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50th Anniversary of ISHR
Leaders of the Study Group/ISHR (1967-1998)

Fig 1: Pioneers of the ISHR (from left): Drs Naranjan Dhalla (author of this series of articles and 9th President of ISHR), Makoto Nagano (ISHR Council 1995-98), Jutta Schaper (10th President of ISHR), Richard Bing (1st President of ISHR), Norman Alpert (ISHR Council 1983-92), Howard Morgan (6th President of ISHR) and Karl Weber (ISHR Council 1995-98).

Photo kindly provided by Drs Jutta and Wolfgang Schaper

The International Society for Heart Research (ISHR) was founded in 1967 by Drs Eörs Bajusz (Boston), Richard Bing (Pasadena) and George Rona (Montreal) as the International Study Group for Research in Cardiac Metabolism (Study Group) (see “History of the ISHR 1967-1998” by Naranjan Dhalla; HN&V 2017, 23(3), pp 1-3, 15). Here we introduce and celebrate the early leaders of the ISHR/Study Group whose vision and efforts established and developed the Society in the decades following its founding (see also HN&V 1994, 2(2), pp 1-6).

Founder of the Study Group/ISHR
Dr Eörs Bajusz played a key role in the formation of the Study Group as a novel and unique Society for the cardiovascular community. After obtaining his MD degree from the University of Budapest, Hungary in 1950, he worked in the
Institute of Muscle Research and published scientific papers in the areas of new diagnostic methods, histochemical determination and muscle diseases. He immigrated to Canada in 1957 and started his postgraduate studies under the mentorship of Dr Hans Selye at the Institute of Experimental Medicine and Surgery in Montreal, where he studied the role of stress in heart disease. He received his PhD from the University of Montreal in 1961. His research focused on the interaction of different dietary and neurohormonal interventions which either enhanced (sensitizers) or attenuated (desensitizers) experimentally-induced myocardial necrosis. He also worked on the pathogenesis of myocardial infarction following coronary occlusion and investigated the involvement of endocrine systems in inducing cardiac abnormalities under stressful conditions. He published several seminal research papers indicating that “cardiac necrosis and some related cardiovascular diseases may be the end-products of altered reactivity of body processes in their response to changes in intrinsic and extrinsic environmental influences” and published two major books on this subject: Conditioning Factors for Cardiac Necrosis in 1963, and Nutritional Aspects of Cardiovascular Diseases in 1965.

Dr Bajusz was greatly influenced by Dr Wilhelm Raab, Professor of Experimental Medicine at the University of Vermont, who translated his own research concept and that of Selye and Bajusz into the formation of preventive cardiology. In 1964, Dr Bajusz joined the Bio-Research Institute in Cambridge, Massachusetts as Senior Research Associate and later became Director of a division in Boston. This Institute had developed a genetic model of cardiomyopathic hamsters with spontaneously occurring congestive heart failure, which provided an extraordinary opportunity for Dr Bajusz to carry out extensive research on the pathophysiology and prevention of heart disease and to promote research collaborations all over the world. He was soon appointed Professor of Pathology at the University of Montreal. It should also be mentioned that it was Dr Bajusz who identified and encouraged Dr Naranjan Dhall to serve the Study Group and nominated him first as a Council Member (1970) and then as Secretary General (1972). Thus Dr Bajusz was involved not only with his scholarly and investigative activities but also with the development of membership in the Study Group until his unfortunate death following a second heart attack in 1973. Numerous colleagues expressed a deep sense of sorrow on the loss of Dr Eörs Bajusz and designated him as “Founder of the International Study Group for Research in Cardiac Metabolism.”

Leadership of the Organization
Although it is the general membership of any Society which determines its profile and success, it is the leadership which plays a critical role in nurturing the growth and development of the organization. In this case, both the Officials and Council Members of the Study Group and then ISHR, with their wisdom and collective decision-making abilities, were responsible for building this organization (Fig. 1). The leaders of the Study Group from 1968 to 1976 are listed in the previous article (HN&V 23(3), pp 2-3, Tables 2,3), whereas those serving from 1976 to 1998 are listed in Tables 1-3. It should be mentioned that after 1970 all Officers and Council Members were elected to their respective offices.

Presidents of the Study Group/ISHR (1968-1998)
Dr Richard Bing (Fig. 2), the Founding President of the Study Group (1968-1973), was a great human being with a towering personality (see HN&V 17(2), pp 1-6). He was born in Nuremberg, Germany and, after receiving his MD degree from Bern, Switzerland, in 1938 he moved to New York for his internship. He carried out extensive research in the field of myocardial metabolism under diverse clinical conditions while working at various institutions in the USA and was the first to determine the metabolic status of the human heart. He did seminal research on the role of metabolic changes in ischemic heart disease while he was Professor and Chairman of the Department of Medicine at Wayne State University in Detroit. In view of the impact of his work in both Europe and USA, he was considered to be the “Father of Myocardial Metabolism”. In the later stages of his distinguished career, he became Professor of Medicine at University of Southern California and Director of Experimental Cardiology at the Huntington Medical Research Institute. He firmly believed that the ISHR had a great future if the organization maintained its independence from clinically-dominated cardiovascular societies in Europe and the USA. Dr Bing devoted considerable time and effort to developing the ISHR and was elected Honorary Life President of this organization in 1973 in Freiberg, Germany.

Dr Albert Wollenberger from Berlin-Buch (Fig. 2; 1973-1976), was born in Freiburg, Germany, educated in the USA and received his PhD from Harvard University in 1942. After working at different Institutions in Denmark, Sweden and England, he joined Humboldt University in Berlin as Professor and Director of the Central Institute of Heart and Circulatory Regulation at the Research Academy of Sciences of DDR. He was known worldwide for his work on the biochemistry of myocardial ischemia and heart failure – most notably the biochemical mechanisms of the hormonal regulation of the heart. He characterized the action of auto antibodies against beta-receptors in the serum of patients with myocarditis and dilated cardiomyopathy. He was the first to outline the biochemical basis of heart failure, and published this in the first article in the first issue of Pharmacological Reviews in 1951. He believed that advances in molec-
ular biology would lead to new concepts for the treatment and prevention of heart disease. He was a mild-spoken man with a wonderful personality and a great sense of humor. During his Presidency, the Society saw dramatic growth and marked changes in its scope.

Dr Lionel Opie (Fig. 3) was elected as the first President of the newly-christened ISHR in 1976. He was Professor of Medicine at the University of Cape Town, South Africa and is famous for his research work in myocardial metabolism in health and disease. He and Dr Bing were the first co-Editors of the *Journal of Molecular and Cellular Cardiology* (1970), and Dr Opie was also the Founding Editor of the journal *Cardiovascular Drugs and Therapy*. He is highly committed to promoting cardiovascular research through his excellent writing and communication skills and has authored several internationally recognized books in the field of cardiac physiology and pharmacology. During his Presidency, he developed close relationships between the ISHR and the Federation of Cardiology and founded the Council of Cardiac Metabolism to promote the scientific basis of cardiovascular medicine around the globe.

Dr Robert Jennings (1978-1980), was Professor and Chairman of the Pathology Department at Duke University, Durham, USA (Fig. 3). He did pioneering research work in the areas of ischemia-reperfusion injury to the heart and ischemic preconditioning. He was an outstanding experimental scientist and a highly respected cardiac pathologist. He is responsible for establishing the organizational structure of ISHR by writing and supporting adoption of detailed By-Laws in 1980. His interests in the welfare of the ISHR are deep-rooted and over the years he has encouraged many individuals to serve this organization in leadership roles. He continues to serve ISHR as Chair of the Finance Committee.

Prof Peter Harris (1980-1983, Fig. 3) was Head of Cardiac Medicine at the National Heart Hospital, University of London, UK and was deeply interested in high altitude research. His work at different places in Peru, India, Tibet and Bolivia revealed new and valuable information regarding the mechanisms of cardiovascular and respiratory adaptations to high altitude. He developed the Cardiothoracic Institute in London with strong multidisciplinary programs in basic research. As Secretary of the European Section, he also took a keen interest in promoting cardiovascular activities in Western Europe and China. He organized a successful high-profile International Congress in London in 1983.

While Dr Harris chaired during a period of extraordinary growth of the ISHR, Dr Howard Morgan (1983-1986; Fig. 3) stabilized the organization during his Presidency. Dr Morgan was a man of unimpeachable integrity who possessed high moral values. These qualities helped him find solutions to complex problems and coordinate sensitive international affairs. Dr Morgan was a highly respected investigator in the area of cardiac metabolism, particularly with respect to glucose utilization and protein synthesis. His work on protein metabolism in cardiac hypertrophy laid the foundation for the development and application of molecular biology techniques for studying the cardiovascular system in health and disease. He built a high profile Centre for Research at the Geisinger Clinic in Danville, Pennsylvania. He also served as President of both the American Heart Association and the American Physiological Society and thus was generally considered to be a cardiovascular man with superior administrative skills, great influence and high impact.

After obtaining her DSc degree from Melbourne University in 1966, Dr
Winifred Nayler (1986–1989; Fig. 4) worked at the Baker Medical Research Institute in Melbourne for several years. She then moved to England and served as Head of Cardiac Physiology and Professor of Cardiac Metabolism at the Cardiothoracic Institute in London. She did excellent research in the field of cardiovascular pharmacology and published extensively in high impact journals. Upon her return to Melbourne as Principal Investigator in the Department of Medicine, she promoted cardiovascular activities all over Australia. She also served as President of the Australasian Section of ISHR and organized a highly successful International Congress in Melbourne in 1986.

Dr Yoshio Ito (1989–1992; Fig. 4), was Professor and Director of the Fourth Department of Internal Medicine, University of Tokyo, Japan. He was a clinical cardiologist who showed a keen interest in promoting basic research in electrophysiology and biochemistry to understand complex problems in cardiovascular medicine. He played a critical role in the development of the Japanese Section of the ISHR. He felt a great deal of pride and devoted a great deal of time in organizing a truly successful Congress to celebrate the Silver Jubilee of the ISHR in 1992 in Kobe. Not only was he President of the Japanese section of ISHR, but also President of the Japanese Circulation Society and Advisor to the Japan Heart Foundation.

After a long service to the ISHR (2 years on Council and 17 years as Secretary General), Dr Naranjan Dhall was the 9th President of ISHR (1992–1995; Fig. 4). At that time, he was Professor of Physiology and Head of the Division of Cardiovascular Sciences at the St. Boniface Hospital Research Centre in Winnipeg (later renamed as the Institute of Cardiovascular Sciences, University of Manitoba and designated by the Medical Research Council of Canada as the Centre of Excellence in Cardiovascular Research). On the basis of his pioneering research work identifying defects in sarcotubular, sarcoplasmic reticulum and mitochondria in different types of experimentally-induced heart disease, he outlined a novel concept of the “Subcellular Basis of Contractile Dysfunction” and laid the foundation for developing molecular targets for the therapy of heart failure. He published extensively in the area of cardiovascular sciences and served as Editor-in-Chief of Molecular and Cellular Biochemistry. During his Presidency, he was successful in raising significant funds from Japan (with the help of Professor Makoto Nagano (Tokyo) and Dr Howard Morgan, (Danville)). Along with Prof. Norman Alpert (Burlington), David Hearse (London) and Philip Poole-Wilson (London), he renegotiated the JMCC contract with the Academic Press (continued on page 14)
PLAN TO ATTEND THE WORLD CONGRESS IN BEIJING IN JUNE 2019

As the World Congress in Beijing approaches ISHR is busy preparing for the meeting. I invite you all to attend and to bring along your colleagues. It promises to be an outstanding week of science and fellowship. ISHR will celebrate its 50th anniversary at this World Congress and we will have a special session to celebrate the occasion. Registration will open November 1 and the early-bird registration discount ends on March 15, 2019. Short talks for all 25 ISHR sponsored symposia will be chosen from abstracts that are submitted by February 1. Check out the website (http://www.ishr2019.org/) for more information. ISHR International has made $100,000 available for early career investigator travel awards. The deadline for these awards is February 1, 2019. Information on how to apply is available on the website. The Richard Bing Young Investigator Competition is always a highlight of the meeting. The deadline for submission for this prestigious award is February 1, 2019. Thanks to Asa Gustafsson for organizing the competition this year. ISHR International will sponsor six Award and Distinguished lectures at the World Congress. ISHR also will induct 24 new Fellows of the ISHR at the World Congress. Congratulations to the new Fellows, who are listed on page 13 of this issue!

REFLECTING ON FUTURE CHALLENGES

As I transition to my final year as President I am reflecting on the strengths and challenges of the ISHR as we begin our next 50 years. The ISHR has many strengths. The society has always had a commitment to Young investigators and the enthusiasm and energy of the Early Career Investigator committee is a major source of the strength and vitality of the ISHR. The ISHR World Congresses are another defining aspect of the ISHR. These meetings bring our diverse society together to celebrate sciences in unique cultural settings. The opportunity to network globally is a wonderful strength of the ISHR. Our society Journal, the JMCC, is another strength of the ISHR. We owe a great thanks to our dedicated Editors and Editorial board for maintaining high scientific quality. In addition to these strengths there are a number of challenges that ISHR needs to consider as we move forward. ISHR is run almost entirely by volunteers. This is a strength of the society, but it presents many challenges. It can be a challenge to have continuity with turnover of volunteers. With a society so dependent on volunteers, things can get lost and we can miss opportunities. ISHR has ameliorated this issue with the addition of the Executive Secretary, Leslie Anderson Lobaugh. However, if the ISHR is to take on new opportunities we might need to identify additional administrative support. Of course, additional administrative support will cost money; the large majority (>95%) of ISHR income comes from JMCC revenue. Currently our journal income is used to support: travel awards for early career investigators to attend the World Congress, 6 yearly ISHR award lectures, 25 symposia at the triennial World Congress, 2-3 symposium at section meetings in non-Congress years, early career investigator activities at the World Congress, and the ISHR Executive Secretary. The JMCC is doing well scientifically, but scientific publishing is undergoing major changes and these changes could impact the revenue that ISHR receives from the journal. As open access and other publication changes occur the revenue from journals are likely to decrease. Open access has many benefits to science, but it would be prudent for ISHR to undertake some planning for how to replace journal income or planning for how to function with less income. ISHR is fortunate to have a devoted cadre of scientists who will guide it through these challenges and allow it to flourish in the next 50 years. Comments and suggestions are welcome (please send to llobaugh@ishrworld.org).

Elizabeth Murphy, Ph.D.
President, ISHR
On Dec. 8, the program commenced with a Featured Research Session (FRS) chaired by Yasuchika Takeishi and Tohru Minamino, which was followed by a plenary lecture by Dr Tamotsu Yoshimori (Osaka University, Japan). Dr Yoshimori summarized the history of autophagy research and presented his work that included studies conducted in collaboration with his mentor, Dr Yoshinori Ohsumi, the winner of the Nobel Prize in Medicine and Physiology in 2016. In the following plenary session, Dr Paolo Bernardi (University of Padova, Italy) delivered a lecture entitled “Molecular nature and regulation of the mitochondrial permeability transition”. He explained the beauty of conformational changes of F-ATPase dimers initiated by factors that target specific subunits of the F-ATPase complex for regulation of the mitochondrial permeability transition pore. A JMCC symposium entitled “Aging and Cardiovascular Disease” was chaired by Issei Komuro and Ichiro Manabe. In this symposium, the role of mitochondrial quality control in protection against aging, adipose tissue function, effects of fatty acid quality on the heart and immuno-metabolism relationships in age-related diseases were discussed. The first day of the conference was concluded by a ceremony for the 2017 ISHR Distinguished Leader Award. Dr Masatsugu Hori, who has contributed greatly to the mission and development of the ISHR for more than two decades, received the Award from Dr Yoshihiko Saito, President of ISHR-JPN.

On Dec 9, in a plenary session, Dr Gou Young Koh (Institute for Basic Science, Korea) gave a lecture on the biological roles of the angioptoin-Tie2 system and provided a new perspective on therapy for vascular diseases by manipulation of this system. In the ISHR Invited Lecture, Dr Hossein Ardehali (Northwestern University, USA) presented his novel findings on multiple mechanisms regulating mitochondrial iron and the pathological role of mitochondrial iron dysregulation in cardiomyocytes, mainly focusing on tristetraprolin. A JMCC symposium entitled “Novel therapeutic targets for heart failure management” was chaired by Hiroyuki Tsutsui and Masafumi Kitakaze, and topics including the role of autophagy, novel inotropic agents that directly modulate sarcomeres, the role of the Fyn-Nox4 axis in redox signals and the involvement of indoxyl sulfate in chronic heart failure were discussed.

The third and final day of the meeting commenced with the Young Investigator Award (YIA) Competition chaired by Keiko Yamauchi-Takihara and Ichiro Shiojima. Six finalists selected from 15 applicants gave excellent presentations, and Sarasa Isobe (Keio University) won the Best YIA 2017 for her study “CD44 variant isoform resulting from endothelial-mesenchymal transition is involved in vascular remodeling of pulmonary arterial hypertension”. In the afternoon, Dr Junichi Sadoshima (Rutgers University New Jersey Medical School, USA) delivered the President’s Distinguished Lecture entitled “The molecular mechanisms of mitochondrial degradation in the stressed heart”. He lectured about the molecular mechanisms and biological roles of mitophagy in stressed...
hearts and he also showed a novel role for RIP1, a key molecule of necroptosis signaling, in the mitophagic process. The program on the final day concluded with a *JMCC* symposium entitled “Mitochondria and cell death”. Hossein Ardehali and Satoaki Matoba chaired this symposium, and speakers discussed mitochondrial dynamics and regulation of mitochondrial DNA (mtDNA) by mitochondrial fission, an intramitochondrial kinase/phosphatase system involved in regulation of the mitochondrial permeability transition, the mechanism by which mtDNA provokes an inflammatory response in failing hearts, and a comprehensive approach to identifying essential genes for mitophagy.

A total of 59 presentations, including five plenary lectures, three *JMCC* symposia, FRS, YIA, and oral and poster sessions, were given in the three-day meeting of the ISHR-JPN. I would like to thank all of the participants and staff for their great contributions and Drs. Hiromi Rakugi (President of the 21st Annual Scientific Meeting of CVEM) and Masataka Sata (President of the 25th Annual Meeting of JVBMO), for their great support in making CVMW2017 possible.

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**Heping “Peace” Cheng, Ph.D.**

**Protons Trigger Mitochondrial Flashes for ATP Homeostasis in Heart**

**Winner of the 2016 Research Achievement Award**

**(June, 2016: Buenos Aires, Argentina)**

After receiving multidisciplinary training in mathematics, physics, biology, and electronic engineering at Peking University (China), Heping (Peace) Cheng received his PhD degree in Physiology in 1995 from the University of Maryland at Baltimore (USA). He then spent a decade at the laboratory of Cardiovascular Science in the National Institute on Aging, NIH (USA), progressing from Senior Staff Fellow to Tenure-track Investigator, and becoming a Senior Investigator with tenure in 2004. Since then, he co-founded the Institute of Molecular Medicine at Peking University and, as a Chair Professor, has headed the Laboratory of Ca²⁺ Signaling and Mitochondrial Biomedicine at the Institute. He was elected to the Chinese Academy of Sciences in 2013.

Peace’s scientific motivation is to decipher physiological principles underlying cellular functions and signaling. During his PhD study, Peace discovered “calcium sparks”—elementary events of excitation-contraction coupling in heart cells. Individual sparks arise when tiny packets...
of Ca\textsuperscript{2+} are released from the sarcoplasmic reticulum through clusters of ryanodine receptors. The summation of thousands of discrete sparks results in an intracellular Ca\textsuperscript{2+} transient that activates the cell to contract. In a flurry of discoveries made with many collaborators, Peace demonstrated that Ca\textsuperscript{2+} sparks in blood vessels negatively regulate vascular tone; subsurface Ca\textsuperscript{2+} sparks in dorsal root ganglion sensory neurons trigger vesicle secretion; and spark-like events from TRPM7 and IP3 receptors, called “calcium flickers”, steer cell migration in fibroblasts. These findings have revolutionized our view of cellular Ca\textsuperscript{2+} regulation and signaling, its hierarchical organization, dynamism, and design principles to simultaneously achieve signaling versatility, specificity, and efficiency.

Through two-decades of vigorous innovation, Peace and collaborators have uncovered a molecular trilogy at cardiac dyads, the smallest units of cardiac excitation-contraction coupling. Ca\textsuperscript{2+} sparklets arise from the opening of single L-type Ca\textsuperscript{2+} channels and trigger Ca\textsuperscript{2+} sparks via the Ca\textsuperscript{2+}-induced Ca\textsuperscript{2+} release mechanism; at the same time, Ca\textsuperscript{2+} blinks, the reciprocal Ca\textsuperscript{2+} signal in the sarcoplasmic reticulum, develop and reveal a surprisingly large local Ca\textsuperscript{2+} depletion that helps to terminate the ongoing spark. More recently, by re-engineering a new generation of genetically-coded Ca\textsuperscript{2+} indicators and by devising a nanodomain-targeting strategy, he has further characterized Ca\textsuperscript{2+} sparks in the dyadic clefts. This trilogy is deranged in the failing heart, where ryanodine receptor clusters are orphaned from their L-type Ca\textsuperscript{2+} channels, such that systolic Ca\textsuperscript{2+} release and hence cardiac contractility are compromised; Ca\textsuperscript{2+} sparks often occur in diastole, contributing to cardiac arrhythmogenesis. In the course of this work, Peace has also gained a reputation for his quantitative and analytical style. He has developed mathematical models of Ca\textsuperscript{2+} sparks and blinks, and devised the first automated spark detection algorithm for the research community.

While investigating the mitochondrial Ca\textsuperscript{2+} response to sparks, Peace and his collaborators made the serendipitous discovery of mitochondrial “flashes”, which reflect bursts of superoxide production entangled with many other signals at the single-organelle level. Attracted to the beauty and complexity of the flash, in recent years Peace has dedicated himself to this new research direction. Emerging evidence indicates that the flash is much more complex than sparks, and constitutes another type of elemental and ubiquitous signaling event that participates in vital physiological processes from metabolism to cell-fate regulation, and from stress responses to aging. To further this quest into flash biology, he is currently leading an effort to develop a miniaturized two-photon microscope with superior resolution and sensitivity that would make it possible to image mitochondrial flashes as well as Ca\textsuperscript{2+} signals in live animals under natural conditions.

Peace previously served as an Associate Editor for Cardiovascular Research and is on the editorial boards of a number of journals including the Journal of Molecular and Cellular Cardiology, the Journal of General Physiology, and AJP-Heart and Circulatory Physiology. He is also Vice-president of the Biophysical Society of China.

**REPORT ON THE INDIAN SECTION MEETING**

**(FEBRUARY 16 – 18, 2018; CHANDIGARH, INDIA)**

The 15th annual International Society for Heart Research (ISHR)-Indian Section meeting was held in conjunction with the Postgraduate Institute of Medical Education and Research (PGIMER) in Chandigarh, India. The ISHR meeting is a dynamic platform to bring together basic cardiovascular research scientists and clinicians. Its aim is to give impetus to translational cardiovascular research and to encourage interaction and discussion between cardiovascular scientists and clinicians. Nearly 250 delegates from India and abroad attended the meeting.

The conference started with a session on “Cardiomyopathies: from bench to bedside”, followed by the Keynote address by Prof Lea Delbridge (Univ of Melbourne), Secretary General of ISHR-International. She gave an insightful talk on new mechanisms and preclinical trials in heart failure with preserved ejection fraction. Prof K K Talwar, President of the ISHR-Indian Section, gave an overview of therapeutic approaches in heart failure. The prestigious Manjit Singh Oration was presented by Prof Ramesh K Goyal, an eminent pharmacologist in India, and the PL Wahi Oration was delivered by Prof VK Bahl, a renowned cardiologist. Dr Elizabeth Murphy, President of ISHR-International, delivered the Presidential address. The meeting was inaugurated by Prof M S Valiathan, an eminent Indian cardiothoracic surgeon who is famous for the development of the indigenous mechanical valve, the Chitra-ITK valve. Prof Valiathan emphasized the role of Indian scientists in the growth of cardiovascular sciences worldwide. His talk was very thought provoking and it made a deep impact on young cardiovascular scientists.
Nearly 40 invited lectures were delivered at the meeting covering a vast range of topics, which included cardiomyopathy from bench to bedside, cardiac regeneration, the role of metabolic pathways in heart disease, cardiac transplantation, cardiac remodelling, molecular mechanisms of cardiovascular diseases, and the role of epigenetics and genetics in the failing heart. These lectures were complemented with presentations by national scientists covering a broad spectrum of basic cardiac research that targeted physiology, pathology, cell signalling as well as genomic and transcriptomic mechanisms of healthy and diseased hearts.

This conference included 19 scientific sessions including 3 award sessions, 2 orations and one plenary session. International speakers included Drs Elizabeth Murphy (NHLBI-NIH), Lea Delbridge (University of Melbourne), NS Dhalla (Winnipeg, Canada), PK Singal (Institute of Cardiovascular Sciences, Manitoba, Canada), Helen Doran (Manchester, UK) and Sanjiv Dhingra (Institute of Cardiovascular Sciences, Manitoba, Canada). Prof Dhalla discussed the role of lysophosphatidic acid in vascular smooth muscle remodelling and hypertension, while Dr Dhingra spoke on the role of PE-2 mediated cardiac regeneration for cardiac failure. Dr Singal’s talk elaborated the role of toll like receptors, TLR2 and TLR4, in heart failure. Dr Helen Doran from the UK spoke on vasculopathy in cardiac transplantation and Dr Leena Joseph presented her data on the role of EMB in DCM and transplantation follow up.
An entire session was devoted to the Indian System of Medicine in CVD which included the role of Yoga and Ayurveda in the prevention and treatment of heart disease, which was addressed by Dr Dinesh Katoch, Advisor, Ministry of AYUSH, Government of India and Prof KS Dhiman, Director General, Council of Ayurveda Research, India.

This year, the ISHR-Indian section, in association with Torrent Pharmaceuticals, India, recognized mid-career scientists in the field of cardiovascular sciences both from clinical and basic sciences. Prof Nitish Mahapatra (Indian Institute of Technology, Chennai) and Prof Nitish Naik (All Indian Institute of Medical Sciences, New Delhi) were selected for the Torrent Research award in basic and clinical sciences respectively. They have both made significant contributions in their respective fields of cardiovascular research.

ISHR-International and the Indian section have long been known as strong supporters of students and early postdoctoral researchers. There were two award sessions, namely the NS Dhalla Young Investigator Award in basic research and the NK Ganguly Young Investigator Award in clinical cardiovascular research. We had six outstanding presentations in the clinical category covering various aspects of cardiovascular health. In the basic science category there were eleven presentations on various molecular aspects of cardiovascular disease and biology given by very talented young scientists. This year, for the very first time, several Early Career Investigator Oral Presentation prizes were given, sponsored by ISHR-International. The NK Ganguly Award was given to Drs Mukund Rastogi (PGIMER) and Saurabh Agstam, and the NS Dhalla Award was given to Dr Anupam Mittal (Institute of Stem Cell Biology and Regenerative Medicine, Bengaluru) for his talk on interplay between epigenetic and genetic factors in pathophysiology of cardiomyopathy. Runner-up prizes were awarded to Shweta Kumar, Durba Banerjee and Dr Prem Parkash for their work on accelerated insulin resistance development in C57BL/6 mice by a high-fat diet. ISHR congratulates all of these young scientists and wishes them a bright future ahead.

To further support young scientists, Dr Murphy announced that travel bursaries were available to help Indian students and ECRs attend the 2019 ISHR World Congress in Beijing, China.

The conference also had good social activities with a banquet dinner for all participants at Lake Club, Chandigarh, where everybody enjoyed good Indian food and music.

The meeting concluded with the valedictory and a vote of thanks from Prof SK Maulik, Secretary General of the ISHR-Indian Section and Dr Uma Nahar on the behalf of the organizers of ISHR-2018.

Anupam Mittal, PhD
Institute of Stem Cell Biology and Regenerative Medicine
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The conference began with a great Early-Career Investigator (ECI) day on Tuesday organised by the ECI committee led by Sam Das, Ron Vagnozzi and Erik Blackwood. The first session involved presentations from 10 enthusiastic and talented early career researchers, including a majority of women which was great to see! Next up was a career development session where I think all attendees, both ECIs and those more senior, appreciated the interesting and honest advice and got some great tips on writing grant applications. The ECIs then headed into a speed-dating lunch with senior members of ISHR. The ECIs were able to ask questions and get advice whilst eating maple butternut soup, fish cakes and local blueberry crisp. Full of sustenance, we moved into the afternoon competition sessions. The three young women in the Junior Young Investigator competition all presented impressive and elegant projects. Ultimately Lisa Dorn won with her project titled “m6A mRNA Methylation drives cardiomyocyte hypertrophy”, but there were honourable mentions for Finalists Randi Parks and Katherina Alsina. The senior investigator competition was up next, and again there were three impressive presentations from Finalists Olympia Bikou, Prabhakara Nagareddy and Erin Reineke, with Erin ultimately taking the winning spot for her presentation titled “Transient activation of AMPK preceding left ventricular pressure overload preserves left ventricular function and reduces adverse remodelling”. The day finished with the welcome reception and first poster session of the conference, where attendees discussed their work over drinks and poutine. Those who were still keen for more were led downtown by the local social coordinators, Hirad Feridooni and Brittny Allan, for some live music and local beers.

The next day saw the official opening of the conference with the Sazzarin Award Lecture delivered by Sandra Davidge of the University of Alberta. Dr Davidge is the Executive Director of the Women and Children’s Health Research Institute, and holds the Tier 1 Canada Research Chair in Maternal and Perinatal Cardiovascular Health. She talked about the “impact of pregnancy complications on maternal and offspring cardiovascular health”, and surely caused several attendees to call their mums and ask about their pregnancies. Wednesday continued with 8 symposia on a variety of cardiovascular topics from “Proteomics and Proteotoxicity in the Heart” to “Cardiovascular Diseases in Females”. The second poster session of the conference was over lunch in the beautiful Admiral Room, and poster-viewing continued through the evening reception. Whilst the senior investigators went to explore the restaurants of Halifax in the evening, the ECIs headed to the social event at Keith’s Brewery. This was a great night of learning about both beer and the history of Halifax, meeting new people, eating and drinking!

Thursday began with an early start for those attending the Women in Science breakfast. This was a well-attended event,
even at the early hour, and there was much honest discussion about the struggles for women in academic career paths. It was inspiring to see so many successful women of ISHR together supporting one another. The large number of female presenters and chairs across the entire program was very encouraging for all the ECIs in attendance. The breakfast was followed by the award of the ISHR Distinguished Leader Award to Richard Moss from the University of Wisconsin. This prestigious award is presented to someone who has made continued important contributions to the ISHR. The President’s lecture was up next with Jeffrey Molkentin from the Cincinnati Children’s Hospital Medical Center giving a notable lecture on the “Mechanism whereby cell therapy benefits the heart post MI injury”. The rest of the day was made up of 8 more symposia covering areas including “Repair of the Vulnerable Heart” and “Cardiovascular Diseases in Neonates and Children”.

The highlight of the conference was the banquet on Thursday evening at Pier 21 – the ‘Ellis Island’ of Canada. Attendees were able to wander through the exhibits and learn about the important immigration history of Nova Scotia whilst drinking wine and eating canapes. Then we moved into the main hall where we were treated to a full lobster dinner, complete with a parade of the lobsters about the room led by a bagpiper (see the teaser photo on the cover page)! Bibs were donned, and tools used to eat the delicious lobsters – a little messy but a great treat for everyone who attended. Awards were also presented, with Samantha Francis Stuart (UC Davis), Jessica Pfleger (Temple), Alex Moyzis (UCSD), Matthew Stoyek (Dalhousie), Chi Lam (U Cincinnati), Kaya Gaudet (Ottawa Heart), Kim Ho (OSUMC) and Leslie Kennedy (NIH) taking home ISHR-NAS Poster Awards. In keeping with the meeting theme, Valerie Long (U Montreal) won the Integration of Sex and Gender in Biomedical Research Poster Prize, sponsored by the CIHR Inst of Gender and Health. In keeping with the Society’s commitment to young investigators, ISHR-NAS also presented 26 Travel Awards to ECIs to assist with travel expenses. The night finished with dancing to the fabulous band, Big Fish, with people staying on the dance floor until the very end. One bus then headed back to the hotel, but the
second bus took those who were still keen downtown for some more dancing.

Friday morning finished off the week with 4 more symposia including those on ‘Heart Diseases in Pregnancy’, and ‘Cardiac Excitation-contraction Coupling & Heart Disease across the Life Course’. Overall it was a fantastic conference, with an interesting and balanced program, exceptional location, a great theme, excellent ECI activities and support, and a great social agenda. Susan Howlett and the other organizers should be congratulated; they have set a high bar for the next hosts!

Alice Kane, PhD
Harvard University

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ISHR-NAS presented Travel Awards ($500/laboratory) to 26 Early Career Investigators to offset the cost of travel to the meeting.

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2019 Fellows of the ISHR

Zoltan Arany, University of Pennsylvania
Hossein Ardehali, Northwestern University
Burns Blaxall, CCHMC
Heping Cheng, Beijing University
Michael Davis, Emory University
Lea Delbridge, University of Melbourne
Dobromir Dobrev, Universitätsklinikum Essen
Peter Ferdinandy, Semmelweis University
Joshua Goldhaber, Cedars-Sinai Medical Ctr
Ana-Maria Gomez, INSERM
Derek Hausenloy, Duke-NUS Medical School
Livia Hool, University of Western Australia

Yu Huang, Chinese University of Hong Kong
Masaki Ieda, Keio University
Raj Kishore, Temple University
Julie McMullen, Baker Heart and Diabetes Institute
Yasuchika Takeishi, Fukushima Medical University
Jamie Vandenb Berg, Victor Chang Cardiac Research Inst
Martin Vila-Petroff, National University of La Plata
Xuejun Wang, University of South Dakota
Rui-ping Xiao, Beijing University
Huangtian Yang, Shanghai Inst for Biological Sciences
Bin Zhou, Shanghai Inst for Biological Sciences
Yi Zhu, Tianjin Medical University
The tenth President, Dr Jutta Schaper (1995–1998; Fig. 4), was a Professor at the Max Planck Institute in Bad Nauheim, Germany. She was experienced in organizing the affairs of the ISHR as Secretary of the Eastern European Section (1976–1983) and Council Member (1980–1989). She examined ultrastructural changes in the diseased heart by employing a wide variety of immunohistochemical techniques. She was a highly respected investigator in the field of heart failure and ischemic heart disease and has published extensively in high impact journals. She is also a wonderful and caring person and thus enjoyed having long scientific and professional discussions with ISHR members. She was skilled in accommodating the interests and viewpoints of others and believed in promoting young scientists. Her compassionate leadership serves as a role model for developing excellence (see HN&V 18(1)).

Other Leaders of the Study Group/ISHR

While these ten Presidents were a true source of inspiration and provided guidance for the smooth functioning of both the Study Group and ISHR, many Officials and Council Members (Tables 1-3) were responsible for managing the affairs of the Society and promoting its membership and educational programs. They served on various committees and on JMCC and Heart News and Views Editorial Boards. The services of Drs Arnold Schwartz, Naranjan Dhall, David Hearse and John Solaro as Secretary General are

**Table 2. Council Members of the International Society for Heart Research During 1976 to 1986.**

<table>
<thead>
<tr>
<th>Year</th>
<th>Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>1976 – 1978</td>
<td>Chazov E (Moscow), Gudbjarnason S (Reykjavik), Harris P (London), Hatt PY (Paris), Ito Y (Tokyo), Katz AM (Farmington), Kölbl F (Prague), Nayler W (Melbourne), Ojiambo HP (Nairobi), Rona G (Montreal), Schroeder H (Stuttgart), Schwartz A (Cincinnati), Sonnenblick E (Boston), Tajuddin M (Aligarh), Wildenthal K (Houston)</td>
</tr>
<tr>
<td>1978 – 1980</td>
<td>Chazov E (Moscow), Ferrans V (Bethesda), Gudbjarnason S (Reykjavik), Hatt PY (Paris), Ito Y (Tokyo), Katz AM (Farmington), Kölbl F (Prague), Nayler W (Melbourne), Rona G (Montreal), Schaper J (Bad Nauheim), Schwartz A (Cincinnati), Smirnov V (Moscow), Tajuddin M (Aligarh), Wildenthal K (Houston), Wollenberger A (Berlin-Buch)</td>
</tr>
<tr>
<td>1980 – 1983</td>
<td>Chazov E (Moscow), Ferrans V (Bethesda), Hatt PY (Brevannes), Hearse D (London), Ito Y (Tokyo), Katz AM (Farmington), Kölbl F (Prague), Nayler W (Melbourne), Rona G (Montreal), Schaper J (Bad Nauheim), Schwartz A (Cincinnati), Smirnov V (Moscow), Tajuddin M (Aligarh), Wildenthal K (Dallas), Wollenberger A (Berlin-Buch)</td>
</tr>
<tr>
<td>1983 – 1986</td>
<td>Alpert NR (Burlington), Cingolani HE (La Plata), Das PK (Varanasi), Ebashi E (Tokyo), Ferrans V (Bethesda), Hatt PY (Brevannes), Hearse D (London), Ito Y (Tokyo), Katz AM (Farmington), Kölbl F (Prague), Onishi S (Osaka), Rona G (Montreal), Schaper J (Bad Nauheim), Smirnov V (Moscow), Szekeres L (Szeged)</td>
</tr>
</tbody>
</table>

**Table 3. Council Members of the International Society for Heart Research During 1986 to 1998.**

<table>
<thead>
<tr>
<th>Year</th>
<th>Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>1986 – 1989</td>
<td>Alpert NR (Burlington), Buja M (Dallas), Cingolani HE (La Plata), Das PK (Varanasi), Ebashi S (Okazaki), Ferrari R (Brescia), Hearse D (London), McNeill JH (Vancouver), Neely JR (Hershey), Onishi S (Osaka), Poole-Wilson P (London), Schaper J (Bad Nauheim), Schwartz K (Paris), Smirnov V (Moscow), Szekeres L (Szeged)</td>
</tr>
<tr>
<td>1989 – 1992</td>
<td>Alpert NR (Burlington), Anand IS (Chandigarh), Buja ML (Dallas), Chen SG (Beijing), Chien KR (San Diego), Cingolani HE (La Plata), Ebashi S (Okazaki), Ferrari R (Brescia), McNeill JH (Vancouver), Onishi S (Osaka), Reimer KA (Durham), Ruijgrok TJC (Utrecht), Saks VA (Moscow), Schwartz K (Paris), Szekeres L (Szeged), Zimmer HG (Leipzig)</td>
</tr>
<tr>
<td>1992 – 1995</td>
<td>Anand IS (Chandigarh), Buja ML (Dallas), Chen SG (Beijing), Chien KR (San Diego), Ferrari R (Brescia), Gavin JB (Auckland), Lakatta EG (Baltimore), McNeill JH (Vancouver), Ostadal B (Prague), Reimer KA (Durham), Levitsky DO (Moscow), Schwartz K (Paris), Singal PK (Winnipeg), Sperelakis NR (Cincinnati), Yellon DM (London), Zimmer HG (Leipzig)</td>
</tr>
<tr>
<td>1995 – 1998</td>
<td>Domench JR (Santiago), Downey JM (Mobile), Gavin JB (Auckland), Han C (Beijing), Haunso S (Copenhagen), Heusch G (Essen), Janse MJ (Essen), Lakatta EG (Baltimore), Levitsky DO (Moscow), Nagano M (Tokyo), Nair KG (Bombay), Ostadal B (Prague), Singal PK (Winnipeg), Sleazak J (Bratislava), Sperelakis NR (Cincinnati), Tada M (Osaka), Weber KT (Columbia), Yazaki Y (Tokyo), Yellon DM (London), Zimmer HG (Leipzig)</td>
</tr>
</tbody>
</table>

(50th Anniversary continued from page 4)
remembered fondly by the members of this organization. The major function of the Secretary General after 1973 was to coordinate the activities and affairs of different Sections and to help organize International Congresses. According to Dr Robert Jennings “The Secretary General of the Society is the most critical officer because most actions take place through this office. This individual is responsible for holding the Sections together and for keeping the ISHR operating between triennial Congresses” (HN&V 18(3), p 6). Profs James Caulfield, Wolfgang Kübler, Philip Poole-Willson and Roberto Ferrari served the Society as Treasurer with great distinction and integrity. Drs Lionel Opie and Thomas Ruigrok devoted considerable energy to promoting JMCC and Heart News and Views, respectively. In addition, several of the Founding Members, including Drs. George Rona, Otakar Poupa, Laszlo Szekeres (Szeged) and Bohuslav Ostadal (Fig. 5), played key roles in developing interests of the Study Group, particularly in Eastern Europe, and served as “Pillars of ISHR”. Thus it is evident that building ISHR into a highly successful organization was dependent upon the efforts of all its Officials and Council Members. In total, these energetic and high-profile leaders assured a great future of the ISHR into the next century.

Prof Naranjan S. Dhal
University of Manitoba
Institute of Cardiovascular Sciences
Max Rady College of Medicine
St Boniface Hospital
Albrechtsen Research Center
Winnipeg, Canada

APPLICATIONS FOR ECI TRAVEL BURSARIES FOR LAB VISITS AT THE 2019 ISHR WORLD CONGRESS

ISHR-International will sponsor three laboratory visit bursaries (US$1,000 each) for Early Career Investigators (ECIs) to undertake training in new techniques/methods at local Section institutes within the host region of the 2019 World Congress in Beijing (Jun 3-6, 2019). These bursaries provide an exciting opportunity to gain expertise and establish collaborative connections with another lab. Bursaries are specifically for subsidizing travel and accommodation costs related to visiting the nominated lab to train in a new technique. Lab visits should occur immediately before or after the Congress and the expected duration is at least one week.

Please visit the website (www.ishrworld.org/ECItraining) for information regarding eligibility criteria, potential host labs, and the application and selection process. The deadline for applications is Friday 21st December, 2018.

CALENDAR

- **December 7-8, 2018.** XXXV Annual Meeting of the Japanese Section. Tokyo, Japan.
  Inquiries: Hiroyuki Tsutui, htsutsui@cardiol.med.kyushu-u.ac.jp

- **June 3-6, 2019.** XXIII ISHR World Congress. Beijing, China.

- **August 8-11, 2019.** XLIII Annual Meeting of the Australasian Section (held jointly with the Cardiac Society of Australia and New Zealand). Adelaide, Australia.

- **May 26-29, 2020.** XXXVIII Annual Meeting of the North American Section. Denver, CO.
  Inquiries: Timothy McKinsey, timothy.mckinsey@ucdenver.edu

- **June 30-July 3, 2020.** XXXVI Annual Meeting of the European Section. Torino, Italy.
  Inquiries: Alessandra Ghigo, ghigo.alessandra@gmail.com
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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