

The Academic Respiratory Initiative for Pulmonary Health - TARIPH Newsletter

Bringing research to patients through partnerships

TARIPH Turns One!

TARIPH officially turned one on 19 March 2019! In the past year, TARIPH has established its core leadership team and secretariat office while actively reaching out to the local respiratory research academic community through TARIPH events including the TARIPH Asthma Workshop and Ministry of Manpower-TARIPH Joint Symposium on "Lung Health in the Occupational Setting: Prevention, Protection and Promotion". The inaugural scientific committee meeting, which convened in February 2019, kick-started several TARIPH collaborative projects across Singapore. TARIPH continued to host several international experts last year including Professor Eric Bateman (Founder of the University of Cape Town Lung Institute) and Professor Parameswaran Nair (Frederick E. Hargreave Teva Innovation Chair in Airway Diseases, McMaster University). We have also published several collaborative articles in high-impact respiratory journals and welcomed new members and partners on board. Thank you for your support in the past year and we look forward to further engagement with our members over the coming year. Stay tuned for upcoming TARIPH events!

World Asthma Day 2019

World Asthma Day (WAD) was first organised by the Global Initiative for Asthma (GINA) in 1998^[1] to improve asthma awareness and care around the world because asthma is an important disease and the most common chronic lung disease worldwide. 235 million people worldwide have asthma^[2] and it is a public health problem for all countries regardless of level of development. In Singapore, approximately 20 percent of children and 5 percent of adult Singaporeans have asthma^[3] and the numbers are rising due to increase in allergies, especially amongst children. Every year, 10-15 young people between the ages of 5 and 34 years old die of asthma^[3] in Singapore despite our good healthcare system. Therefore, the theme of this year's WAD event was "Towards Zero Asthma Deaths in Singapore". Public events were organised by SingHealth including a public forum and public outreach activities as featured below in the 'Updates from Singapore's Respiratory Community' section.

Summary of TARIPH Activities since launch

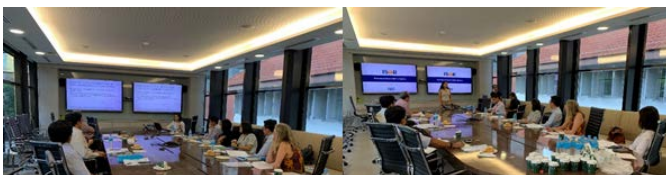


TARIPH Bulletin

Inaugural TARIPH Scientific Committee Meeting

The TARIPH Scientific Committee held its inaugural meeting on 22 February 2019 at the Boardroom of Lee Kong Chian School of Medicine Headquarters, Novena Campus. The meeting was attended by nine TARIPH Scientific Committee members comprising representatives from the academic, private and public clinical communities including senior representation from Respiratory and Critical Care Medicine in Tan Tock Seng Hospital, National University Hospital, Changi General Hospital and Singapore General Hospital, as well as other external stakeholders including National University of Singapore (NUS) and the Agency for Science, Technology and Research (A*STAR).

The TARIPH Scientific Committee came together to discuss issues and ways to advance Singapore's respiratory health landscape and to promote better coordination among the healthcare clusters.



Chaired by TARIPH co-academic lead, Assistant Professor Sanjay Chotirmall, the meeting commenced with an overview of TARIPH's activities and accomplishments over the past year. Three papers were

Recommended Reads by Senior Residents

The Recommended Reads by Senior Residents section features a list of key publications with an accompanying brief summary that have been selected by a group of nominated Senior Residents in Respiratory medicine from each healthcare cluster. These highlighted articles are carefully curated to be read-worthy amidst busy schedules of respiratory researchers, clinicians and fellow residents.

The Senior Residents are supervised by Adjunct Associate Professor Mariko Koh, Senior Consultant, Department of Respiratory and Critical Care Medicine, Singapore General Hospital in the selection of suitable articles for this academic exercise.

The recommended reads for this quarter are:

1. [Hypersensitivity Pneumonitis - Radiologic Phenotypes Are Associated With Distinct Survival Time and Pulmonary Function Trajectory](#)
CHEST 2019; 155(4):699-711

These authors defined three mutually exclusive CT phenotypes of chronic HP: honeycombing, fibrosis with minimal or no honeycombing (fibrotic phenotype), and nonfibrotic abnormality.

The subjects with nonfibrotic HP had median transplant-free survival >14.7 years, compared with >8.0 years for

presented including a potential national clinical trial, discussions on TARIPH's upcoming initiatives and projects such as the healthcare-seeking journey of patients with respiratory problems, assessing the content validity of a new quality of life (QoL) instrument for patients with severe asthma and a proposed collaboration model with the International Severe Asthma Registry (ISAR) proposed by Professor David Price. With these initiatives and projects in the pipeline, TARIPH hopes to benefit patients with lung disease through research and, in turn, improve the quality of life and respiratory outcomes for Singaporeans.

Please feel free to contact the TARIPH Secretariat Office at tariph@ntu.edu.sg if you are keen to contribute to TARIPH projects or have an exciting initiative that would serve the academic respiratory community.

MOM-TARIPH Joint Symposium

On 10 May 2019, TARIPH held our first joint symposium with the Ministry of Manpower (MOM). The symposium titled "Lung Health in the Occupational Setting: Prevention, Protection and Promotion" aimed to raise awareness of occupational lung diseases within the medical community as well as to bring together medical and Workplace Safety and Health (WSH) professionals for a common goal of promoting occupational lung health in their respective fields.

The LKCMedicine's Toh Kian Chui Annex Lecture Theatre reached its full capacity with an attendance of more than 200 participants. With the overwhelming turnout, special arrangements had to be made to livestream the event to the Learning Studio at the Clinical Sciences Building (CSB). The audience included respiratory and occupational health physicians, nurses, workplace safety health officers and industrial hygienists from across Singapore who gathered to learn about occupational lung health while exploring networking opportunities through TARIPH.



Click [here](#) for the programme booklet and [here](#) to view pictures from the event.

Recommended Reading from Singapore Respiratory Medicine Fellows published in top ranking international respiratory journal



The four editors of our newsletter's Recommended Reads by Senior Residents section – Dr Phua Chee Kiang (Tan Tock Seng Hospital), Dr Chew Si Yuan (Singapore General Hospital), Dr Tan Yi Hern (Changi General Hospital) and Dr Tan Ze Ying (National University Hospital) – have recently published an article in the American Journal of Respiratory and Critical Care Medicine highlighting the topic of bronchiectasis. The article was an invited piece from one of the top-ranking respiratory journals (2017 Impact Factor 15.24) – American Journal of Respiratory and Critical Care Medicine (AJRCCM) [4], also commonly referred to as the "Blue Journal". The preparation and publication process of this article had been a valuable learning experience for our residents who should be congratulated for this publication in a high-impact international respiratory journal placing Singapore on the international stage for respiratory research. Congratulations to the senior residents! Please click [here](#) to access the article.

Flow-Volume Underworld (FVU) Meeting 2019



Fifty-five years ago, seven individuals who were deeply concerned about the mechanisms, progression, diagnosis, and treatment of obstructive lung diseases – Jere Mead, Peter Macklem, Sol Permutt, Bob Hyatt, Joe Rodarte, Dick Riley, and Roland Ingram gathered together and founded the Flow-Volume Underworld (FVU). This year, the meeting was brought to Singapore for its inaugural Asia edition. Lead chair organiser, Associate Professor Thai Tran, Department of Physiology, NUS and TARIPH Scientific Committee Member, together with co-chair, Dr. Kay Choong See, Department of Medicine, NUS, led the two-day meeting held on 25 - 26 March 2019, at the Clinical Research Centre auditorium of NUS. The purpose of the meeting was to provide an international forum in which new ideas could be proposed freely, critiqued intensely, and then discussed fully in a collegial, informal spirit. There were representatives from the US, Australia, Canada, China, New Zealand, The Netherlands, UK, and of course, Singapore. Issues that were covered at the meeting included: lung function mechanics, lung injury, lung development and ageing, and new treatments for respiratory diseases. The talks continued well past the international buffet dinner and drinks. The meeting programme can be found at this [link](#).

the fibrotic phenotype and 2.8 years for the honeycomb phenotype.

The paper adds evidence that the clinical course of fibrotic HP with honeycombing is similar to that of IPF with honeycombing.

The prognosis of chronic HP has generally been thought to be better than that of IPF, but previous studies of this topic have not always incorporated the presence and pattern of radiologic or histologic fibrosis. These clearly defined phenotypes are practical and potentially important for stratifying and prognosticating subjects with HP.

2. [Pregnancy-Adapted YEARS Algorithm for Diagnosis of Suspected Pulmonary Embolism](#)

N Engl J Med 2019;380:1139-49

Studies on D-dimer and clinical prediction rules for ruling out pulmonary embolism in pregnancy are scarce and this study was conducted to validate the pregnancy-adapted YEARS algorithm in a cohort of 494 patients, which combines the use of a D-dimer test and a clinical prediction rule. This study found that pulmonary embolism could safely be ruled out by the algorithm across all trimesters of pregnancy with 32-65% of women avoiding CT pulmonary angiography.

3. [Distinct "Immunoallotypes" of Disease and High Frequencies of Sensitization in Non-Cystic Fibrosis Bronchiectasis](#)

Am J Respir Crit Care Med. 2019 Apr 1;199(7):842-853

The role of atopy in bronchiectasis was explored in this large multicentre study effort, with findings of high rates of allergic sensitisation and worse outcomes. The authors subsequently identified 2 distinct immunoallotypes with unique allergen responses, which provide an important starting point for future work focusing on improving endophenotyping in bronchiectasis.

4. [Electronic cigarettes: a task force report from the European Respiratory Society](#)

European Respiratory Journal 2019 53: 1801151

There is a marked increase in the development and use of electronic nicotine delivery systems or electronic cigarettes (ECIGs). This statement covers electronic cigarettes (ECIGs). It summarises the current knowledge on the epidemiology of ECIG use; their ingredients and accompanied health effects; second-hand exposure; use of ECIGs for smoking cessation; behavioural aspects of ECIGs and social impact; in vitro and animal studies; and user perspectives.

5. [Controlled Trial of Budesonide-Formoterol as Needed for Mild Asthma](#)

N Engl J Med 2019; 380:2020-30

International asthma guidelines have historically recommended as-needed short acting β_2 agonists (SABA) for mild asthma. The Novel-START study was an open-label randomised controlled trial for patients with mild asthma which found a lower exacerbation rate for patients on as-needed budesonide-formoterol therapy compared to as-needed salbutamol. This landmark study, together with the similar findings of the SYGMA trials that were published in 2018, has formed the basis for practice-changing updates to the management of mild asthma in the GINA 2019 guidelines that now advocate as-needed inhaled steroid-SABA combination therapy over SABA monotherapy.

Edited by:



Dr Phua Chee Kiang, Senior Resident, Respiratory and Critical Care Medicine Department, Tan Tock Seng Hospital



Dr Chew Si Yuan, Senior Resident, Respiratory Medicine, Singapore General Hospital



Dr Tan Yi Hern, Senior Resident, Singhealth Respiratory and Critical Care Medicine, Changi General Hospital



Dr Tan Ze Ying, Senior Resident, Respiratory & Critical Care Medicine, National University Hospital

Supervised by:

Adjunct A/P Koh Siyue Mariko, Senior Consultant, Department of Respiratory and Critical Care Medicine, Singapore General Hospital

Updates from Singapore's Respiratory Community

Singapore Celebrates World Asthma Day 2019

Sharing and knowledge exchange by international respiratory experts

TARIPH was honoured to host and learn from some of the leading international respiratory experts in the world. Assistant Professor Sanjay Chotirmall, co-academic lead of TARIPH Scientific Committee hosted the guests and introduced the various facilities and initiatives including a tour around the Clinical Science Building at Novena where our TARIPH office is based.

International Respiratory Experts who visited TARIPH:



• **Professor Wisia Wedzicha** – Professor of Respiratory Medicine and Head, Respiratory Clinical Science Division, National Heart and Lung Institute, Imperial College London

• **Professor Eric Bateman** – Emeritus Professor of Pulmonology and Department of Medicine at University of Cape Town and Founder of the University of Cape Town Lung Institute

• **Professor Parameswaran Nair** – Frederick E. Hargreave Teva Innovation Chair in Airway Diseases and Professor of Medicine, Division of Respiriology, McMaster University

• **Dr Thérèse Lapperre** – Senior Consultant, Department of Respiratory Medicine, Bispebjerg and Frederiksberg Hospital



An initiative of the Singapore National Asthma Program-2 (SNAP-2) and supported by Singhealth Lung Centre as well as the Asthma & Allergy Association of Singapore, an Asthma public forum was conducted on 4 May 2019 at Suntec Convention Centre in celebration of World Asthma Day. The theme of this event was "Towards Zero Asthma Deaths". It was an afternoon of educational sessions, where asthma specialists and nurses presented facts on asthma disease in Singapore, the dangers of uncontrolled asthma as well as useful tips on optimally controlling asthma. The highlight of the event was asthma patient ambassadors sharing their real-life experiences in dealing with severe life-threatening asthma and asthma control at an elderly age.

In addition, participants had the opportunity to participate in hands-on sessions such as checking their lung function and undergoing asthma inhaler device training. The event ended with sumptuous goodie bags and attractive lucky draw prizes for participants to take home.

The public forum was a resounding success and we reached out to more than 200 public members, who were all eager to learn more about asthma. Many felt such sessions were extremely useful and should be held regularly to increase public awareness of asthma.

5 minutes with..... Professor Lim Tow Keang

The "5 minutes with" section is a light-hearted series where five short questions are posed to people from our local respiratory community to uncover interesting things about them. In this issue, we have invited Professor Lim Tow Keang, Department of Medicine and Senior Consultant, Division of Respiratory and Critical Care Medicine, University Medicine Cluster at National University Health System to share his thoughts with us.



- Did you choose your profession or did it choose you?**
I went into medical school by default. In those days, if you were good in science, it was either engineering or medicine. I did not like maths, so that was it.
- What was one of your most defining moments in life?**
On my first day in medical school, a young neurologist was on the podium answering questions. In response to "why do medicine", Dr Yee Woon Chee* quoted Albert Camus from the book "La Peste" (The Plague). I sat up with that spine-tingling feeling and told myself: "yes, I am in the right place". Many years later, I was fortunate to have celebrated several Christmases with Dr Yee when he was working in Singapore. He is probably the main reason I am a physician. *: [https://www.neurology-asia.org/articles/neuroasia-2011-16\(3\)-263.pdf](https://www.neurology-asia.org/articles/neuroasia-2011-16(3)-263.pdf)
- If you could have dinner with anyone, who would it be?**
William Shakespeare, of course. I have studied and marvelled at his plays all my life but do not know the man himself at all. His personal life is described as "a chronicle of immaculate absenteeism."
- Do you prefer coffee or tea?**
I drink both coffee and tea every morning.
- What do you do in your spare time?**
I read serious or "literary" fiction and history, especially on colonisation in Asia like, this week, the catalogue of the Metropolitan Museum of Art (MET) exhibition: "Sultans of Deccan India, 1500–1700: Opulence and Fantasy". I am working on something entitled "Zen and the Art of Lung Mechanics" loosely modelled after Robert Pirsig's classic on motorcycle maintenance.

Publications (January – March 2019)

- Molton, James S, Benjamin A Thomas, Yan Pang, Lih Kin Khor, James Hallinan, Claire M Naftalin, John J Totman, et al. "Sub-Clinical Abnormalities Detected by Pet/Mri in Household Tuberculosis Contacts." BMC infectious diseases 19, no. 1 (2019): 83. <https://doi.org/10.1186/s12879-019-3705-0>

If there are any publications you would like to highlight here, please send them to tariph@ntu.edu.sg. Publications listed here should demonstrate collaboration across Singapore or internationally.



Changi General Hospital (CGH) conducted their inaugural World Asthma Day public outreach activities on 7 May 2019.

In partnership with AstraZeneca Singapore, six teams of nurses, doctors, respiratory technicians and volunteers visited locations in eastern Singapore – Heartbeat@Bedok, Changi City Point, and the Medical Centre at CGH – to educate interested participants on the importance of good asthma management, as well as the importance of healthy lung function.

Over 300 simple lung tests were conducted to help participants gauge their lung function. Pink Post-it pledges were collected from participants to support good asthma management, which is to prevent the overuse and over-reliance of salbutamol. The pledges were collated to form a larger-than-life pair of healthy lungs!

Asthma is a chronic respiratory condition that makes breathing difficult. It is characterised by inflammation of the airways, leading to temporary narrowing of the air passages. This causes shortness of breath, chest tightness, coughing and wheezing. It is a common respiratory disease in Singapore, affecting five percent of adults and 20 per cent of children.

World Asthma Day is observed every year on the first Tuesday of May. The event, organised by the Global Initiative for Asthma, aims to improve asthma awareness and care around the world.

Have any respiratory-related updates to share with the TARIPH community? Do get in touch with us at tariph@ntu.edu.sg for further details.

Upcoming Events

TARIPH COPD Workshop

Date: To be confirmed.

Join the TARIPH family

This newsletter is sent to all TARIPH members who has indicated their interest. Click [here](#) to subscribe to the newsletter by joining the TARIPH family. For more details about TARIPH, please visit our [website](#) or email tariph@ntu.edu.sg.

Acknowledgements

We would like to thank the following people for their contribution to this issue of the TARIPH newsletter:

- Colleagues from Communications and Outreach department, Lee Kong Chian School of Medicine, for their advice and assistance with proofreading;
- Adjunct Assistant Professor Jansen Koh from Respiratory and Critical Care Medicine, Changi General Hospital (CGH) for his contribution of Changi General Hospital's World Asthma Day public outreach activities article and picture;
- Associate Professor Thai Tran from Department of Physiology, National University of Singapore (NUS) and TARIPH Scientific Committee Member for her contribution of 'Flow-Volume Underworld Meeting (FVU)' article and picture;
- Adjunct Associate Professor Mariko Koh and Dr Adrian Chan from Respiratory and Critical Care Medicine, Singapore General Hospital (SGH) for their contribution of Singapore General Hospital's World Asthma Day public forum article and picture

We welcome contributions. Please contact the TARIPH secretariat at tariph@ntu.edu.sg if there is any content you would like us to feature.