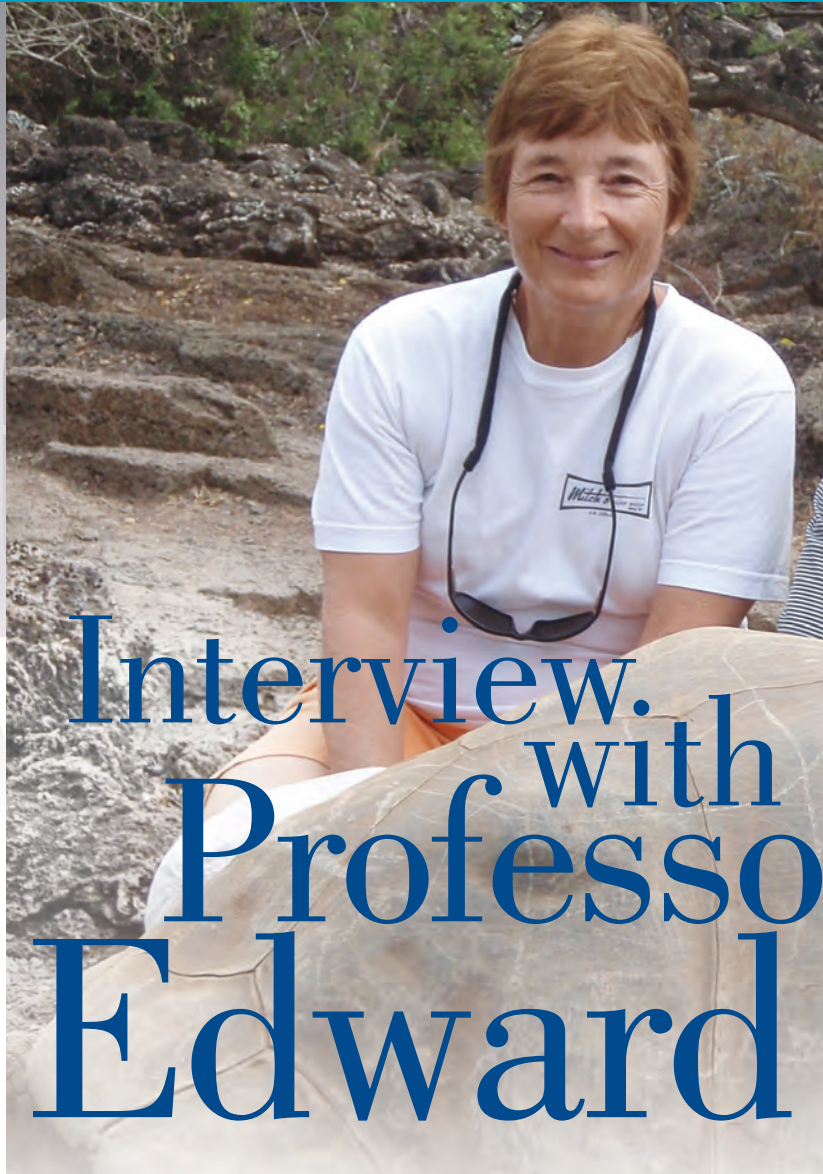
Professor Edward Holmes, Deputy Chairman, Translational and Clinical Sciences Group (BMRC) and Executive Chairman, National Medical Research Council (NMRC) is a well respected international thought leader in translational research and academic medicine. Catalyst is grateful to Prof Holmes for taking time off his busy schedule to share his candid views on research in Singapore. The following is an extract from an interview conducted at A\*STAR in January 2011.

## **What are your thoughts on the current awareness of both translational research versus community health research in Singapore?**

As I understand, this question is really about awareness of the differences between and interrelatedness of translational research and community research in Singapore – the contrasting situation between the two. It seems to me that first one has to ask awareness by whom: in my opinion there are at least three groups to consider. How aware is the government, in particular MOH and funding agencies like NMRC; different physician groups; and lay people in the community.

My sense is that MOH has an acute awareness of the need to do more T2, i.e. later stage translational research which includes community-based research. MOH and NMRC have just started a new research program in Health Services Research that is intended in part to focus more attention and effort on community related research.

The 2<sup>nd</sup> group, physicians, could be more aware of what can be done in the area of T2 research. There has been significant progress in creating awareness of the potential of T1 research (early stage translational research that includes laboratory and




clinical research) over the last five years. However, in Phase 3 of the Biomedical Sciences (BMS) Initiative (2010-2015), more needs to be done to increase awareness and provide support for T2 research.

The 3<sup>rd</sup> group of individuals that should to be aware is the general public. These are the individuals who participate in research projects and they are the taxpayers who provide the support to conduct all types of translational and clinical research; considerably more effort is needed to educate the public on the importance and value of translational and clinical research in its broadest sense.

Singapore is not alone in the challenges faced in developing a robust T1 and T2 clinical research infrastructure. Certainly the United States and UK face the same challenges. We can't stop at the T1, the early stages of translational research; for the general public to benefit we must also engage in bringing new therapies to the daily practice of medicine. I think NHG as health cluster is ideally positioned - to conduct T2 or community-based research since the cluster has both outpatient primary care centers as well as tertiary care inpatient centers.





Prof Edward Holmes and his wife Prof Judith Swain  
on their holiday to Galápagos.

# r Holmes

## **Is there a simple analogy that you could use to compare these 2 forms of research to the lay clinician?**

As I mentioned earlier in the interview, it is important to recognize that translational and clinical research is a continuum.

A good example of how the continuum from basic research to T1 and on to T2 research has worked well is illustrated by how we approach the management of hypercholesterolemia. Thirty years ago when I was a medical student, we were just beginning to understand there were different types of cholesterol and some were good and some were bad. As a consequence of research programs spanning basic research to community research today it is a routine part of health assessment to measure and fractionate cholesterol and manage patients with diet and drugs that have been developed to address specific cholesterol problems. As a result the every day practice of medicine has been significantly altered and patients have benefited by a reduction in cardiovascular disease. To me this is a good example of how the continuum of translational research from the T1 to the T2 stage has worked to improve the health of the general public.

# mes

## **How do you think translational research can effectively cascade down to the community level? How do you see NMRC role and part to play in this research area?**

NMRC is the funding agency that carries out the translational and clinical research agenda established for the country by the BMS Executive Committee in conjunction with agencies like MOH and A\*STAR.

At the beginning of Phase 2 of BMS in 2005 it was decided there would be 5 major therapeutic disease areas addressed through the translational and clinical research agenda, i.e. Cancer, Cardiovascular/Metabolic Disease, Infectious Disease, Neuroscience and Eye diseases. These five areas were selected because of the importance of these disorders to the health of Singaporeans and because it was felt the science was sufficiently advanced to be able to make progress in the broad area of translational and clinical research in these areas. Substantial progress has been made in training a cadre of clinician scientists and investigators, developing the needed infrastructure to support these investigators and launching several very promising programs in the T1 or early stage of translational research. Steps have been initiated to develop T2 or later stages of translational research with the launch of the Health Services Research grant scheme. As we embark on Phase 3 of BMS it will important for NMRC, working with the BMS Executive Committee and community of investigators to develop new programs in the T2 area including community-based research.

My sense is that Singapore may be better positioned than many other countries to develop programs in community-based research because of its size, stable population, and health



“Singapore is attempting to do something that few other cities or countries can do by bringing together basic research, translational research, and community based research to create an ecosystem that drives fundamental discovery to improve human health and improve the economic well-being of Singaporeans.”

clusters that bring together both hospital-based and community-based healthcare.

In addition Singapore is starting a 3<sup>rd</sup> medical school, and this is a unique opportunity to develop new translational and clinical research programs that complement what is already being done in the two existing medical schools. One could imagine that the NHG cluster through its partnership with the new medical school at NTU might develop exciting new programs focused on the community-based research.

As we move to doing more T2 or community-based research, we can't lose sight that we need to continue investments in the more upstream basic and translational research initiatives or there will be no new ideas to take to the community. The goal of BMS Phase 3 is to integrate across the continuum from basic to T1 to T2 clinical research.

#### **What do you like most about your job?**

What I like most about my job is that this is an extremely stimulating environment...Singapore is attempting to do something that few other cities or countries can do by bringing together basic research, translational research, and community based research to create an ecosystem that drives fundamental discovery to improve human health and improve the economic well-being of Singaporeans. In addition Singapore is a fun place to live and work.

#### **How do you find time for your family?**

The critical thing for me is not so much finding time, but having a spouse who shares the same values. I am fortunate in having a wife who is as excited about being part of the biomedical research community in Singapore as I am. I think we could do better in coordinating our travel schedules however. We once met in the Tokyo airport when I was leaving Singapore headed to San Diego and she was going in the opposite direction. We both came to the conclusion this was no way to get together for a cup of coffee.

#### **What do you like to do in your spare time? Do you have any hobbies?**

My wife and I both enjoy outdoor types of activities. For example, we both enjoy playing golf. For some couples, playing golf would might be considered time apart; for or us it's 4 hours together without telephones or Blackberry™. My new year's resolution is to learn to fly fish. I am working on a vacation for us this summer at some place where we can fly fish in the morning, golf in the afternoon, and finish the day over a nice dinner with a good bottle of wine.

#### **Does your personality and love for your hobbies help in making decisions in your daily work?**

Yes, I think so. At least for me, my time away from work is helpful in keeping things in perspective. By doing things with other people, playing golf together, talking about books or anything other than medicine, it helps me to maintain perspective on what is important in life... If I go away for a few days, I feel recharged and ready to go, and bring a new perspective and energy to my work.

#### **How do you handle the tight demands of your schedule?**

Not well. Passing your wife in the airport after being apart for ten days is not recommended. That said I feel I am unbelievably fortunate to have career as a clinician scientist doing something that I really enjoy and something that hopefully benefits mankind.

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#### *Research Phases*

*T1 – Research done in the laboratory, preclinical and in investigational units all the way to clinical research involving patients.*

*T2 – Research where we are trying to find out what really works, not just in our research structure but more in the community.*

*BMS Phase 3: Biomedical Sciences Initiative Phase 3*



Dr Tang Wern Ee (Middle) with her team at NHGP Clinical Research Unit.



# Primary Care Research

**Dr Tang Wern Ee**  
Head, Clinical Research Unit  
National Healthcare Group Polyclinics

Primary care generally refers to first contact care provided by healthcare professionals to patients in a community. The 4 main features of primary care have been described as: first contact access, continuous person-focused (not disease-focused), comprehensive and coordinated care provided to individuals and populations undifferentiated by age, gender, disease or organ system<sup>1</sup>.

Primary care research is simply research conducted in the context of primary care. Primary care research aims to address the evidence gaps in primary care and ultimately to improve the quality, clinical effectiveness and cost-effectiveness of primary care in all its manifestations<sup>2</sup>. Given the complexity and breadth of primary care, primary care research is multi-dimensional and multi-disciplinary. It encompasses the epidemiology and clinical presentation of conditions seen in primary care, patients and care-seeking behaviour, doctor-patient interventions, clinical decision

making, screening, prevention and health promotion, organisation of primary care and primary care policy<sup>3</sup>. Research questions from certain dimensions of primary care research may be most appropriately undertaken by clinicians within primary care while other research questions are likely to be better answered by researchers from health service research units and epidemiologists. However, research in primary care often has to be multi-disciplinary in order to tackle the relevant research questions effectively<sup>2</sup>.

The National Healthcare Group Polyclinics (NHGP) provides care for a significant number of patients with chronic diseases. In view of this, the research focus for the NHGP has been on chronic diseases and improving chronic disease care delivery. The research that NHGP has undertaken includes the evaluation of chronic disease management programmes; determining the prevalence of depressive symptoms and clinical depression among diabetic patients; assessing clinician attitudes and practices in the areas of screening and

management of depression; exploring the perceptions of insulin therapy amongst diabetic patients and the health literacy of our patients.

Practice-based research in a busy primary care setting is challenging. Amongst the challenges faced are: the engagement of primary care clinicians in the research agenda, the building of research capacity in primary care and the translation of research evidence into clinically effective practice. The growing recognition both locally and internationally of the importance of primary care in population health<sup>4</sup> will spur the field of primary care research.

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# Combined CRP

The Combined Clinical Research Professionals (CRP) – Clinical Research Coordinator Society (CRCS) Forum with “Proposed Amendments to Clinical Trials Regulations” and “Common GCP Inspection Findings” as the topics, was held on 10 Dec 2010, at the National University Health System Auditorium, with Dr Lisa Tan and Ms Sumitra Sachidanandan as speakers. Dr Tan is the Regulatory Consultant of the Clinical Trials Branch, Health Products Regulation Group; Ms Sachidanandan is the Compliance Inspector of the Clinical Trials Branch, Health Products Regulation Group.

Dr Tan shared the background; summary of proposed changes and rationale for changes and new initiatives on the Clinical Trials Regulations. In summary the proposed changes in the 6 key

aspects; Sponsor Responsibilities; Observational Trials; Consent Requirements for Vulnerable Populations; Vigilance; Confidentiality and Non-Disclosure of Information and Investigational Product Labeling.

“Stakeholder Communication Sessions” were held to obtain feedback from the industry, IRBs/DSRB and the Emergency Physician to understand what issues or obstacles being encountered. These sessions were held from February to March 2009. Further sessions will be held from 2010 to 2011 for the industry, IRBs/DSRB, Investigators and Institutions to understand if the proposed changes will be feasible once approved.

It was mentioned that these changes would be implemented in the later half of 2011.





# & CRCS Forum

Ms Sachidanandan shared on the GCP Inspection framework, Classification of GCP Inspection Findings and GCP Site Inspection Findings from 2009 to 2010. GCP Inspection was launched in September 2009 and the 1st GCP Site Inspection was done in Nov 2009. A total of 13 GCP Site Inspections has been carried out to date. Ms. Sachidanandan mentioned that among the "Major" GCP Inspection findings, Informed Consent came up tops as a critical finding. She further elaborated with a scenario of a subject who had signed an amended ICF which had not been approved by the licensing authority. She stressed that certain processes required logical rationale. In addition, if there were no documentation, the process was never done.

Most participants came from the various healthcare institutions under the National Healthcare Group and the SingHealth Services. There were also representations from the Academic Institutions, Regulatory Organisations, Pharmaceutical Companies and the Contract Research Organisations. The topics were very well taken and seats for the event was filled up very fast. There was even a waiting list for registration to this event.

In order to meet the resounding registration, an additional room was utilized to cater for those on the waiting list.

Participants responded favorably and participated actively in the Q & A section. Q & A could also be received from the additional room.

With over 300 participants, the forum was a resounding success; this reflected the high relevancy of the topics to the research community who took time off their busy schedule to spend the day sharing and imparting knowledge.

The next forum will be held in March 2011. You should attend if you are a:-

- Clinical Research Coordinator/Assistant
- Clinical Research Associate
- Investigator
- Clinicians, nurses, pharmacists and allied health personnel who are engaged in the conduct of clinical trials
- Project team leaders and coordinators
- Other research professionals.

*For more information, please visit our website at [www.research.nhg.com.sg](http://www.research.nhg.com.sg)*

## FY11 NHG-KTPH CLR & SIG I Research Grant Call

### **Clinician Leadership in Research (CLR)**

The Clinician Leadership in Research (CLR) grant aims to groom and nurture young aspiring clinician scientists. The grant spans over 2 years and is ideal for clinicians keen in exploring a career as a clinician scientist.

A seed funding of \$10,000 will be awarded for every successful research proposal. The CLR Clinician Scientists will get to work with an experienced Principal Investigator & mentor, thereby strengthening their research performance. Research training by subject experts will also be provided to all successful applicants during the tenure of the grant programme.

### **Small Innovative Grant I (SIG I)**

The Small Innovative Grant I (SIG I) is a short-term grant designed to support clinical research that can contribute directly to

improve patient care or to enhance clinical research capabilities in NHG. It is designed to support exploratory and innovative studies with the aim of preparing young investigators to initiate larger investigations and vie for competitive grants on a national level.

Since its inception in 2005, SIG I has supported close to 100 studies and valuable knowledge has been discovered through the numerous scientific publications, posters and presentations from these studies. SIG I funds a maximum of \$50,000 yearly for up to 2 years.

This year, both CLR and SIG I have been launched in conjunction with Khoo Teck Puat Hospital (KTPH) from 22 November 2010 to 10 January 2011. Results of the grant call are expected to be released in March 2011.

## Event Highlights

The Research Training & Development Unit (RTDU), part of NHG RDO conducted a total of 23 classroom-style courses, 3 forums and 3 discussion platforms tailored to the local Clinical Research industry in 2010.

Apart from educating and training Clinical Research professionals from Clinical Research Coordinators (CRCs) to Principal Investigators (PIs), these platforms also catered for announcements of latest happenings in the industry. Here is a photo recap of the eventful year:

**Research Admin Roundtables** are discussion platforms where Research Administrators (research managers and support staff inclusive) from local health clusters and research institutions come together for a lunch-time networking session. These sessions have been conducted since August 2006, at different Institutions to give our participants a better understanding of each Institution's roles and functionalities, and share views on key issues and updates in the local Clinical Research scene. A total of 3 sessions were held in 2010.

**1 & 2** In April, participants enjoyed a guided tour around the facilities of the Duke-NUS Graduate Medical School campus.

**3-5** In July, Ms. Shannon Neo (WDA) and Mr. Tan Chee Boon (NYP) introduced the newly-open WDA Clinical Research Consortium and the curriculum of WSQ Certified CRC Programme respectively. Participants and speakers exchanging opinions and feedback at the highly-interactive discussion platforms.

**6-11** In December, participants had the opportunity to visit Khoo Teck Puat Hospital's state-of-the-art facilities and much-talked about rooftop garden. They were also introduced to the capabilities of the hospital's Clinical Research Unit (CRU) through a presentation by CRU manager, Ms. Joy Chan.

**Clinical Research Coordinator Society (CRCS) Forums** are forums catered for the local CRCs population. Topics shared not only imparted knowledge beneficial for their work, but also for their personal development. A total of 3 forums were held this year.

**12-15** Cross-collaborations between NHG and SingHealth Services (SHS), and Clinical Research Professionals (CRP) as we held combined CRCS Forum well-attended by over 250 participants.

**RTDU conducts training courses** ranging from Singapore Guidelines for Good Clinical Practices (SG-GCP), Research Methodology to Research Ethics, Proper Conduct of Research to Project Management well-attended by over 300 local participants.

**16-20** Our courses are conducted by highly experienced Clinical Research professionals from institutions, regulatory bodies, pharmaceutical companies and contract research organisations.

**21-28** Class sizes are kept small to maximize learning and interaction amongst participants and speakers. Participants practising their newly-acquired knowledge through hands-on exercises, group discussions and games, in fun and conducive environments.

## Research Training & Development Unit (RTDU)

# A Year in





# Photos





# 1<sup>st</sup> Singapore Health and Biomedical Congress



**One for the album** Distinguished guests and co-organisers of the inaugural SHBC

The 1<sup>st</sup> Singapore Health and Biomedical Congress (SHBC) held on 12 – 13 November 2010 had welcomed more than 2800 participants. Jointly organised by NHG and NUHS, this inaugural event with the theme ‘Improving in Our Community – A Holistic and Integrated Approach’ had received a total of 407 scientific abstracts for the Scientific Competition, of which 33 scientific abstracts were presented at the finals during the 2-day event held at the Suntec Singapore International Convention and Exhibition Centre.

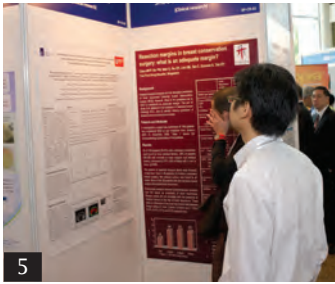
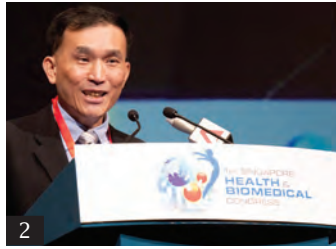
## 12 November

- 1) Opening Ceremony of the inaugural SHBC
- 2) Opening Address by Guest of Honour, Mr Lim Chuan Poh, Chairman, A\*STAR
- 3) Mr Lucas Chow, Chairman, Health Promotion Board delivering the keynote lecture at the Opening Ceremony
- 4) Trade Exhibition at the Concourse
- 5) 1<sup>st</sup> SHBC Poster Presentation at the Concourse
- 6) Professor Kevin Grumbach of University of California delivering his Plenary Lecture at the Primary Care Forum 2010, held in conjunction with SHBC 2010
- 7) Delivery of the Plenary Lecture on “The Role of NUS in Ageing Research” by Professor Peter Little
- 8) Plenary Lecture on “Academic Medical Centers as Model of Integrated Care for the Community” by Professor John Wong Eu Li
- 9) Plenary Speaker, Professor Eric Andrew Finkelstein addressing the audience on “Economic Incentives to Reduce Obesity”
- 10) Distinguished guest at 1<sup>st</sup> SHBC Opening Ceremony
- 11) Attentive delegates at 1<sup>st</sup> SHBC’s plenary session
- 12) A/Prof Chng Wee Joo – SHBC Scientific Committee Chairman delivering citation for Keynote speaker, Mr Lucas Chow
- 13) Presentation of token of appreciate to Mr Lucas Chow by A/Prof Benjamin Ong, Chief Executive, National University Health System
- 14) Welcome address by SHBC Organising Committee Chairman, A/Prof Quek Swee Chye
- 15) Judges for 1<sup>st</sup> SHBC Scientific Competition

## 13 November

- 16) Question and Answer session by speakers
- 17) Speaker certificate presentation by Chairperson of a Track
- 18) Happy delegates of SHBC 2010
- 19) Networking at SHBC 2010
- 20) Panel Discussion of Primary Care Forum 2010 – held in conjunction with SHBC 2010







# Winners of the 1<sup>st</sup> SHBC 2010 Scientific Competition

The NHG-NUHS 1<sup>st</sup> Singapore Health & Biomedical Congress (SHBC) 2010 was held on 12-13 November 2010 at the Suntec Singapore International Convention and Exhibition Centre. The finals of the Scientific Competition were also held during the 2-day inaugural event.

After an intensive round of selection by our judges, we are proud to present to you the winners of the 1<sup>st</sup> SHBC Scientific Competition. Our heartiest congratulations to the following winners!

## **Singapore Clinician-Investigator Award**

Gold: Dr Leonard Ang, Singapore National Eye Centre  
Silver: Dr Gilberto Lopes, Johns Hopkins Singapore International Medical Centre  
Bronze: Dr Eric Khoo, National University of Singapore  
Dr Lee Guan Huei, National University Hospital  
Dr Sim Kang, Institute of Mental Health

## **Singapore Allied Health Award**

Gold: Ms Lim Su Lin, National University Hospital  
Silver: Mr Daniel Zhao Binhang, National University Hospital  
Bronze: Mr Benny Li Kaihui, Institute of Mental Health

## **Singapore Nursing Award**

Gold: Mr Zhou Zhenyu, Institute of Mental Health  
Silver: Ms Lim Chai Sean, National University Hospital  
Bronze: Ms Ang Mei Qi, KK Women's and Children's Hospital

## **Singapore Young Investigator Award – Basic Science Research / Translational Research**

Gold: Mr Kok Yee Onn, National University of Singapore  
Silver: Dr Xie Zhigang, National University of Singapore  
Bronze: Mr Muhammad Irfan Ismail, National University Hospital

## **Singapore Young Investigator Award – Clinical Research**

Gold: Dr Carol Cheung, Singapore Eye Research Institute  
Silver: Dr Huang Gaofeng, National University Hospital  
Bronze: Ms Miao Hui, National University of Singapore

## **Singapore Young Investigator Award – Quality, Health Services Research**

Gold: Dr Gilberto Lopes, Johns Hopkins Singapore International Medical Centre  
Silver: Dr Sun Yan, National Healthcare Group HQ  
Bronze: Mr Liao Zi Qiang Glen, National University of Singapore

## **SHBC Best Poster Award – Allied Health**

Gold: Ms Chen Ya Shu, National University Hospital  
Silver: Mr Benny Li Kaihui, Institute of Mental Health

## **SHBC Best Poster Award – Basic Science Research / Translational Research**

Gold: Dr Sim Kang, Institute of Mental Health  
Silver: Dr Mark Chong, National University of Singapore  
Bronze: Ms Chan Chang Yien, National University of Singapore

## **SHBC Best Poster Award – Clinical Research**

Gold: Dr Amutha Chinnadurai, National University Hospital  
Silver: A/Prof Melvin Leow, National Healthcare Group HQ  
Bronze: Dr Patrick Chan, Tan Tock Seng Hospital


## **SHBC Best Poster Award – Nursing**

Gold: Ms Carolyn Chan Mei Fong, National Healthcare Group Polyclinics  
Silver: Ms Florence Chng, Khoo Teck Puat Hospital

## **SHBC Best Poster Award – Quality, Health Services Research**

Gold: Ms Elizabeth Ng Shu Hui, National University of Singapore  
Silver: Dr Chan Moon Fai, National University of Singapore  
Bronze: Dr Predeebha Kannan, National Healthcare Group Polyclinics





# NHG Singapore Guidelines to Good Practice (SG-GCP) Course

The National Healthcare Group (NHG) Singapore Guidelines to Good Clinical Practice (SG-GCP) Course was held on 29-30 September 2010-its third run of the year.

The healthcare professionals who attended the SG-GCP course were equipped with a comprehensive and wholesome understanding of the Good Clinical Practice guidelines. The course delivered a strong message to all participants on their responsibility to protect the rights, safety and well-being of all trial subjects. It was also emphasized that data and reported results taken from the trial subjects must be credible and accurate.

A total of 61 participants attended the 2-day workshop, of which 47 (77%) participants were from healthcare Institutions. There were 2 (3%) participants from the academic Institutions and 12 (20%) from the pharmaceutical industry.

17 speakers were invited to conduct the workshop. Our

speakers were chosen based on their qualifications and experience in the industry: They are experts from:-

- 1 Regulatory – Health Sciences Authority (HSA)
- 2 Healthcare / Academic Institutions - Institute of Mental Health (IMH), National Healthcare Group HQ (NHG HQ), National University Health System (NUHS), Tan Tock Seng Hospital (TTSH), NHG Eye Institute (NHGEI)
- 3 Private Sector - Aesculape CRO Pte Ltd, Legal Clinic Pte Ltd, Maccine Pte Ltd, Lundbeck Pte Ltd

The SG-GCP course provided the participants with a good understanding of the Good Clinical Practice guidelines and course was also a value-add to the participants through the speakers' sharing of their industry knowledge and experience. Inputs from the regulatory body, pharmaceutical companies, healthcare institutions, CRO and legal counsel gave our participants a thorough understanding of the guidelines.

## NHG RDO Training Calendar for January - March 2011

Date	Time	Training Programme	Course Category	Course Module	Venue	No of Seats
Ongoing	0000-2359	Proper Conduct of Research Online – Basic I-III	Proper Conduct of Research	PC101-103	<a href="http://www.elearning.nhg.edu.sg">http://www.elearning.nhg.edu.sg</a>	120
20 Jan & 21 Jan	0900-1800	Singapore Guideline for Good Clinical Practice	SG-GCP		ASTC Seminar Hall Level 2, Kent Ridge Wing Bldg 5 Lower Kent Ridge Road	60
18 Feb	0900-1700	Proper Conduct of Research Workshop – Advanced I	Proper Conduct of Research	PC301	ASTC STLab Level 2, Kent Ridge Wing Bldg 5 Lower Kent Ridge Road	30
1 Mar	1500-1700	15 <sup>th</sup> Clinical Research Coordinators Society Forum	CRCS		TTSH Theatrette	250

For registration and full details, please visit <http://www.research.nhg.com.sg/wps/wcm/connect/romp/nhgromp/trainingeducation/searchcourse>  
For all training enquiries, you may also write to us at "researchtraining@nhg.com.sg"

**Clinical Ethics Consultation  
Learning From Experience**  
An International Conference  
GoodwoodPark Hotel 17-19 Feb 2011

*"Axioms in philosophy are not axioms until they are proved upon our pulses: We read fine things but never feel them to the full until we have gone the same steps as the Author"*  
- John Keats

CME, CNE points awarded :: Visit <http://cbme.nus.edu.sg/cec.pdf>

# What would Researchers want for the New Year?



“Too many to mention. But money for more research is one of them. Only research in medicine can help us to tackle diseases more efficiently. Better money for research than money for weapons, right?”

*And for myself: a romantic song sung by Renee Fleming... and a good glass of wine.*”

**Prof Hugo Van Bever**  
Paediatrics, National University Health System



“World peace, and end to poverty and a large NMRC grant but if I can't have that then a roast turkey dinner with loved ones on Christmas day will suffice.”

**Dr Emily Shen**  
Gastroenterology and Hepatology,  
Tan Tock Seng Hospital

“What I would like (for New Year) as a researcher would be a great assistant who will not only keep me on the straight and narrow, perform all the mundane, and especially, the paper work, and be a sight for sore eyes to boot.”

**Dr Anton Cheng**  
Surgery, Khoo Teck Puat Hospital

“This New Year, I wish for more successful grant applications, more Tier 1 Publications, more patients recruited to my clinical trials but most importantly being happy and fulfilled doing all these.”

**A/Prof Chng Wee Joo**  
Haematology/Oncology, National University Hospital  
Scientific Committee Chairman, 1<sup>st</sup> Singapore Health & Biomedical Congress 2010

“Christmas & New Year is a time of festive celebration and getting together to renew ties and enhance bonds of friendship. As a researcher, it is a time to reflect about relationships as research involves forming networks of collegial collaboration and building bridges of friendship that will extend beyond a particular project. I would like to involve more of my staff especially the junior staff under me in research projects. This is because the invested time, efforts and training will put them in a good stead to make considered judgment about the quality of any research paper encountered in their daily clinical practice as well as encourage them to contribute towards the research enterprise both now and in the future.”

**A/ Prof Sim Kang**  
Psychiatry, Institute of  
Mental Hospital

“A crystal ball to look into the future.”

**Dr Jimmy Lee**  
General Psychiatry, Institute of Mental  
Health/Woodbridge Hospital  
Scientific Committee Member,  
1<sup>st</sup> Singapore Health & Biomedical Congress 2010



“More grant money and less administrative duties like organising conferences.”

**Dr Steven Thng**  
National Skin Centre  
Scientific Committee Member,  
1<sup>st</sup> Singapore Health & Biomedical  
Congress 2010

