SECTION BEAT

Meet the Japanese Section: Joint Meetings Generate Novel Ideas

The ISHR Japanese section was founded in 1975 by the first president, Prof. Tachio Kobayashi. After the 8th World Congress of the ISHR held in Tokyo in 1976, we had our first individual Japanese Section Meeting in 1977. Since then, our Section has held annual or biennial scientific meetings before 1991 and annual scientific meetings after 1993; last year we held our 32nd Scientific Meeting.

Our mission is to promote and contribute to the development of cardiovascular science together with other sections of the ISHR. Actually, two professors from the Japanese section have led ISHR-International as President: Prof. Yoshio Ito from 1989 to 1992, and Prof. Masatsugu Hori from 2010 to 2013. A unique feature of our society is that we specialize in “basic” cardiovascular science when compared to the other cardiovascular societies, and we believe that our focus on the basic cardiovascular field is the “reason for our existence” and the strength of the ISHR. Furthermore, the ISHR-Japanese Section has a higher proportion of members who are Doctors of Medicine than other Sections, which is advantageous in performing translational research or analyses of multiple organ involvement, such as the cardio-renal connection. Hence our Section meetings usually have some sessions discussing disease oriented basic cardiovascular science.
Since the founding of the Japanese Section, the number of the members has gradually increased to approximately 400 to 450. However, when compared to the largest Japanese cardiovascular society, the Japanese Circulation Society, to which approximately 26,000 members belong, the number of ISHR members is very small. This created a problem: the number of participants at our annual scientific meetings plateaued at a relatively small number, which not only stunted the discussion but also inhibited fundraising from companies because of relatively less advertising effectiveness. Thus this negative spiral limited the funds available to manage our annual scientific meetings.

A turning point came to us in 2014. The President of the ISHR-Japanese Section at that time, Prof. Keiichi Fukuda, and the Secretary-General and Chair, Prof. Toyoaki Murohara, decided to hold a joint session with another scientific meeting, the 36th annual meeting of the Cardiac Biopsy Conference, which was also chaired by Prof. Murohara. The effect of holding a joint meeting was not only that the number of participants increased but also that researchers other than basic cardiovascular scientists participated in the meeting. Moreover, in 2015, I was given an opportunity to chair the 32nd ISHR Japanese Section Scientific Meeting. I called 3 chairs of other scientific meetings to convene a joint scientific meeting: the 23rd annual meeting of the Japanese Vascular Biology and Medicine Organization, managed by Prof. Toyoaki Murohara from Nagoya University, the 19th annual scientific meeting of the Society of Cardiovascular Endocrinology and Metabolism, managed by Prof. Kazuo Kitamura from Miyazaki University, and the 37th annual meeting of the Cardiac Biopsy Conference, organized by Prof. Hiroyuki Tsutsui from Hokkaido University. They agreed to have a joint scientific meeting and we held it as Cardiovascular and Metabolic Week 2015, CVMW2015, in Kobe, Japan. Meeting attendance was the same or greater than the previous year; not

Four Chairs of CVMW2015. From left: Prof. Kazuo Kitamura, Prof. Yoshihiko Saito, Prof. Hiroyuki Tsutsui, and Prof. Toyoaki Murohara.
only basic cardiology scientists but also vascular biologists, endocrinologists, pathologists, and clinical scientists joined the meeting and we had a special opportunity to discuss topics with researchers from different fields. Each society pursued its own field of interest, while at the same time expecting that the collaboration would stimulate new ideas by way of a scientific “chemical reaction”. Throughout this joint meeting, the participants explored scientific fields outside of their own specialties and the interaction between participants resulted in new insights.

The overall assessment of the joint meeting was as follows:

Merits:
• The joint meeting provided an opportunity to discuss topics with researchers from different fields.
• For those who belong to multiple societies, the joint meeting helped to save time and money as participants avoided making multiple business trips.
• The discussion was exciting because researchers from various fields gave opinions from different points of view.

Demerits:
• Because the presentations were scheduled in parallel, sessions of interest were sometimes overbooked.
• A single venue prevented participants from visiting different places and sampling different local specialty dishes.

Many participants seemed to welcome the joint meeting. The 32nd ISHR-Japanese Section Annual Meeting, held jointly with 3 other scientific societies, was thus quite successful with no less than 700 participants. We believe this collaborative style of scientific meeting generates novel ideas drawn from the diverse participants, which will advance study in each field.

As for the management of the meeting, compared to individually organized meetings, the joint management brought us less waste and a more favorable result. The income and expenditure balance had a surplus, which were distributed to the 4 societies.

Although it is of course very important and indispensable for the development and advancement of individual scientific fields that each society has its own scientific meetings where participants discuss and pursue their field of interest at a deeper level, discussion sometimes hits a brick wall. Dramatic innovations in scientific technology, especially in molecular biology, occurred in the 80’s and 90’s. After the year 2000, however, those innovations seemed to reach a mature state. The slowing of the rate of technological advancement has a negative effect when the same population of scientists discuss the same field, especially in a relatively small and uniform society like Japan. To move science forward to the next step, I think the interaction between different fields is very important and attractive. There are points to be introduced and absorbed into our field not only from other areas of biology, but from engineering and economic sciences as well. Through interaction and blending with other fields, I hope basic cardiology will move towards the elucidation of unsolved clinical questions and the defeat of intractable diseases.

Professor Yoshihiko Saito
President of the Japanese Section
Nara, JAPAN
President’s Letter

The main activity of the ISHR and what sets ISHR apart from most other cardiovascular societies is our World Congress, where all the Sections come together to hear the latest in cardiovascular science in an international venue. The World Congress in Buenos Aires last April was very successful and the ISHR owes an enormous THANK YOU to the organizers, Martin Vila-Petroff and Alex Aiello and their local organizing committee. Under the initiative of Lea Delbridge, ISHR Secretary-General, ISHR surveyed the participants and the results of the survey were discussed by the Executive Committee. There was a good response (almost 30% of delegates!), and overall the respondents were very positive about the scientific content and networking opportunities. There were a number of very useful comments that the Executive Committee and the 2019 World Congress organizing committee will take note of in planning for the 2019 World Congress. Specifically, we need to enhance the Poster sessions and not have any other activity scheduled at the same time. Mid-career investigators were also somewhat less satisfied with the social networking opportunities, and this is a group that we need to engage more for the upcoming World Congress in 2019. ISHR thanks everyone who took part in the survey and we will take these suggestions seriously in order to continue to improve our meetings.

Although it seems like we just returned from Buenos Aires, planning is underway for the 2019 World Congress in Beijing to be held June 2nd to 5th. Yi Zhu and his organizing committee are putting together another outstanding meeting. The meeting will be held at the China National Convention Center next to the National Stadium, the former site of the Beijing Olympics. ISHR, under the leadership of Lea Delbridge, will soon begin planning for the ~24 ISHR symposia. We will soon be soliciting your input on the thematic areas to be emphasized (stem cells, arrhythmias, metabolism, E-C coupling, cardioprotection, etc) and your suggestions for symposia speakers. The Executive Committee will also work with the ECIs to get them started in planning for the ECI activities. As suggested by the survey results, ISHR will also initiate mid-career activities.

I’d like to take this opportunity to update the membership on the activities of the ISHR Executive Committee. Since 2008, in non-Congress years ISHR has rotated the Reimer, Pfeiffer and President’s Distinguished Lectures among the North American, European and Japanese Sections. The Outstanding Investigator, Research Achievement and Peter Harris Awards lectures have been given at the Section meeting of the awardee. To promote interaction among the sections, the three award lectures and the three distinguished lectures will now be rotated among the six active sections: Australasian, Chinese, European, Japanese, Latin American and North American. This new rotation will start in 2018.

Speaking of Award Lectures, I would like to congratulate the winners of the 2017 ISHR Awards and Distinguished Lectures. Matt Hori will be presented with the Distinguished Leader Award at the JPN section meeting in 2017. John Solaro and David Eisner are the co-recipients of the Peter Harris Award; the lectures will be presented at the NAM section meeting in New Orleans in May and the EUR section meeting in Hamburg in July, respectively. Rong Tian will present the Research Achievement Award lecture at the NAM section meeting in New Orleans. Jolanda Van Der Velden and Xander Wehrens are the co-recipients of the Outstanding Investigator Award to be presented at the EUR and NAM section meetings, respectively. Brian O’Rourke will present the Reimer Distinguished Lecture at the EUR section meeting, Tetsuji Miura will give the Pfeffer Distinguished Lecture at the NAM Section meeting, and Jun Sadoshima will deliver the President’s Distinguished Lecture at the JPN section meeting. Congratulations to all the awardees!

Elizabeth Murphy, Ph.D.  
President, ISHR
REPORT ON THE XIII CHINESE SECTION MEETING
(SEPTMBER 22-25, 2016; WUHAN, CHINA)

The biennial congress of the Chinese Section of ISHR for 2016 was organized by Tongji Hospital of Tongji Medical College, Huazhong University of Science and Technology. The theme of this congress was "Translation, Precision, Development". Two hundred cardiovascular scientists from all over the world attended this congress, as well as 900 registered representatives and students. The meeting also attracted 211 abstract submissions, and 150 posters were presented.

The XIII Congress of the Chinese Section was held in conjunction with the XVI Meeting of the Cardiovascular Society of the Chinese Association of Pathophysiology, and the IX Tongji Cardiovascular Disease Forum. At the opening ceremony, Prof. Xi-yong Yu (Chairman of the Cardiovascular Society of the Chinese Association of Pathophysiology) and Prof. Elizabeth Murphy (President of ISHR-International) gave warm welcoming addresses, expressing confidence in the success of this congress. Prof. Yi Zhu (President of the ISHR-Chinese Section) also made a speech promoting the 2019 ISHR World Congress to be held in Beijing (June 2-6, 2019).

The meeting program included seven plenary lectures, along with eight sessions of special reports on cardiac remodeling, vessel remodeling, translational medicine, stem cell and new technology and more. There were also two sessions for young scientists, two mini symposia, the Young Scientist Research Award session (for post-graduate students and post-doctoral fellows), as well as poster sessions.

Four plenary lectures were given after the opening ceremony. Academician Sheng-shou Hu (Fuwai Hospital, Chinese Academy of Medical Sciences) gave the first talk on how to promote clinical research in China from a cardiac surgeon’s view. Prof. Elizabeth Murphy, President of ISHR-International (NIH, USA) gave a wonderful talk summarizing the cardioprotective roles of S-nitrosation (SNO) in ischemia/reperfusion injury. The next speaker was Prof. David Eisner, whose study focused on regulation of diastolic calcium. Finally, Prof. Rui-ping Xiao (Peking University) introduced her excellent work on MG53, a novel E3 ligase which plays key roles in metabolic syndrome including insulin resistance, obesity and Type 2 diabetes.

In the mini symposia entitled “New Technology”, several specialists introduced valuable advanced technologies for researchers to employ, and they received loud applause from the audience. Prof. Hui-ru Tang (Fudan University) gave a talk about ultrasensitive quantitative metabolomics, which is very valuable in measurements of biomarkers for cardiovascular diseases. Prof. Chun Yuan (University of Washington, USA) introduced a magnetic resonance imaging method for studying atherosclerosis. Then Dr. Ze-neng Wang (Cleveland Clinic, USA) gave a talk focusing on the connection between gut microbiota and atherosclerosis, mainly studied by means of mass spectrometry. The last speech was given by Prof. Qing Jing (Shanghai Institutes for Biological Sciences, Chinese Academy of Sciences), who introduced new applications of zebrafish as a model in cardiovascular development and disease research.

Another mini symposia was entitled “New Thinking”. First, Dr. Er-dan Dong (National Natural Science Foundation) gave a speech on interpreting the policy of the Chinese Natural Science Foundation, and gave suggestions on how to successfully apply for funds from NSFC. Then two editors presented the publishing policy and procedures of their journals, and provided useful advice on how to get published in high-level journals. The editors were, Prof. You-yi Zhang (Life Science Publishing Co., Ltd.), and Prof. Lizheng Liu (Life Science Publishing Co., Ltd.).
One highlight of this meeting was the theme “Translational Medicine”, which included two sessions with 19 invited speakers. In the first session, Prof. Yi-bin Wang lectured about genetic and epigenetic regulation of transcriptome reprogramming in heart failure, and Prof. Xander Wehrens (Baylor College of Medicine, USA) gave a talk on new calcium handling proteins in heart failure. Dr. Janika Viereck (Hannover Medical School, Germany) summarized the roles of long noncoding RNAs in cardiac remodeling and their potential as therapeutic targets. Prof. Jun Cai (Fuwai Hospital, CAMS) introduced their exploration of personalized medicine for hypertensive patients in Fuwai Hospital, and Prof. Qiang Zhao (Shanghai Institute of Materia Medica, CAS) gave a talk on another aspect of translational medicine, focusing on structure analysis of membrane proteins and drug development. In the second session, Prof. Frank B. Hu (Harvard University, USA) offered a comprehensive view on the value of precision medicine for public health and preventive medicine. Then Prof. Dao-wen Wang (Tongji Hospital, Huazhong University of Science and Technology) discussed their experience in genetic diagnosis of aortic dissection. Prof. Ru-tai Hui (Fuwai Hospital, CAMS) lectured on the topic of hypertrophic cardiomyopathy, presenting new insights into gene diagnosis and clinical interventions. The next speaker was Prof. Xiao Xiao (University of North Carolina, USA), a specialist in gene therapy, who gave a talk about the application of recombinant adeno-associated-virus-mediated gene therapy. Other speakers addressed additional interesting translational medicine issues.

Another highlight of this congress was the promotion of participation of young scientists. 24 speakers presented in two sessions reserved for assistant professors and professors under the age of 45, who are the backbone power of Chinese scientific research in future decades. Then, 17 post-graduate students and post-doctoral fellows competed for the Young Scientist Research Award. The winners of first grade were: Dr. Jing Shen (Peking University Third Hospital) and Dr. Yi-jie Wang (Shanghai Institutes for Biological Sciences, CAS). There were also 150 posters displayed in two sessions, and 50 posters were selected for Excellent Poster Awards.

Another very important event was the ISHR-CHI Section assembly. Prof. Xi-Yong Yu from Guangdong Academy of Medical Sciences was elected as Chairman of the 9th Chinese Association of Pathophysiology, Cardiovascular Section, and Prof. Yi Zhu as President of the ISHR-CHI Section. Elections of two affiliated executive committees were also successfully conducted. Prof. Xiang Cheng (Union Hospital, HUST) was elected as Chairman of the Committee of Young Members, and Prof. Dao-Wen Wang as Chairman of the Translational Medicine Council.

The success of this congress was attributed to the enthusiasm and support of all participants and hard work of the
2015 Distinguished Lecture Award Winners

Gerald W. Dorn, M.D.
Winner of the 2015 ISHR Keith Reimer Distinguished Lecture Award
“Ancestry vs Ambiance: The evolutionary underpinnings of cardiac hypertrophy signaling”
(June, 2015: Seattle, WA, USA)

Dr. Dorn is the inaugural Philip and Sima K Needleman Professor and Associate Chair (Internal Medicine) for Translational Research at the Washington University in St. Louis School of Medicine. He is also the founding Director of the Washington University Center for Pharmacogenomics. The longstanding goal of the Dorn laboratory has been to define stress signaling pathways orchestrating the transition from normal myocardium to cardiomyopathy; the current emphasis on neurohormonal signaling events that contribute to development of cardiac hypertrophy and its progression to heart failure reflects this focus.

Rui-Ping Xiao, M.D., Ph.D.
Winner of the 2015 ISHR President’s Distinguished Lecture Award
“A Central Role of MG53 in Metabolic Syndrome and Diabetic Cardiomyopathy”
(July, 2015: Bordeaux, France)

Rui-Ping Xiao, M.D., Ph.D., is a professor at the Institute of Molecular Medicine, Peking University, (IMMPKU). Dr. Xiao’s main scientific focus has been on G-protein coupled receptor (GPCR) as well as insulin receptor signaling in the cardiometabolic system. The scope of her scientific work covers three intertwined programs: (I) β-adrenergic receptor (β-AR) subtype signaling in cardiovascular system; (II) Regulation of cardiomyocyte viability and excitation-contraction coupling by Ca 2+/calmodulin dependent kinase II (CaMKII) in normal and failing hearts; and (III) Identification and characterization of cardiometabolic disease-related novel genes and pathways.

Kinya Otsu, M.D., Ph.D.
Winner of the 2015 ISHR Janice Pfeffer Distinguished Lecture Award
“Mitochondrial quality control, sterile inflammation and heart failure”
(December, 2015: Kobe, Japan)

Dr. Otsu is Professor of Cardiology at King’s College London and has been awarded a British Heart Foundation (BHF) Personal Chair of Cardiology. Dr. Otsu’s work has made major contributions to our knowledge of the pathophysiology of heart failure, including the delineation of new cardiac pathogenic pathways amenable to therapeutic targeting. His work is highly relevant to the development of new therapies for heart failure, a condition with increasing prevalence and major public health relevance.
**Report on the XXXIX Australasian Section Meeting (August 3-7, 2016; Adelaide, Australia)**

The 39th annual ISHR meeting was held in conjunction with the Cardiac Society of Australia and New Zealand (CSANZ) meeting in Adelaide, Australia. The conference started off with the RT Hall Lecture delivered by Dr John Webb from St. Paul’s Hospital and University of British Columbia, who spoke on the state and development of transcatheter aortic valve implants. *The Ralph Reader Prize Session* is a key feature of the annual CSANZ conference, and this year ISHR had a finalist in the Basic Science Category. Dr Helena Qin (Baker IDI Heart and Diabetes Institute) won this prestigious award after delivering a great presentation titled ‘Formyl peptide receptor biased agonists as novel cardioprotection from myocardial ischaemia-reperfusion (I-R) injury’. Congratulations Helena on this outstanding achievement.

This year, Prof David Kaye (Baker IDI Heart and Diabetes Institute) and Prof Christine Winterbourn (University of Otago) were invited to headline the Kempson Maddox and Basic Science Lectures respectively. Both leaders in their field, Prof Kaye spoke on the emerging issue of heart failure with preserved ejection fraction while Prof Winterbourn delivered her lecture titled ‘Neutrophil reactive oxygen species and inflammation’. These lectures were an appropriate prelude to talks given by local ISHR scientists covering a range of topics including cardiac regeneration, energy deficiency of the diseased heart, systems biology of heart failure, arrhythmia, and the role of genetics and stress response in the failing heart.

The ISHR Australasian section has long been a proud supporter of research students and early postdoctoral fellows. A new initiative this year was the programming of the Early Investigator Panel Discussion and Symposium. Organised and implemented by ISHR Australasian section Early Career Researcher (ECR) representatives Dr Helena Viola (University of Western Australia) and Dr Kim Mellor (University of Auckland), this initiative was aimed toward providing further opportunity for ECRs to engage with senior researchers, and present their work at a major conference. The symposium chaired by Dr Gemma Figtree (University of Sydney) focused on the future of stem cells in cardiovascular research, with interesting basic science and clinical perspectives from Dr Enzo Porrello (University of Queensland) and Dr James Chong (The Westmead Institute) respectively. An interactive panel discussion with additional panellists Dr Claudine Bonder (University of South Australia), Dr Andrew Boyle (University of Newcastle), Dr Yu Suk Choi (University of Western Australia) and Dr Nathan Palpant (University of Queensland) provided engaging dialogue on this theme. This was followed by 8 outstanding presentations from ECRs centred on the theme of cardiac pathology and repair.

Further support for ECRs is reflected by the opportunities given to young researchers to present their work and compete for prizes. The 2016 ISHR...
Student Investigator Oral Presentation Finalists were Mr Darnel Prakoso and Mr Yow Keat Tham (both from Baker IDI Heart and Diabetes Institute), Mr Richard Tan (Heart Research Institute), and Mr Gabriel Bernasochi (University of Melbourne). Well done to all students for their excellent presentations and responses to questions from a supportive audience. Congratulations to the winner, Mr Gabriel Bernasochi, for his presentation titled “Augmented aromatase expression in pathological hypertrophy and aged rat myocardium.”

The ISHR poster and mini oral sessions are always popular and provide ample opportunities to discuss cardiovascular research in an informal setting. These sessions were well attended and covered a wide range of topics from basic science, clinical, epidemiology, and studies conducted in mice, rats, sheep and humans. Congratulations to Ms My-Nhan Nguyen (Baker IDI Heart and Diabetes Institute) for winning the Best Student Mini Oral with her presentation titled ‘Cardiac galectin-3 contributes to fibrotic cardiomyopathy due to transgenic beta-adrenergic activation’, and to Ms Su Jen Chua (University of Adelaide) for best poster presentation titled ‘Galectin-3 levels is not a predictor of increased left ventricular mass in a healthy ageing population’. “Well done!” to all students who participated in these presentations.

The ISHR Student Publication Award was won by Ms Amelia Power (University of Auckland), for her paper entitled, Impaired ADP channeling to mitochondria and elevated reactive oxygen species in hypertensive hearts published in Am J Physiol - Heart Circ Physiol (2016, Volume 310, page H1649). In this paper, Amelia showed that the impaired connectivity between mitochondria and myofibrils may contribute to elevated reactive oxygen species production in the hypertensive heart, which could be a result of ultrastructural changes that occur in hypertrophy.

Dr Jenny Ooi (Baker IDI Heart and Diabetes Institute) took home the ISHR Postdoctoral Publication Award for her paper published in RNA Biology, titled Identification of miR-34 regulatory networks in settings of disease and antimiR-therapy: implications for treating cardiac pathology and other diseases (2016, Volume 28, pg. 1). In this paper, Jenny showed how miRNAs can not only regulate gene expression, but also target expression of various transcription factors that in turn, also regulate expression of other miRNAs.

The ISHR Early Investigator Career Development Luncheon allowed attendees to interact with invited international speakers Dr Elizabeth McNally (Centre for Genetic Medicine, Chicago, USA) and Dr Brian O’Rourke (Johns Hopkins School of Medicine, Baltimore, USA), and Associate Editor of Nature Reviews Cardiology Dr Karina Huynh. The panel members
shared how they developed their careers through a number of different pathways. Discussions also included what they would seek in potential post-doctoral candidates, alternate pathways to achieving success in academia and advice on picking up additional skills to increase competitiveness. A special thank you to Dr Kimberley Mellor (University of Auckland) and Dr Helena Viola (University of Western Australia) for organising the ECR events, both were a great success and thoroughly enjoyed by all.

The annual AGM was held on Friday 5th August at The Playford Hotel in Adelaide. Here Prof Livia Hool (President), A/Prof Salvatore Pepe (Finance Secretary), Dr Colleen Thomas (Member Secretary), Dr Jim Bell and A/Prof Julie McMullen (ECR Development) gave a summary of the Australasian section’s activities over the past year. During the AGM, Prof Hool thanked retiring council members Prof Leonard Arnolda (Australian National University), Prof Marie Ward (University of Auckland) and Prof David Saint (The University of Adelaide) for their contribution and commitment to the ISHR council over the years. New council appointments were announced for the 2016-2019 term. Prof Livia Hool was re-elected as President, Dr Colleen Thomas was elected Finance Secretary, and A/Prof Rebecca Ritchie was welcomed to council as Member Secretary. Additional council positions for 2016-2019 include: ECR Development (A/Prof Julie McMullen and Dr James Bell), ECR Representatives (Dr Helena Viola and Dr Kimberley Mellor), ISHR World Council Statutory member (Prof Salvatore Pepe), CSANZ Liaison (Prof Jonathan Kalman) and ISHR International (Prof Lea Delbridge and Prof Livia Hool). General Representatives on council include Prof Derek Laver, Dr Enzo Porrello, Prof Diane Fatkin, Prof Jamie Vandenberg, Dr Jeff Erickson, Prof Fadi Charchar, Prof Janna Morrison, and Dr Adam Hill.

The AGM was followed by the annual ISHR dinner, also held at The Playford, Adelaide. The ISHR dinner made for a wonderful opportunity to network with fellow ISHR members and our international guests all while celebrating a highly successful meeting, the achievements of the section thus far, and stimulating lively discussion about the ever growing future of the Australasian section of the ISHR.

Mr Yow Keat Tham, Ms My-Nhan Nguyen and Dr Bianca Bernardo

The next CSANZ / ISHR Australasian Section meeting will be held in Western Australia at the Perth Convention Centre, 9-13 August 2017.
Mark Anderson, M.D., Ph.D.

**Is CaMKII Essential for Coupling Oxidative Stress to Cardiopulmonary Disease?**

Winner of the 2015 Research Achievement Award

(June, 2015: Seattle, WA)

Mark Anderson is a physician scientist and the William Osler Professor and Director of the Department of Medicine and the Physician-in-Chief of Johns Hopkins Hospital in Baltimore.

Mark graduated from Macalester College with honors in Biology (BA) and from the University of Minnesota with a PhD (Physiology/Pharmacology) and MD (Medicine). He trained in internal medicine, cardiovascular diseases and clinical cardiac electrophysiology at Stanford University. His first faculty position was at Vanderbilt University where he established an independent laboratory and became the Betty and Jack Bailey Professor of Cardiovascular Medicine. At Vanderbilt he directed the training programs in clinical cardiac electrophysiology and cardiovascular diseases and the clinical arrhythmia service. In 2005 he was recruited to the University of Iowa where he first served as Chief of the Division of Cardiovascular Medicine and later as Chair of the Department of Internal Medicine and the Director of the François Abboud Cardiovascular Research Center. In 2014 he was recruited to Johns Hopkins University.

During postdoctoral training at Stanford Mark met Howard Schulman, then Director of the Neurosciences Program, who introduced him to CaMKII; at that time CaMKII was not anticipated to play a role in heart. He was the first to propose the hypothesis that CaMKII was a proarhythmic signal by promoting aberrant calcium fluxes and membrane hyperexcitability. This hypothesis led to two patents and a series of published manuscripts providing evidence that CaMKII inhibition was antiarrhythmic. The successful application of enzyme inhibitor therapy to arrhythmias was completely unanticipated, challenging the prevailing paradigm that the preferred approach for treating arrhythmias was by ion channel antagonist drugs.

Heart failure patients are at high risk to die suddenly from arrhythmias, but the conjoined clinical phenotypes of mechanical myocardial dysfunction and electrical instability were not known to have a mechanistic connection. Moreover, inotropic therapies for improving myocardial function in heart failure patients increased arrhythmias and sudden death, while ion channel antagonist drugs resulted in high rates of proarrhythmia and sudden death in heart failure patients. His work (Zhang Nat Med 2005, Erickson Cell 2008, He Nat Med 2011), in collaboration with talented colleagues, showed that CaMKII was a pathological down stream signal for each of the therapeutically validated neurohumoral pathways in heart failure (i.e. beta adrenergic agonist, angiotensin II and aldosterone) and provided a mechanistic framework supporting a view that arrhythmias and heart failure occur together, at least in part, because they are both favored by excessive CaMKII activity. His studies provided important proof-of-concept evidence that CaMKII inhibition reduced heart failure by improving myocardial function while also reducing arrhythmias and prolonging life. These studies led to a patent and various manuscripts from his laboratory and the laboratories of his collaborators. The arrhythmia and heart failure patents were licensed and, together with an emergent scientific literature, contributed to industry efforts to develop CaMKII inhibitor drugs.

CaMKII-related discoveries were greatly accelerated by a Fondation Leducq funded research Alliance for CaMKII Signaling, led by Anderson and codirected by Dr. Silvia Priori (University of Pavia). This award enabled Anderson and Priori to form an international research network, emphasizing cutting edge research of CaMKII in the cardiovascular system and transatlantic research exchanges. The alliance contributed to training numerous early stage investigators and has produced over 90 publications relating to the role of CaMKII in cardiovascular health and disease between 2009-2013.

While it is widely accepted that excessive oxidant stress is an important upstream (continued on page 12)
Outgoing (2013-2016) and incoming (2016-2019); bold type Council members: First row (l-r): Rodolphe Fischmeister, John Solaro (JMCC Editor), Asa Gustafsson (Treasurer), Litsa Kranias, Rui-Ping Xiao, Metin Avkiran (Past-President), Tish Murphy (President), Masatsugu Hori, Lea Delbridge (Secretary General), Keiichi Fukuda, Yoshikiko Saito (Exec Cmt Member-at-Large), Federica del Monte, Livia Hool, Yi Zhu. Second row (l-r): Leslie Anderson Lobaugh (Exec Sec), Charles Steenbergen (Finance Cmt), Peter Ferdinandy, Johannes Backs, Thomas Thum, Rainer Schulz, Richard Moss, David Eiser, Thomas Eschenhagen (President-Elect), Mark Sussman, Tetsuji Miura, Hossein Ardehali, Fabio di Lisa, Martin Vila Petroff, Salvator Pepe. Not pictured are: Issei Komuro, David Lefer, Gary Lopaschuk, Toyoaki Murohara, Peipei Ping, Yasuchika Takeishi, and KK Talwar.

These studies suggest that CaMKII inhibition may be a successful, but previously unanticipated, antioxidant therapy and led to new patent applications. Mitochondria are a critical source of oxidative stress and serve as nodal elements in metabolic adaptation to physiological stress (Wu Nat Commun 2015) and for cell survival decisions (Joiner Nature 2012). Anderson’s group is pursuing the hypothesis that CaMKII may exert physiological and disease actions in heart by affecting mitochondrial functions.

Dr. Anderson is a member of the American Society for Clinical Investigation, The Association of American Physicians, The American Clinical and Climatological Association, The Council of the Association of Professors of Medicine, Association of University Cardiologists, a founding Fellow of the Heart Rhythm Society, Senior Fellow of the American Asthma Association and a council member and Fellow of the ISHR. He was an AOA graduate from medical school, an Established Investigator of the AHA and has presented various named lectures.

Mark enjoys spending time with his family, skiing, swimming, running, reading, travel, cooking, music and theater. Anderson is a hopeless musician but last year he started to play the didgeridoo and is learning circular breathing.
Early Career Investigator (ECI)
Events in Hamburg 2017

The 34th Annual Meeting of the European Section of the ISHR will be held in Hamburg from the 24th until the 27th July, 2017. As Early Career Investigator (ECI) member of the ISHR-ES Council, I am pleased to announce that an ECI Symposium will be organized as a prelude to the meeting. My Co-chairs and I expect to bring together an outstanding group of students and postdocs, and to provide a great environment for the attendees to foster partnerships and the exchange of ideas in the area of cardiovascular biology.

We will hold an ECI scientific symposium (July 24th) by inviting early career investigators to present their cutting edge science. Make sure to submit your abstract in advance to be considered for oral presentation!

An ECI Evening Social Event will be organized on the day of arrival (July 23rd) where ECI can get together and socialize in a more “relaxed and informal” atmosphere.

As we continue our event planning, more details will be announced, so stay tuned. We hope to see you in our next ISHR-ES ECI event in Hamburg!

Alessandra Ghigo
ECI – European Section

(continued from page 6)

local organizing committee, and was also a hallmark of the achievements of Chinese researchers in both basic and translational fields of cardiovascular studies, as well as the contributions made by the Cardiovascular Section of the Chinese Association of Pathophysiology, and the Chinese Section of the ISHR. This congress encouraged all cardiovascular scientists and clinicians to make further progress in the fields of basic and translational medicine. We will make great effort together, and meet again at the 2019 ISHR World Congress in Beijing!

Chen Chen and Dao-wen Wang

Professor Huang-Tian Yang (ISHR Chinese Section Vice President) addressing the conference.
I would like to begin my letter by extending thanks to everyone who participated in our ECI events in ISHR–Seattle (2015). We had an extremely successful and well-received event where 160 delegates registered for the ECI scientific symposium, and 130 young investigators attended the ECI career development panel. The ECI events would never be this successful without the participation and enthusiasm of all of you!

This year, we will endeavor to provide more opportunities for early career attendees to discuss science and develop their careers. Here are some previews for our 2017 New Orleans NAS-ECI event:

Scientific Symposium: As one of the key platforms for the early career investigators to present and discuss their scientific achievements, this year we will again open our ECI event by holding an early career scientific symposium. ECI members will be selected based on their submitted abstract to deliver a short talk followed by a question/answer period.

Career Development Panel: This year, we will provide career development advice more tailored to a specific audience. We will hold two separate career development panels: one session for graduate students will invite recent postdocs to provide suggestions on how to choose a lab for postdoctoral research, and a second session for postdoctoral fellows will invite department chairs to provide guidance on preparing for a faculty position.

Following the scientific sessions, we will hold an on-site early career luncheon. In order to better facilitate the communication between early career investigators and senior investigators, we will have the luncheon in a “speed dating” format. During the luncheon, each individual early career investigator will have the opportunity to talk and receive career advice from multiple senior investigators.
For those of you who want additional social interaction with your peers, we have organized a special “ECI social night”! More details will be released as planning continues (but it is rumored that Pokémon may play a role in the evening’s events!).

As I mentioned before, the goal of the ISHR-NAS ECI committee is to provide opportunities for ECIs to communicate with fellow researchers and develop their careers. We exist for you. I would love to hear your thoughts – please let me know how we can do a better job for you.

Chen Gao, PhD  
*University of California, Los Angeles*

**Network with your fellow ISHR-NAS ECIs:**

Facebook: https://www.facebook.com/groups/ECI.ISHR/members/  
Linked In: https://www.linkedin.com/groups?gid=5185730

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**Calendar**

- **January 27-29, 2017.** 2017 Annual Meeting of the ISHR-IND Section. New Delhi, India.  
  Inquiries: Shantanu Sengupta, shantanus@igib.res.in

- **April 20-22, 2017.** 2017 Annual Meeting of the ISHR-LAT Section (held jointly with the Argentinean Society for Arterial Hypertension).  
  Inquiries: Carlos A. Valverde valverdeca@gmail.com / Julieta Palomeque jpalomeque@ciclaplata.org.ar

- **May 30 – June 2, 2017.** XXXVI Annual Meeting of the North American Section. New Orleans, LA.  
  Inquiries: David Lefer, dlefe1@lsuhsc.edu

- **July 24-27, 2017.** XXXIV Annual Meeting of the European Section. Hamburg, Germany.  
  Inquiries: Lucie Carrier, l.carrier@uke.de

- **August 9-13, 2017.** XL Annual Meeting of the Australasian Section. Perth, Australia.

- **December 8-10, 2017.** XXXIV Annual Meeting of the Japanese Section. Osaka, Japan.  
  Inquiries: Tetsuji Miura, miura@sapmed.ac.jp

- **June 2-6, 2019.** XXIII ISHR World Congress. Beijing, China.
HEART NEWS AND VIEWS

is the official News Bulletin of the International Society for Heart Research and is published every fourth month.

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