APSTH
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Inside

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Message from the Chairman

Lai Heng Lee

Dear friends and colleagues,

We last met in October 2014 at Hanoi during a very successful 8th Scientific Congress of the APSTH. Time passes quickly and we are now in the middle of 2015, and the next APSTH Council Meeting is due to take place in June at Toronto. Once again, I muse over what APSTH can offer to its members. While we may offer fewer benefits in comparison with what other professional societies offer, we have to be cognisant that APSTH does not collect subscription or membership fees and indeed the council has no intention to do so for the near future.

Operating on a shoe string budget, we pressed on with our bi-annual scientific congresses hosted and held in different member countries by rotations based on gentlemanly agreements. We take pride in these congresses with education forums which have benefited many members, and where scientific works and data from the Asia-Pacific can be presented and shared. Do keep a look out for coming announcements for the next APSTH Congress in 2016, to be held in Taiwan.

APSTH offers a valuable platform for networking and collaborations in research and education. Successful interest groups have sprouted from APSTH, such as the “Thrombotic Thrombocytopenic Purpura” led by Prof. Ross Baker from Australia and the “Protein S Study” led by Professor Hiroko Tsuda from Japan. Thanks to the generosity of JTH, the JTH-APSTH collaboration allows travel grants for young investigators from APSTH to present their work in Japan. Through the liaison efforts of Prof. Yukio Ozaki and Claire McIntock, APSTH member countries have benefitted much from the many ISTH Education grants and we have seen great success in such forums at Suzhou (China), Manila (Philippines), Hanoi (Vietnam) and Kota Kinabalu (Malaysia).

Work towards having an APSTH-affiliated scientific journal is in progress. This will provide the much needed publication platform for abstracts presented at the APSTH scientific congress and also an additional platform for publications of peer-reviewed works from the APSTH.

The APSTH newsletter continues to be our main portal of communication with our members on the highlights, updates and activities of APSTH. Once again, we express our appreciation to Prof. Pantep Angchaisuksiri for his tireless efforts in maintaining this newsletter. We very much encourage and welcome our members to contribute articles to our newsletter by sending an email to the Editor at pantep.ang@mahidol.ac.th.

We also urge our members to bring new members in from like-minded friends and colleagues. Application and registration for new members can be done online at www.apsth.org.

From the Editor

Welcome to another edition of our newsletter. At this mid-year point, we take a look at some of the recent activities of our Society.

We start off with a very interesting update by Tetsuhito Kojima, M.D., Ph.D., on his research in an article titled, A New Hereditary Thrombophilia: Antithrombin (AT) Resistance. Dr. Kojima is with the Department of Pathophysiological Laboratory Sciences, Nagoya University Graduate School of Medicine, Nagoya, Japan. He writes that hereditary thrombophilia often presents unusual clinical episodes of venous thrombosis at a young age, with frequent family history and recurrence, and in atypical vessels. His research identified a novel mechanism of hereditary thrombosis by AT resistance, associated with missense mutations in the prothrombin gene. These mutations would lead to a substantial procoagulant function of the mutant prothrombin, but could cause considerably impaired inhibition of the mutant thrombin by AT.

Next, we have four reports from the recipients of the APSTH/JSTH 2015 Travel Grants. They all found the experience of attending the APSTH/JSTH Joint Symposium in Kofu, Japan to be very valuable. Not only were they able to benefit from meeting and learning from some of the leading minds in our field, but they were also able to meet and exchange information with other young researchers from our area. The reports in this newsletter are from these recipients of the APSTH/JSTH 2015 Travel Grants: Li Teng Khoo (Malaysia), David Rabbolini (Australia), Lan Wang (China), and Aizhen Yang (China).

Also in this newsletter Jameela Sathar, Consultant Haematologist, Ampang Hospital, Kuala Lumpur, Malaysia writes about the ISTH Sponsored Educational Programs on Thrombosis and Haemostasis hosted by the Malaysian Society of Haematology in Kota Kinabalu. Malaysia, April 24-25, 2015. The meeting's theme was "Addressing Haemostatic Problems in Women". It was made possible by a grant from the ISTH. 475 people attended this very successful meeting. Unique to this meeting was its focus on a particular area of bleeding and clotting disorders in women.

Next, we cover a very important outreach of the Society, World Thrombosis Day. With one in four people worldwide dying from causes related to thrombosis, World Thrombosis Day's 2015 campaign hopes to bring new attention and resources to stop the leading cause of preventable hospital death. On 13 October, World Thrombosis Day's more than 200 partner organizations in 60 countries will bring focused attention to the often overlooked and misunderstood disease of thrombosis, especially hospital-associated venous thromboembolism (VTE). World Thrombosis Day is a timely opportunity to discuss, update or establish new VTE policies. Preventing thrombosis is a patient safety issue and should be a standard of care for all hospitalized patients. Policies should engage all staff involved in patient care and strive for high compliance.

In 2014, organizations around the world found creative and inventive ways to become involved with World Thrombosis Day and spread awareness in their own communities. In Taiwan, organizers held an awareness event and press conference, in Japan there were numerous activities, including an exhibit at an airport, in Australia, one hospital held a competition amongst wards to create thrombosis awareness displays for patients and staff, and in Thailand, WTD posters were sent to all hospitals and several educational activities were held. In other parts of the world, organizations and individuals organized marathons, large-scale outside events, video and social media campaigns, press conferences and training events for hospital staff.

Last, but not least, we have a list of important upcoming meetings. Our next APSTH Congress will be held in Taiwan during October 6-9, 2016.

I'd like to encourage you to share information with our readers by submitting an article for publication in this newsletter to me at pantep.ang@mahidol.ac.th.

Pantep Angchaisuksiri, *Editor*
Officer of Public Relations and Communications APSTH

APSTH
Asian - Pacific Society on Thrombosis and Hemostasis

Research News

A New Hereditary Thrombophilia: Antithrombin Resistance

Tetsuhito Kojima, M.D., Ph.D.
Department of Pathophysiological Laboratory Sciences
Nagoya University Graduate School of Medicine, Nagoya, Japan

Hereditary thrombophilia often presents unusual clinical episodes of venous thrombosis at a young age, with frequent family history and recurrence, and in atypical vessels. Genetic studies of hereditary thrombophilia have revealed two types of genetic defects: loss-of-function mutations in the natural anticoagulants antithrombin (AT), protein C, and protein S; and gain-of-function mutations in the procoagulant factors V (factor V Leiden) and II (prothrombin G20210A). The prothrombin gene G20210A mutation is associated with a mild risk factor for thrombosis in the Caucasian population, but many other prothrombin gene mutations lead to bleeding tendencies such as prothrombin deficiency, dysprothrombinemia, and hypoprothrombinemia.

To date, numerous genetic defects in various molecules have been found among families with hereditary thrombophilia, but many remain unidentified. Recently, we have described a case of hereditary thrombosis induced by a new mechanism of AT resistance (ATR), a gain-of-function mutation in prothrombin (prothrombin-Yukihahi) [Miyawaki Y et al. N Engl J Med 2012; 366: 2390–2396]. This is a novel missense mutation in the prothrombin gene (c.1787G>T) that resulted in a variant prothrombin (p.Arg596Leu). The mutation cosegregated with DVT in the family, indicating that it could be a cause of hereditary thrombophilia in this family. The mutation of prothrombin-Yukuhahi located at one of the AT binding sites where thrombin was complexed with AT and heparin. Two hydrogens of the Arg596 side chains of thrombin form hydrogen bonds with oxygens of the Asn265 side chain of AT [Li W et al. Nat Struct Mol Biol. 2004; 11:857–862] (Fig. 1). It was expected that the mutant prothrombin would retain a certain degree of procoagulant activity, but complex formation of the mutant thrombin with AT could be impaired resulting in prolonged residual thrombin activity.

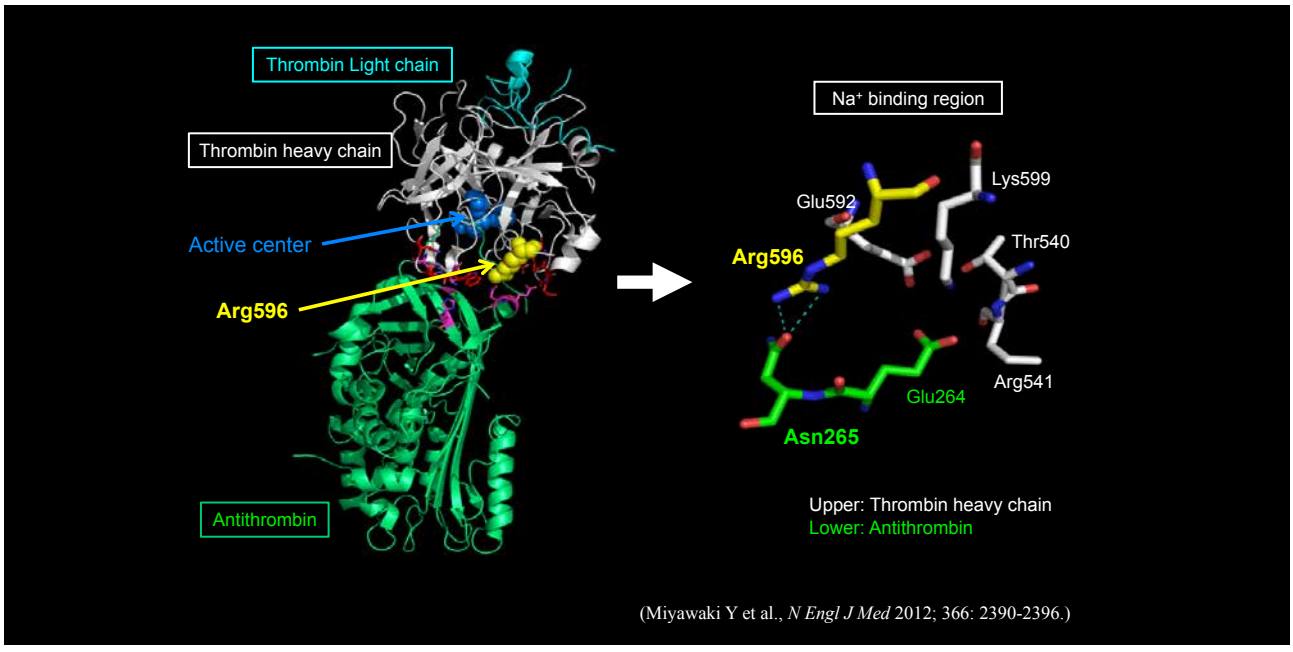


Figure 1. Structure of TAT complex (PDB ID : 1TB6)

To test these hypotheses, we tested the reconstituted plasma by mixing prothrombin-deficient plasma with the recombinant prothrombins, because the proband's plasma was not suitable for evaluation due to warfarin treatment. We observed that the mutant and wild-type prothrombins were fully converted to thrombins in a similar manner within 5 min by prothrombinase. However, the mutant thrombin had a lower catalytic activity for fibrinogen clotting than the wild-type, probably because of structural disruption of the Na+ binding region by the Leu596 substitution for Arg. The second hypothesis, namely that the mutant thrombin would be defective in terms of its interaction with AT, was examined by TAT complex formation using ELISA. There were extremely low levels of TAT in the mutant thrombin sample, even after a 1 h reaction time (Fig. 2). This suggested that the disruption of the Na+ binding region, resulting in the loss of two hydrogen bonds between the Arg596 of thrombin and Asn265 of AT, may be critical for TAT complex formation. These findings indicated that prothrombin-Yukuhashi could be characterized as a dysprothrombin highly resistant to inhibition by AT, called ATR.

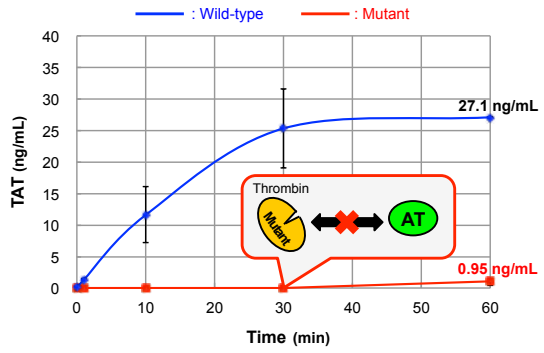


Figure 2. Kinetics analysis of TAT formation

Several laboratory tests are available to evaluate thrombotic diathesis, however, none of the previous conventional laboratory tests can easily detect ATR in plasma. Recently, we developed a new laboratory test that evaluates the thrombin inactivation response in plasma to the added AT [Murata M et al. Thromb Res 2014; 133: 293–298]. The assay was designed to measure the residual activity of plasma-derived thrombin after inactivation in a certain period by the excess of AT. The assay consisted of 3 steps: prothrombin activation, thrombin inactivation using AT, and measurement of the residual thrombin activity. Because warfarin treatment decreased the levels of vitamin K-dependent coagulation factors including prothrombin, the initial and final residual thrombin activites in the warfarinized patient's plasma containing prothrombin Yukuhashi was very low; however, a definite ATR was observed when converted to the relative residual thrombin activities.

Using this plasma assay, we have identified another ATR patients in Serbian thrombosis family carrying a different prothrombin mutation at the same nucleotide position (c.1787G>A, p.Arg596Gln), called prothrombin Belgrade [Djordjevic V et al. J Thromb Haemost 2013; 11: 1936–1939] (Fig. 3). In addition, there was another paper reported the same mutation in the thrombosis patient from India [Sivasundar S et al. Blood Cells Mol Dis 2013; 50: 182–183]. Very recently, we also identified the same prothrombin p.Arg596Gln mutation in another two Japanese thrombophilia families. We tested both of patients' plasma and found both ATR phenotypes associated with the *F2* c.1787G>A mutation. These data suggested that ATR mutations, particularly prothrombin Belgrade, could be found all over the world.

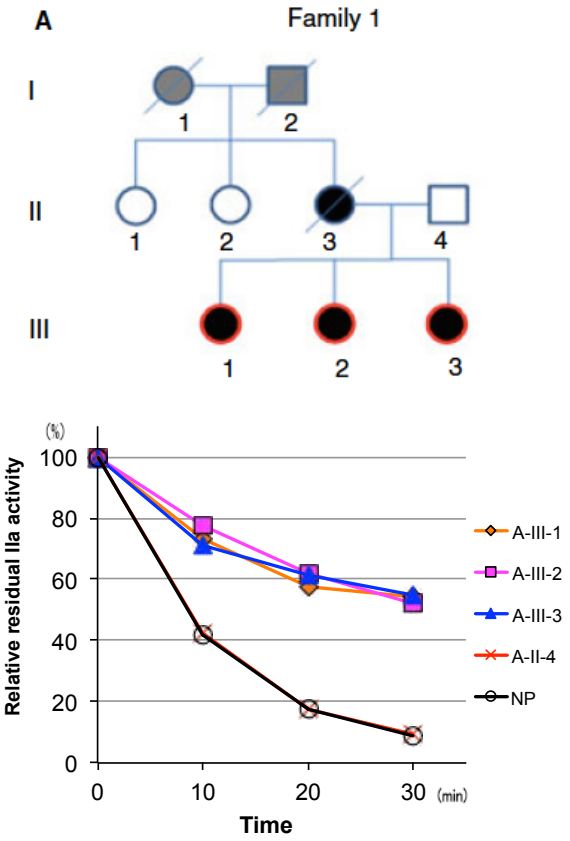


Figure 3. Serbian thrombophilia family with ATR

In conclusion, we identified a novel mechanism of hereditary thrombosis by AT resistance, associated with missense mutations in the prothrombin gene. These mutations would lead to a substantial procoagulant function of the mutant prothrombin, but could cause considerably impaired inhibition of the mutant thrombin by AT. The ATR thrombin may possess prolonged procoagulant activity *in vivo*, leading to a susceptibility to thrombosis. We also devised a new laboratory test to detect ATR in plasma, which can be used as a research tool to find ATR in undiagnosed patients with thromboembolism.

Reports from Recipients of the APSTH/JSTH 2015 Travel Grant

From left to right - Li Teng Khoo (Malaysia), David Rabbolini (Australia), Satoshi Fujii (Japan), Aizhen Yang (China), Lan Wang (China), Yukio Ozaki (Japan), Tetsumei Urano (Japan).

The APSTH/JSTH 2015 Experience

Li Teng Khoo
Department of Microbiology
Faculty of Biotechnology and Biomolecular Sciences
Universiti Putra Malaysia, Serdang, Malaysia.

This year, I felt very honoured to be selected to present my research at the 37th APSTH/JSTH joint symposium. It truly was a joyful moment for me. I was further delighted to also be awarded the Young Scientists Grant. Using that travel award, I was able to travel to Japan and to meet great hematologists. I looked forward to fly to Japan to attend this symposium.

One the first day of the symposium, I met Prof. Satoshi Fujii together with other Young Scientists Grant recipients at a luncheon meeting. He is very kind and warm. He gave us a short briefing regarding sessions of symposium conducted in English. He also advised us of the possible questions that would be asked during oral presentation. I also got to know other great recipients such as Dr. David Rabbolini, Dr. Aizhen Yang and Dr. Lan Wang. We exchanged contacts details, research interests, as well as cultures from our respective countries.

My presentation for this symposium was entitled “Subfraction B, a potential anticoagulant agent, fractionated from Melastoma malabathricum Linn. leaf hot water extract.” Through feedback from this presentation, I found that there is much work I can proceed with. Additionally, after the end of the Young Scientists Grant recipients’ presentations, we were welcomed by Prof. Yukio Ozaki. That night, we were taken out to a traditional Japanese restaurant. There, I met three other kind and warm researchers, Dr. Yoshie Kawahara, Dr. Nagaharu Tsukiji and Dr. Toshiaki Shirai. This meeting was fun and interesting. They shared their research experiences as well as Japanese culture with us. On top of that, I was able to taste authentic delicious Japanese cuisine.

For the next two days of symposium, I was given an opportunity to learn about the new discoveries in thrombosis and hemostasis from other excellent scientists. For example, new physiological roles of platelet activation receptor of C- type lectin-like 2 (CLEC-2) as well as the functions of podoplanin in thrombosis and hemostasis were discussed. Moreover, an overview of the relationship between neutrophil extracellular traps (NETs) and thrombosis; inflammation and involvement of mitochondrial DNA in neutrophil extracellular traps production; lessons of animal models about thrombosis and hemostasis; and other interesting lectures were well presented. With these valuable lectures, my knowledge in the field of thrombosis and hemostasis was significantly broadened. This encourages me to pursue my career as a hematology scientist. Besides, during the symposium's welcoming party, I was fortunate enough to talk to Dr. Claire McLintok. She spoke to all the Young Scientist Grants' recipients about one of the education programmes from ISTH, which is Reach the World. Through this programme, we are able to expand our networking in hemostasis research and polish our experimental skills. Most importantly, I have gotten to know from her, many other Malaysian Scientists who are active in the thrombosis and hemostasis field of research.

All in all, this symposium brought me memorable, wonderful and fruitful experiences. I would like to thank the 37th APSTH/JSTH joint symposium organiser for this well-organised and informative symposium. I also would like to express my sincere gratitude to Prof. Satoshi Fujii as well as Prof. Yukio Ozaki for giving me this golden learning opportunity. Last but not least, big thanks go to my supervisory committee who are Dr. Muhajir, Dr. Janna, Dr. Eusni and Dr. Faridah for helping me all the time in my research and encouraging me to attend this symposium. My hope for the future is that I will be given another opportunity to attend other thrombosis and hemostasis symposiums of the same calibre.

APSTH/JSTH Joint Symposium Experience

David Rabbolini
Haematologist, Royal North Shore Hospital, Sydney
Clinical Lecturer, University of Sydney
PhD student, Northern Blood Research Centre, Kolling Institute, University of Sydney, Australia

Thank you for the opportunity of presenting our team's work at the recent APSTH joint symposium held at the JSTH annual meeting in Kofu, Japan.

Our team at the Northern Blood Research centre, Kolling Institute of Medical Research affiliated with the University of Sydney has a strong interest in platelet research and this culminated in an exciting project involving next generation sequencing as a means to investigate uncharacterised macrothrombocytopenia from centres around Australia and New Zealand. Our initial assay using the Illumina MiSeq platform was highly informative and we were able to provide clinicians with the results of genetic testing for their patients. In addition, our experience has provided us with the opportunity to optomise this platform and we will be providing this service to clinicians into the future and encourage regional collaborations with our colleagues from within Australia, New Zealand and indeed Japan and other countries in the Asia Pacific region.

The joint Symposium was an opportunity to share this work and our results with our Asian counterparts. As one of the recipients of the travel awards I was keen to travel to Japan to meet colleagues with similar interests and diverse expertise in the field of thrombosis and haemostasis.

I arrived in Tokyo on the morning before the conference and was promptly greeted at the airport and helped onto a bus headed for Kofu, in the Yamanashi province. Of course, one of the many attractions in this region is Mt Fuji which looms in the distance. I was most excited to discover that my hotel room window gave me a daily "full frontal" view of the impressive mountain in the distance, this was certainly a nice present to arrive to, and a better one to wake up to in the mornings.

My presentation entitled, DNA-based diagnosis of uncharacterised inherited macrothrombocytopenias using next generation sequencing technology with a candidate gene array was on the first day of the conference and was one of four presentations. The others were presented by other recipients, Li Teng Khoo from Malaysia and Aizhen Yang and Lan Wang, the latter two both from China. Later in the day we were treated to outstanding presentations by the Japanese scientists working abroad. I left the first day of the conference impressed by, the clearly, world class standard of work that was being conducted by doctors and scientists from this region!

As an international guest, one of my hopes was to meet and talk to other early career researchers and we were given the perfect opportunity that night when Prof Fujii treated us to a traditional Japanese style dinner at one of the local restaurants. Our companions included two outstanding scientists involved in CLEC2 research, Dr Nagaharu Tsukiji and Toshiaki Shirai as well as a Dr Yoshie Kawahara from the Asahikawa Medical University Hospital…A great way to end the first day.

Day two and three of the conference were highlighted by talks from world leaders in research and clinical areas of thrombosis and haemostasis and included talks from Dr Watson (UK), Dr Suzuki-inoue (Japan), Dr Nieswandt (Germany) as well as Dr Mclintock (New Zealand). I was particularly impressed by the presentations by Dr Nieswandt who in his talk entitled, "lessons from animal models about thrombosis and haemostasis", provided me with valuable insights into the pathophysiology of stroke and possible targets for future therapeutics. Likewise, the panel of speakers covering the emerging story of CLEC2 was inspiring. Once again, like day 1, day 2 was ended brilliantly by an official "welcome dinner" for all attendees. This was a fun evening highlighted by wine tasting from the region!

Not only did the conference serve as a forum to learn from, and network with my overseas colleagues, but it also gave me an opportunity whilst in Japan to visit colleagues in Kyoto at Prof Eto's laboratory at the Center for iPS Cell Research and Application (CiRA). This was simply incredible to be able to visit a centre of such international reputation and I would like to extend my thanks to his team for such a great visit.

To conclude. I would like to extend a heart felt thank you to the organising committee for providing young professionals with this international opportunity and I would like to extend my gratitude to the president of the JSTH Prof Yukio Ozaki, as well as the chairman of the APSTH joint symposium, Prof Fujii and all my Japanese colleagues for making us feel so welcome. I look forward to a return visit and future collaborations.

The APSTH/JSTH 2015 Experience

Lan Wang
Respiratory and Critical Care Medicine Department, West China Hospital
Sichuan, China

As a clinical physician who majored in pulmonary and critical care medicine, it was indeed a golden opportunity for me to participate the 37th Congress of JSTH to report on our research on pulmonary thromboembolism on behalf of Prof. Yi Qun and our team members. I appreciated that the organizing committee sponsored me as young researcher and gave me the chance to attend this influential international congress on thrombosis and hemostasis.

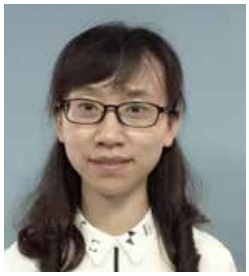
Although this was my first visit to Japan, I was really impressed by tidy streets, respect of traditional culture and people's humbleness both in Kofu and Tokyo. Thanks to the kind arrangement of the organizing committee to send Ms. Hashimoto to pick me up at Narita airport, all my travelling and transferring went smoothly and conveniently.

At the first day of the congress, I was given the chance to deliver a speech entitled "Risk factors associated with long-term mortality in patients with non-massive pulmonary thromboembolism" in the session of APSTH/JSTH joint symposium hosted by Prof. Satoshi Fujii and Prof. Tetsumei Urano. I was pleased that the audience discussed my report enthusiastically and gave me positive feedback on further research direction. It was in this session, that I met three other young researchers, David from Australia, Li Teng from Malaysia and Aizhen from China. Aizhen's wonderful presentation on DNA-based diagnosis of IMT, a potential anticoagulant agent fractionated from a traditional medicinal plant and coagulation factor XII widened my knowledge in the fundamental research field of thrombosis and hemostasis. After this session, we four became friends and exchanged more details and ideas on each other's research, as well as culture differences among our countries.

During the following two days of the congress, we attended all the sessions in English. I got a chance to learn the scientific frontiers in the field of platelet biology, animal models of thrombosis and hemostasis, and novel biomarkers of VTE. I was deeply impressed by the serial research on the role of CLEC-2 in clotting conducted by the lab of Prof. Yukio Ozaki. I also learned many clinical highlights and useful information from the educational lecture on the pregnancy-associated VTE given by Prof. Claire Mclintock.

At the evening after the first day's congress, we four young researchers were invited to dinner in a traditional Japanese restaurant by Prof. Fujii and several young researchers from Prof. Ozaki's lab. It gave us an opportunity to experience traditional Japanese culture and enhance our friendship. Full of pleasure and enthusiasm, we attended the welcome party held by the organizing committee the next evening where we tasted the locally produced wine and communicated with the excellent researchers from all over the world.

I would like to express my sincere gratitude to Prof. Yukio Ozaki and Prof. Satoshi Fujii for organizing such a professional and high quality congress, providing a platform for academic exchanges and offering me this chance to report on our work in this field.



The APSTH/JSTH 2015 Experience

My Unforgettable Experience of Attending APSTH/JSTH Joint Symposium

Aizhen Yang
Cyrus Tang Hematology Center, Soochow University, Suzhou, China

It has been my great honor to present and share our research work at the 37th Congress of the ISTH-APSTH joint symposium in Kofu, Yamanashi, Japan. Also, it was an amazing experience for me to attend this meeting. I would like to take this opportunity to express my thanks to the Organizing Committee of this symposium.

Today I still remembered how excited I was when I read the email from the APSTH informing me that my abstract had been selected. My supervisor was also happy for me and told me that Kofu, the place of this meeting, is where he was trained for his Doctorate degree. The trip from Shanghai to Kofu took almost 6 hours. Kofu is a beautiful city surrounded by mountains and is famous for its grapes and red wine. I was so surprised when I saw the skyline of Mt. Fuji from the window of my hotel room. What a wonderful sight.

On the first day of the symposium, I was deeply impressed by how warm the committee was to us. A pre-symposium informal meeting was hosted by Professor Satoshi Fujii right before our presentations. He highlighted some special English lectures and encouraged us to contact these world-wide famous scientists. I was glad to meet the other three young scientists who also presented their research. They were Li Teng Khoo from Malaysia, David Rabbolini from Australia and Lan Wang from China, too. At that night, Professor Fujii, with other postdoctoral fellows Nagaharu Tsukiji, Toshiaki Shirai and Yoshie Kawahara invited us to enjoy traditional Japanese cuisine. During the dinner, our conversations ranged from research experience to language, food and travel. We all had a good time that night.

The conference program included various significant topics and updates on platelet biology, new anticoagulant therapy, cancer-associated thrombosis, and others. I learned a lot from these outstanding presentations of internationally famous scientists, Drs. Katsue Suzuki-Inoue, Shannon Truley, Steve P Watson, Li Jun Xia, and Kenneth J. Clemetson. What I want to mention is the lecture on platelet activation and thrombus formation with a focus on genetic mouse models, which was delivered by Dr. Bernhard Nieswandt. Through these lectures, I gained a lot of knowledge in the field of thrombosis and haemostasis. I also know how to better organize and present our works.

Another unforgettable experience was the social event at the Congress welcome party. Prof. Yukio Ozaki, the chairman of this JSTH conference, gave a welcome speech. His words encouraged our young researchers to make more progress and to be more active in the APSTH society. Also it was fantastic to meet Dr. Claire McLintock. She was very warm and friendly, encouraging us to apply for the further education program supported by the ISTH Council.

Overall, I had an invaluable educational experience in the congress which will certainly encourage me to more actively continue my research. I would like to express my sincere thanks to all the organizing committee, especially Professor Satoshi Fujii and Professor Yukio Ozaki for giving me the opportunity to attend this congress. I will never forget all of my experiences in this congress including lectures, meeting with so many leading scientists, and other activities. Finally, I would like to suggest that other young scientists apply for this JSTH-APSTH joint symposium.

APSTH
Asian - Pacific Society on Thrombosis and Hemostasis

ISTH Sponsored Educational Programs on Thrombosis and Haemostasis Hosted by the Malaysian Society of Haematology in Kota Kinabalu. April 24-25, 2015

Jameela Sathar
Consultant Haematologist, Ampang Hospital
Kuala Lumpur, Malaysia

The Malaysian Society of Haematology hosted the Malaysian National Haematology 12th Annual Scientific Meeting from the 24–25th April 2015. The meeting's theme was "Addressing Haemostatic Problems in Women". It was made possible by a grant from the ISTH and was held in Sabah, Malaysia. 475 people attended this very successful meeting.

Introduction
Unique to this meeting was its focus on a particular area of bleeding and clotting disorders in women. It is fitting that Sabah, Malayaia hosted this year's meeting, given that the first women and children's hospital in Malaysia was built there in 2004.

Bleeding and clotting disorders have a particular relevance in women, given that in their lifetimes, all women experience unique challenges to haemostasis in the form of menstrual bleeding, pregnancy and the puerperium. These are physiologically complex events in themselves, made even more complex by inherited or acquired disorders or carrier states.

The meeting was held over two days. The first day focused on bleeding problems and the second day on clotting. Details of the events of these two days are included below. Also, a concurrent session for nurses was held on the second day. There was a lot of interaction between the nurses and speakers and everyone learned a lot and was eager to put what they learned into practice. In addition, there was also a Poster Award. Fifty-five delegates participated in the poster presentation, 44 in the clinical category and 11 in the laboratory category. The judges were Dr. Chris Ward, Dr. Mike Laffan, Dr. Veera Sekaran and Dr. Leong Chooi Fun. They were impressed with the quality of the poster presentations.

Purpose
To provide a better understanding of haemostasis and the assessment and management of bleeding and clotting disorders in women.

Day 1 (24th April 2015)

The meeting started off with a welcome address by Dr. Jameela Sathar followed by Dr. Claire McLintock who introduced the International Society of Haematology, its outreach programme, and the benefits of becoming an ISTH member. This was followed with the plenary lecture "Understanding Haemostasis and the Haemostatic Changes in Pregnancy" by Dr. Chris Ward. He illustrated his talk with many diagrams and made a difficult subject like haemostasis easily comprehensible. In pregnancy, altered vascular physiology, minor changes in platelet counts, marked shift in procoagulant factors and inhibited fibrinolysis result in a hypercoagulable state.

After Dr. Ward's lecture, Dr. Alan Teh who is the president of the Malaysian Society of Haematology gave a welcome address. The meeting was followed by the first symposium titled "The Bleeder", chaired by Dr. Chris Ward and Dr. Jameela Sathar. The first talk in this symposium was given by Dr. Sharmini Parampalan titled "Taking a Bleeding History & Menorrhagia – how extensively should a bleeding disorder be sought?" Dr. Sharmini stressed the importance of getting a thorough menstrual history including bleeding patterns since menarche.

Dr. Mike Laffan then went on to explain the pathophysiology of von Willebrand disease (vWD) as well as the pattern of bleeding expected in this condition. He introduced the bleeding score, which is important to help make a diagnosis of vWD. Dr. Thynn Thynn Yee delivered the next lecture on the "Management of a Haemophilia Carrier and other RBDs". She highlighted that the current recommendation for perinatal detection of haemophilia was to do a free fetal DNA sampling from the mother's peripheral blood to identify the sex of the baby, followed by chorionic villous sampling if it is male and termination of pregnancy if the fetus is affected. Dr. Thynn went on to give the next lecture on "Acquired Haemophilia in Pregnancy". She stressed the importance of early clinical suspicion to clinch the diagnosis so as to prevent further bleeding complications.

Dr. Shan Narayanan discussed the "Psychosocial Issues in Women with Bleeding Disorders" and related his own experience as a person with factor XIII deficiency himself. He also related how he met a lady called Cheryl Nineff at WFH 2014 in Melbourne and was inspired by her to set up a women's group in Malaysia. Working together with Dr. Jameela Sathar, they managed to get a grant from the Novonordisk Haemophilia Foundation to develop a women's group program over the next 3 years. The objective was to create awareness about bleeding and clotting disorders in women, to provide

psychosocial support to these women, and to empower them to advocate for better healthcare.

Dr. Claire McLintock was given the task to talk on two subjects. The first was on "Management of Refractory ITP in Pregnancy". In this lecture, Dr. McLintock illustrated the various causes of thrombocytopenia in pregnancy. Immune Thrombocytopenic Purpura is the most common immunological cause with the majority of pregnant patients having no bleeding symptoms. Dr McLintock moved on to give her talk on "Fetal Neonatal Alloimmune Thrombocytopenia (FNAIT): Evaluation and Management". She outlined the pathophysiology of FNAIT, which is due to maternal alloimmune antibody to fetal platelets. The diagnosis is suspected in presence of neonatal thrombocytopenia less than 50 x 109/L, unexplained haemorrhage or when there is history of intracranial haemorrhage in the previous sibling.

The last symposium for the day was on "Obstetric Bleeding". Dr. Carol Lim talked on "Managing Obstetric Bleeding'. She discussed post-partum haemorrhage, the definition, incidence, the causes and its management. Everyone enjoyed Dr. Carol's talk. It was a very interactive session between the obstetricians, haematologists and nurses. Dr. McLintock then went on to give another exciting presentation on "Massive Transfusion Protocol in Critical Obstetric Bleeding". She shared the massive transfusion protocol of Auckland City Hospital. Communication between the clinician and blood transfusion service unit is mandatory in order to ensure smooth and sufficient blood supply.

The first day of the meeting ended with two interesting case presentations. The first was a case of "Refractory ITP in Pregnancy" presented by Dr. Jay Suriar. The second case on "Congenital Bleeding Disorder in Pregnancy" was presented by Dr. Lau Ngee Siang.

Day 2 (25th April 2015)

The second day of the meeting focused on thrombosis and anticoagulation. The first talk was delivered by Dr. Vijaya Sangkar on "Thrombotic Microangiopathy in Pregnancy". Several conditions need to be considered when we encounter thrombocytopenia and anaemia in pregnancy. They are TTP, DIC, HUS, Evans syndrome, HELLP syndrome and severe pre-eclampsia. Dr. Mike Laffan spoke next on "Management of APLS in Pregnancy". Although the criteria for APLS is well defined, the laboratory tests are poorly standardized. There are novel therapies in the pipeline for APLS such as antiCD20, eculizumab, hydroxychloroquine (blocks Beta2GP1 disruption of annexin 5 complexes and inhibits TLR7) and N acetyl cysteine (reduces Beta GP1 and antibody binding).

"Recurrent Abortions – what is the evidence for anti-platelets/ anticoagulants?" was delivered by Dr. Hamizah Ismail. She began by explaining the physiology of trophoblast invasion and how the failure of the first or second wave of the invasion can lead to a miscarriage. Dr. Hamizah then gave a thorough and excellent overview of the evidence for antiplatelets/ anticoagulant therapy.

Dr. Carol Lim spoke next on the "Clinical Presentation of Venous Thrombosis in Pregnancy" followed by Dr. Lim Cheng Kooi on "Imaging Modalities for Clots in Pregnancy – Which Test and When to Request?" Both speakers emphasized that the clinical and laboratory findings of VTE in pregnancy lack sensitivity and specificity and that normal physiologic changes in pregnancy can mimic signs and symptoms of DVT and PE. Hence imaging modalities play a crucial role in the diagnosis of VTE in pregnancy.

The next symposium focused on two uncommon conditions. The first was "Thrombosis in Unusual Sites Following Fertility Treatment" by Dr. Mohamed Hatta Mohd Tarmizi and the second was "Paroxysmal Nocturnal Haemoglobinuria: Fertility Issues and Management of Pregnancy" by Dr. Chris Ward. The final symposium was all about "Anticoagulation". Dr. Mike Laffan talked on "Heparin Resistance and Anticoagulation in Pregnancy" while Dr. Claire McLintock talked on the "Management of Prosthetic Heart Valves in Pregnancy". It is always interesting to have case presentations at the end of lectures so that we can put to use what we have learned, to clinical practice. The first case on "Metallic Prosthetic Heart Valve in Pregnancy" was presented by Dr. Toh See Guan. The second case "PNH in Pregnancy" was presented by Dr. Jerome Tan. The third case was presented by Dr. Lim Soo Min about a 38-year-old lady with "Unusual Thrombosis" who was referred to him for his opinion regarding continuation of anticoagulation therapy.

Conclusion

It was the first time that the Malaysian Society of Haematology had organised a meeting solely focusing on bleeding and clotting disorders in women. From the feedback we received, everyone from the nurses, pharmacists, scientists, medical officers, obstetricians and haematologists, learned a lot and enjoyed themselves very much. It was a very interactive meeting, full of questions and laughs as well.

We would like to thank the organising committee for a job well done. We would also like to extend our appreciation to ISTH for giving us an education grant in the form of speaker travel for Dr Chris Ward, Dr Claire McLintock and Dr Mike Laffan. And last, but not least, were the sponsors from the pharmaceutical industry. Without their support it would not have been possible to have such a successful meeting.

2015 World Thrombosis Day Campaign Brings Attention to Hospital-Associated Venous Thromboembolism

ISTH Headquarters, North Carolina, U.S.A.

One in four people worldwide are dying from causes related to thrombosis, and World Thrombosis Day's 2015 campaign hopes to bring new attention and resources to stop the leading cause of preventable hospital death. On 13 October, World Thrombosis Day's 200 partner organizations in more than 60 countries will bring focused attention to the often overlooked and misunderstood disease of thrombosis, especially hospital-associated venous thromboembolism (VTE).

VTE is a leading cause of death and disability worldwide. In Europe and the U.S., it claims more lives than AIDS, breast and prostate cancer, and motor vehicle crashes combined. And being admitted to a hospital can increase the risk of developing VTE. More than 10 million cases of hospital-associated VTE occur every year – many of them preventable.

Despite the fact that VTE can be prevented, patients at high risk for developing the condition often don't receive life-saving prevention. Through education and outreach, WTD hopes to reduce VTE-related death – the majority of which is hospital-associated – by encouraging healthcare professionals to always "Think VTE" and be knowledgeable about the risk factors for VTE, signs and symptoms of deep vein thrombosis (DVT), the importance of a conducting a VTE risk assessment for all hospitalized patients, evidence-based prevention strategies, and early and accurate diagnosis and management.

World Thrombosis Day is a timely opportunity to discuss, update or establish new VTE policies. Preventing thrombosis is a patient safety issue and should be a standard of care for all hospitalized patients. Policies should engage all staff involved in patient care and strive for high compliance.

In 2014, organizations around the world found creative and inventive ways to become involved with World Thrombosis Day and spread awareness in their own communities. In Taiwan, organizers held an awareness event and press conference, in Japan there were numerous activities, including an exhibit at an airport, in Australia, one hospital held a competition amongst wards to create thrombosis awareness displays for patients and staff, and in Thailand, WTD posters were sent to all hospitals and several educational activities were held. In other parts of the world, organizations and individuals organized marathons, large-scale outside events, video and social media campaigns, press conferences and training events for hospital staff.

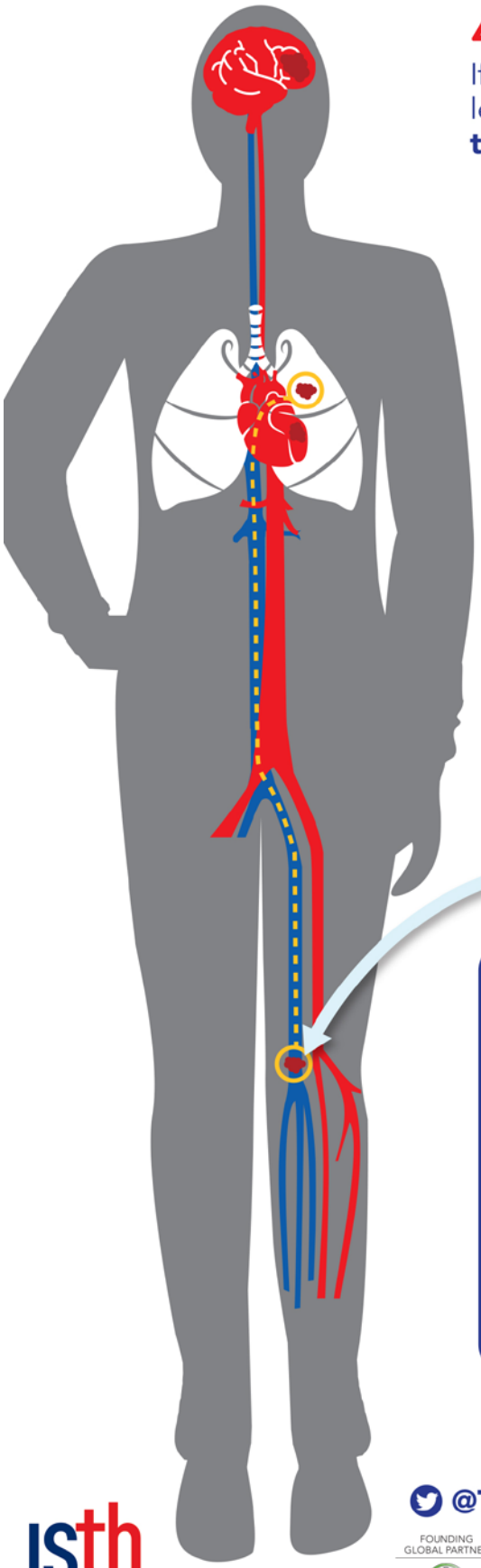
You, too, can be a catalyst for awareness and prevention of thrombosis. Join the 2015 WTD movement. Visit www.worldthrombosisday.org to join the campaign and find ideas about how to spread the word. Connect on social media by using #WTDay15 #StopDeadlyClots and #ThinkVTE. Follow WTD on Twitter (@ThrombosisDay) and on Faceboook at facebook.com/WorldThrombosisDay. Together, we can make a difference in the lives of the millions of people affected by thrombosis

STOP DEADLY BLOOD CLOTS

Know the Facts. See the Signs? See Your Doctor!

Thrombosis – the formation of a blood clot – is the one disorder that causes the world's top three cardiovascular killers: heart attack, stroke and venous thromboembolism (VTE).

WORLD THROMBOSIS DAY
OCTOBER 13



⚠ KNOW THE SIGNS AND SYMPTOMS

If a blood clot forms in your leg, it is called **"deep vein thrombosis" or DVT.**

If the blood clot in your leg breaks off and travels up to your lungs, it is called a **"pulmonary embolism" or PE.**

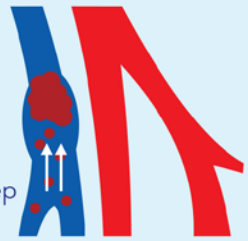
WARNING SIGNS OF DVT IN THE LEG MAY INCLUDE:

- Pain
- Tenderness
- Swelling
- Warmth
- Redness

WARNING SIGNS OF PE MAY INCLUDE:

- Unexplained shortness of breath
- Rapid breathing
- Chest pain (may be worse with deep breaths)
- Rapid heart rate
- Light headedness or passing out

DVT + PE = VTE



If not prevented or caught early, a deep vein thrombosis (DVT) can progress, with the blood clot breaking away and traveling to your lungs and becoming a potentially deadly pulmonary embolism (PE), which requires immediate medical attention. Together, DVT and PE are known as venous thrombo-embolism (VTE).

BE PROACTIVE

A blood clot in the leg or lung can be prevented.
Take three important action steps:

1. Go to WorldThrombosisDay.org to learn the risk factors.
2. Be proactive and if you are at risk, talk to your doctor about prevention.
3. Share this information with your family and friends.

WorldThrombosisDay.org

WorldThrombosisDay

@ThrombosisDay #JoinWTDay #stopdeadlyclots

ISTH International Society on Thrombosis and Haemostasis

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Upcoming Meetings:

1 **ESC Congress 2015**
29 August - 2 September 2015 – London, United Kingdom
http://www.escardio.org/ESC2015

2 **ISTH Advanced Training Course in Thrombosis and Hemostasis**
14-17 September 2015 – Dubai, United Arab Emirates
http://www.isth.org/page/EduDubaiCourse

3 **15th Congress of Chinese Society of Thrombosis and Haemostasis**
16-18 October 2015 – Wuhan, China
Contact information: Dr. Hu Yu Email: dr_huyu@126.com

4 **2nd Congress on Controversies in Thrombosis and Hemostasis**
5-7 November 2015 – Barcelona, Spain
www.congressmed.com/cith

5 **57th ASH Annual Meeting and Exposition**
5-8 December 2015 – Orlando, Florida, USA
www.hematology.org/Annual-Meeting

6 **9th Congress of the Asia-Pacific Society on Thrombosis and Hemostasis**
6-9 October 2016 – Taipei, Taiwan R.O.C
http://www.apsth2016.org/

APSTH 2016 Program At-A-Glance

Time	Thursday Oct. 6	Time	Friday Oct. 7				Saturday Oct. 8				Sunday Oct. 9
08:00 ~ 17:00	Registration	08:00 ~ 17:00	Registration				Registration				Registration (8:00~9:00)
09:00 ~ 12:00	Educational program with support of ISTH	08:30 ~ 10:00	Symposium I	Symposium II	Symposium III		Symposium VII	Symposium VIII	Symposium IX		Plenary lecture III
		10:00 ~ 10:30	Coffee break				Coffee break				Coffee break
		10:30 ~ 12:00	Plenary lecture I				Plenary lecture II				Award ceremony
		12:00 ~ 13:30	Lunch symposium				Lunch symposium				Closing remarks
12:00 ~ 14:00	Lunch	13:30 ~ 15:00	Symposium IV	Symposium V	Symposium VI		Symposium X	Symposium XI	Symposium XII		
14:00 ~ 17:00	Educational program with support of WFH	15:00 ~ 15:30	Coffee break				Coffee break				
		15:30 ~ 17:00	Oral Communi-cation	Oral Communi-cation	Oral Communi-cation	Oral Communi-cation	Oral Communi-cation	Oral Communi-cation	Oral Communi-cation	Oral Communi-cation	
		17:00 ~ 18:30	Poster				Poster/Satellite symposium				
18:00 ~	Welcome reception	18:30 ~ 20:00	Satellite symposium				Congress banquet				

Conference Venue

Taipei International Convention Center (TICC)
Address: 1 Hsin-Yi Rd., Sec.5, Taipei 11049, Taiwan R.O.C
Tel.: +886 (2) 2725-5200 ext. 3517
Fax.: +886 (2) 2723-2589

Website: http://www.ticc.com.tw/

Topics

- Blood Coagulation
- Bleeding Disorders
- Venous Thrombosis
- Platelets
- Platelet Disorders

ISTH™
International Society on Thrombosis and Haemostasis

ISTH Advanced Training Course in Thrombosis and Hemostasis

September 14-17, 2015

Organized by
The ISTH Education Committee

Meeting Chairs
Flora Peyvandi
Nevine Kassim

Location
The Crowne Plaza Hotel
Dubai, UAE

Join the International Society on Thrombosis and Haemostasis (ISTH) for three full days of intense examination on the subjects of coagulation, bleeding disorders, platelets and venous thrombosis. Leading international scientists will deliver focused lectures followed by ample time for discussion and close interaction with the participants.

This Advanced Training Course will be especially interesting to trainees in hemostasis, hematology, transfusion medicine, vascular medicine, or intensive care medicine. Senior hematologists looking for an update or a Ph.D. wishing to acquire clinical and basic knowledge in the field will also benefit tremendously from this course. **Join us in Dubai!**

Early Registration Deadline: **July 16, 2015**
Register at ISTH.org
Questions? Call **+1 919 929 3807**
or email **headquarters@isth.org**

Endorsed by ESH EMA ESTH

Supported by an Unrestricted Educational Grant from Instrumentation Laboratory, A Werfen Company