In previous issues of the newsletter, Dr Naranjan Dhalla recounted the early history of the precursor of the ISHR, the International Study Group for Research in Cardiac Metabolism (Study Group) (HN&V 2018, 23(3)), and introduced the early leaders of the ISHR/Study Group (HN&V 2018, 23(2)). Here he explores the formation and early history of the Sections of the ISHR/Study Group, which comprise the society as we know it today.

European Section
In 1973, Prof Peter Harris agreed to serve as Secretary of the European Section (ES) and to set up the Secretariat at the Cardiothoracic Institute, University of London, England. Although the ES did not elect a President or Council Members to assist Dr. Harris,
several prominent individuals, including Drs. Pierre Hatt (Paris), Pierre Morat (Geneva), Frantisek Kölbl (Prague), Wolfgang Kühler (Düsseldorf) and Lionel Opie (Cape Town), extended their unqualified support for promoting cardiovascular activities in Europe. Dr. Opie has written a fascinating account of the development of the European Section of the Study Group (HN&V 2005, 13 (3)), noting that the Europeans started developing the ES in 1970 and held a few meetings to ensure its success; however, records at the Headquarters of the Study Group show that formation of the ES was approved by the general membership in 1973. Irrespective, the ES showed remarkable growth under the leadership of Dr. Harris (Secretary 1973-1980), who promoted successful meetings in Brussels (1975), Rotterdam (1977), Dijon (1979) and Bologna (1981). When Dr. Harris became President of ISHR (International) in 1980, Dr. Jutta Schaper (Max Planck Institute, Bad Nauheim, Germany), became Secretary of the ES. She worked tirelessly to further promote the profile of this Section and extended extra-ordinary cooperation to the American Section from 1980 to 1993. She took keen interest in the development of high-quality scientific programs for the ES meetings in Geneva (1984), Stockholm (1985), Reykjavik (1986), Budapest (1987), Oxford (1988), Rotterdam (1989), Glasgow (1990), London (1991), Heidelberg (1992) and Jerusalem (1993). From 1993-1997, Dr. Ketty Schwartz (Institut National de la Sante et de la Recherche Medicale (INSERM), Paris, France; Fig 1) served as Secretary of the ES. She was an outstanding scientist in the field of muscle molecular biology and genetics and served with great distinction. She appointed several Council Members, notably, Drs. M. Avkiran (England), E Carmeliet (Belgium), A. Henderson (England), G. Kessler-Icekson (Israel), B. Lewartowski (Poland), T. Ruigrok (Netherlands), M.C. Schaub (Switzerland), J. Slezak (Slovak Republic), A Waldenstrom (Sweden), and H.G. Zimmer (Germany). Several highly successful meetings were held during her tenure in Copenhagen (1994), Bologna (1996) and Versailles (1997) (Figs 2 and 3).

American Section
In 1973, there were about 300 members of the Study Group from the North American continent. The American Section (AS) of the Study Group was established in 1974 and all of its Officials and Council Members were required to be elected by the general membership. Drs. Richard Bing, Naranjan Dhalla and James Caulfield were elected to serve as President, Executive Secretary and Treasurer, respectively, from 1974 to 1976 (Table 1). Furthermore, 18 of the 30 individuals who were nominated were elected to serve on the Council for a 3-year term. Thereafter, all Officials and about one-third of the Council Members were elected every three years. Drs. Richard Bing, George Rona, Robert Jennings (Fig 4) and Howard Morgan played critical roles in the development of the AS. The Council elected Dr. Richard Bing to be the Honorary Life President of the AS in 1980. In addition to the Officials (1976-1998) listed in Table 1, several individuals including Drs. Henry Besch (Indianapolis), Colin Bloor (La Jolla), Victor Ferrens (Bethesda) Michael Hess (Richmond), Harry Fozzard (Chicago), Boris Korecky (Ottawa), Glenn Langer (Los Angeles), James Scheuer (New York), Arnold Schwartz (Cincinnati), John Solaro (Cincinnati), Michael Sole (Toronto), Nick Spereleksic (Charlottesville), John Spitzer (New Orleans) and Richard Walsh (Cincinnati) enthusiastically supported the development of the AS. Notably, Keith Reimer (Durham), Karl Weber (Columbia, MO), James Liedtke (Madison), William Weglicki (Omaha) and Norman Alpert (Fig 5) played key roles in developing the membership of this Section (there
were more than 650 members in 1990). Highly successful annual meetings of the AS were organized in Burlington, New Orleans, Hilton Head, Oklahoma City, Cincinnati, Columbia (MO), London (ON) and Winnipeg. Due to the efforts of Dr. William Weglicki, the Upjohn Award for Young Investigators, funded by the Upjohn Pharmaceutical Co, was established in 1984 presented at annual meetings for several years.

**Japanese Section**

While attending the International Congress in Quebec City in 1974, a Japanese delegation consisting of Drs. Yoshio Ito, Toyomi Sano, Shinjo Onishi and Makoto Nagano, discussed the proposal to promote the cardiovascular activities and interests of the Study Group in Japan. This discussion resulted in the establishment of the Japanese Section (JS) of the Study Group in 1974 in Tokyo with Drs. Tachio Kobayashi as President and Yoshio Ito as General Secretary. The news of the formation of the JS was well received in both Europe and the USA, and the 6th International Congress of the Study Group was held in Tokyo under the chairmanship of Dr. Tochio Kobayashi in 1976. Both Drs. Hideo Ueda (a high profile Professor of Medicine) and Satsuro Ebashi (a brilliant muscle pharmacologist) at the University of Tokyo had a great influence on cardiovascular activities in Japan. In view of their dedicated service and commitment to promoting the cardiovascular community, in 1977 Drs. Yoshio Ito and Makoto Nagano were invited to become President and General Secretary of the ISHR-Japanese Section, respectively. Drs. Ito and Nagano organized 9 scientific meetings of the JS in different cities and were also great hosts (Fig. 6). They invited several international guests to share their expertise and developed close relationships for collaborative research work during 1977-1991. Several prominent investigators, including Drs. Y. Yazaki, S. Mochizuki, S. Onishi, M. Endoh,
N. Takeda, N. Makino, H. Kawaguchi, T. Toyo-oka, H. Hayashi, S. Kurihara, N. Katakazza, S. Izumi, M. Hiroyaka, I. Imanaga and N. Yamazaki, helped in the development of the IS (Figs. 7 and 8). In 1992, Drs. Makoto Nagano and Yoshio Yazaki became leaders of the IS for several years, organizing scientific meetings throughout Japan. They brought a great deal of prestige to Japan by hosting a highly successful International Congress in Kobe under the chairmanship of Dr. Yoshio Ito in 1992.

**Indian Section**

In 1975, Dr. Mohamed Tajuddin, who was Dean of the Medical College in Aligarh, proposed that a full-fledged Section of the Study Group be established to promote cardiovascular activities in India. This request was approved by the Council, and the Indian Section (IS) of the Study Group was officially registered as a Non-profit Organization in India in 1976. Dr. Mohamed Tajuddin was appointed as President and Dr. Balraj Bhatia (New Delhi) became Secretary. Several prominent cardiovascular scientists, including Drs. R.B. Arora (New Delhi), S.S. Manchanda (New Delhi), G. Singh (New Delhi), P.K. Das (Varanasi) and P.L. Wahi (Chandigarh), supported the development of the IS. In 1976, the inaugural meeting of the Section in New Delhi (attended by about 150 people for two days) was hosted by Hakim Sahib Abdul Hameed (Hamidard Dawa Khana, Delhi). Later, this Section organized the 1978 International Congress of ISHR in New Delhi with excellent scientific and social programs. From 1983 to 1992, Dr. K.G. Nair (Bombay) and Onkar Tripathy (Lucknow) took charge of the IS as President and Secretary, respectively. Several scientific meetings were organized in Bombay, Chandigarh and Lucknow during this period. In order to make this Section more viable and stimulate the participation of young scientists, in 1992 Dr. Nirmal K. Ganguly (Chandigarh) was asked to take up the challenge as President, and Mrs. Brigitte Nagano with - From left to right: Jan Sležak, Pawan Singal and Bohuslav Ostadal. 

**Australasian Section**

With 5 Sections in place, the ISHR Council devoted its attention to promoting the interests of the Society in Southeast Asia and Australia. Although there were pockets of cardiovascular strength in Hong Kong, Singapore, Australia and New Zealand, there were political difficulties in developing a common theme for heart research in this region of the world. This challenge was entrusted to the Australasian Section of ISHR in 1978 with Dr. Winifred Nayler (Melbourne) as President. Several individuals, including Peter McLennan, J. Angus, M.G. Clark, M. Daly, J.B. Gavin, C. Gibbs, S. Humphrey, D. Kilpatrick, R. Taylor and D. Wilcken, played important roles in the development of the Australasian Section. Scientific meetings were held in various cities annually and this Section hosted a highly successful ISHR Congress in Melbourne in 1996. Despite extensive efforts during 1978 to 1989 to promote the interests of the Australasian Section, the membership of the Society in South Asian countries remained sparse.

**Soviet Section**

In 1975, Dr. Alex Chernukh (Vice President of the USSR Academy of Medical Sciences, Moscow), who came to receive the Purkinje Medal of Medical Research in Brno, Czechoslovakia, suggested the possibility of linking the cardiovascular community in the Soviet Union with the Study Group. This led to discussions with Dr. E. I. Chazov, Director General of the Cardiology Research Centre in Moscow, who enthusiastically supported formation of an organization to promote heart research in the Soviet Union. Accordingly, the Soviet Section of the Study Group was approved by the Council in 1976 with Drs. E. Chazov and Vladimir Smirnov (also of the Cardiology Research Centre, Moscow) to serve as President and Vice President, respectively. Dr. L.V. Rosenshtaukh, who is a well known electrophysiologist, was appointed as Secretary. Several young scientists, including Drs. V.A. Saks, D.O. Levitsky and T.S. Levchanko (all from Moscow), were asked to organize a relationship with all Biomedical Institutes in major Soviet cities such as Leningrad, Rostov and Tashkent. Several prominent scientists, including Dr. F.Z. Meerson from the Institute of General Pathology and Pathologic Physiology, Moscow and Dr. P.P. Rumyantsev from the Institute of Cytology, Leningrad, played an active role in the development of this Section. In addition to hosting a high-profile International Congress of ISHR in Moscow in 1980, this Section organized more than 10 multidisciplinary scientific meetings in Tashkent, Yerevan, Sukhumi and Baku between 1976 and 1992.

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(continued on page 13)
I’d like to begin my first letter to the ISHR by expressing my sincerest thanks to my predecessors who shaped ISHR and left it in a wonderful state, providing a model on which to orient. Metin Avkiran, our outgoing Past-President, served the ISHR not only as President from 2013-2016, but as Secretary-General from 2004-2010 with wisdom, foresight and elegance. We also owe a big thanks to Elizabeth Murphy for her dedication as President (2016-2019), for her life-time engagement in ISHR and for all she did to make ISHR better organized: her support of the Early Career (ECIs) and Middle Career (MCIs) Investigators and the Sections and her facilitation of communication between ISHR members and leadership. I would like to express my sincere thanks to John Solaro, the outgoing Editor-in-Chief of the Journal of Molecular and Cellular Cardiology (2016-2019), the journal of the ISHR. John steered the journal in a smooth manner and succeeded in keeping it one of the leading journals in the field. I thank Lea Delbridge, our Secretary-General (since 2016), for her great work on all the duties which come with the office including the successful organization of the ISHR World Congress in Beijing. I am happy that she will continue in this office for the upcoming term. The World Congress wouldn’t be possible without the financial support from ISHR International. I would also like to thank Åsa Gustafsson (Treasurer) and Charles Steenbergen and Robert Jennings (Financial Committee) for their smooth and skillful handling of our funds and investments whose profits contributed significantly to the income of the society for the past decade. And, of course, a big thanks goes to Leslie Lobaugh, our ISHR Executive Secretary, for being the heart and the memory of ISHR, without whom nothing would work smoothly. This is also the place to thank Yi Zhu, Ming Xu and Huangtian Yang for their fantastic work as local organizers of the Beijing Congress and great hospitality. They made the ISHR World Congress 2019 an unforgettable event and demonstrated yet again that ISHR is in a strong and vibrant state! This is to the credit of all of you and to the very positive leadership over the past decades. I will try to follow in their footsteps.

I see four major goals for my term.

- We are living in times of political change, which seemed unlikely to ever occur again only a few years ago. International cooperation, open borders, equality and participation of minorities, the governing of law and the scientific underpinning of political decision-making all seem threatened worldwide with immediate consequences for science. ISHR is not the place to change this, but we should live up to these values, remain purely science-driven in our decision-making, promote the best science and draw a clear line between facts and beliefs. The greatest defining value of ISHR is our truly international scope, and I will try to integrate even more people, scientific groups and sections into our society.

- We are also living in a changing publication landscape. The traditional business model of publishers is likely to end in the foreseeable future. Public institutions that pay for the research leading to publications increasingly refuse to pay publishers for having access to their own publications. While this seems only fair, it has immediate impact on ISHR and many other scientific societies which obtain much of their regular income from (a small) share of the profit margin of their society journal, in our case the JMCC. Thus, I will work together with Rong Tian, our newly appointed Editor of the JMCC, and the Publication Committee (Elizabeth Murphy, David Eisner, Rui-Ping Xiao, Howard Rockman) to find a new model, which is fit for the future, and I ask everyone with good ideas and experience in other journals to participate.

- Finally, we need to take a fresh look at the way we organize and finance the ISHR World Congresses, our prime product. At present, ISHR International sponsors the Congress with the largest fraction of its income. And the local organizers not only have to organize all the details of registration, abstract organization and social events, but have the burden of the financial risks. Most other societies generate income from their congresses and I do not see why we shouldn’t. We will work with a professional organizer for the upcoming ISHR World Congress in Berlin 2022 and hope that this will turn out to be a successful model for the future.

- ISHR is dependent upon strong Sections. We need to increase membership and therefore the life of the Sections is crucial. I would like to foster communication with the Sections and discuss ways to even better represent the Sections during the World Congress.
REPORT ON THE XXXV JAPANESE SECTION MEETING

(DECEMBER 7-8, 2018; TOKYO, JAPAN)

The 35th annual meeting of the ISHR-Japanese Section (ISHR-JPN) was held in Tokyo on December 7-8, 2018. As in the past 3 years, it was organized as a part of Cardiovascular and Metabolic Week (CVMW). In CVMW2018, the ISHR-JPN collaborated with the Cardiac Biopsy Conference (CABIC), organized by Prof Shinichi Nunoda from Tokyo Women’s Medical University Graduate School of Medicine, the Japanese Vascular Biology and Medicine Organization (JVBMO), organized by Prof Nobuyuki Takakura from Osaka University, and the Japan Society for Adaptation Medicine (JSAM), organized by Dr Masami Nemoto from the Jikei University School of Medicine. A total of 457 meeting delegates participated in many enthusiastic discussions in the very successful CVMW2018.

This collaborative style of scientific meetings was started in 2015. CVMW2018 consisted of 4 joint symposia, 5 special lecture sessions, 9 luncheon seminars, and 2 evening seminars. As always, ISHR2018 had its own sessions; 2 symposia, 3 oral sessions, 3 poster sessions, a Young Investigator Award (YIA) competition, and the ISHR Keith Reimer Distinguished Lecture.

On Dec. 7, the meeting started with the joint symposium entitled “The cutting-edge of basic research on cardiomyopathy”, chaired by Dr Yasushi Sakata. In this symposium, Drs Sachio Morimoto (International University of Health and Welfare), Takuro Arimura (Kagoshima University), Manabu Taneike (Osaka University), and Seitaro Nomura (Tokyo University) gave exciting talks. The role of myofilament Ca$^{2+}$ sensitivity in genetic cardiomyopathy, regulatory mechanism of myosin light chain phosphatase, the role of degradation system, and multi-omics in cardiomyopathy were discussed. In the following special lecture, Dr Junichi Sadoshima (Rutgers New Jersey Medical School, USA) delivered an excellent lecture entitled “Mitophagy is essential for maintaining cardiac function during high fat diet-induced diabetic cardiomyopathy”. He demonstrated novel findings of the role of mitophagy and its regulatory mechanism in diabetic cardiomyopathy. In the afternoon, the YIA Competition was chaired by Drs Toshihisa Anzai and Yasuchika Takeishi. Six finalists gave excellent presentations.

Steven Houser responding to a question after his lecture entitled “Cardiac injury and repair”.

Four presidents of CVMW 2018; (left to right) Hiroyuki Tsutsui, Shinichi Nunoda, Nobuyuki Takakura, and Masami Nemoto.
and Dr Yu Nakagama (Tokyo University) won the Best YIA 2018 for his study entitled “Role of lactate in fueling the heart”. The ISHR symposium entitled “A novel target in mitochondrial science and cardiovascular disease” was chaired by Drs Masafumi Kitakaze and Yoshihiko Saito. Topics regarding mitochondrial dynamics in aging, mitochondrial drug delivery system, mitochondrial iron overload in aging-related cardiac dysfunction, and modulation of cytochrome c oxidation were vigorously discussed.

On Dec. 8, the ISHR symposium entitled “Regulation of redox and inflammation and cardiovascular disease” was chaired by Drs Toyoaki Murohara and Koichi Node. In this symposium, mitochondrial metabolic regulation, dynamic cardiac homeostasis by immune-cells, mitochondrial redox regulation, role of aging signaling in the failing heart, and the role of myoocyte in cardiac ischemic injury were discussed. Dr. Steven Houser (Lewis Katz School of Medicine at Temple University, USA), who has contributed greatly to the advancement and development of the field of molecular and cellular biology in cardiovascular disease, received the 2018 Keith Reimer Distinguished Award. He delivered the Keith Reimer Distinguished Lecture 2018 entitled “Cardiac injury and repair”, which was the special feature of this year’s annual meeting. He reviewed recent data suggesting that cardiac injury can be reduced by treatment with a novel cell derived from the bone stroma and nicely presented his novel findings on the regulation of fibrosis by immunomodulation. A Featured Research Session (FRS) was chaired by Drs Hiroki Aoki and Hiroshi Akazawa. In this session, hematopoietic stem cells and cardiac function, gamma-aminobutyric acid (GABA) signaling in brown adipose tissues, MicroRNA-34a and aortic valve calcification, HIF-1α-p53 pathway in cardiac rupture, and the role of MEF2c in direct cardiac reprogramming were discussed. The program on the final day was concluded with the ISHR session entitled “Inflammation and cardiac regeneration”. Drs Tetsuya Matoba and Katsuhito Fujiu chaired this session and 5 speakers discussed the role of matrix stiffness in cardiac reprogramming, HMGB1 and mesenchymal stem cell mobilization, a new type of organ specific arteritis, the role brain perivascular macrophages in sympathetic activation, and the regulatory mechanism of cardiomyocyte maturation.

A total of 55 presentations were given in the 35th annual meeting of ISHR-JPN. Active and fruitful discussions were stimulated by all presentations. We believe that the participants explored scientific fields outside of their own specialties and the interaction between participants resulted in new insights in this collaborative style of scientific meetings. We thank all of the participants who supported this meeting and look forward to the 36th annual meeting of ISHR-JPN in 2019.

Shouji Matsushima
Hiroyuki Tsutsui
Department of Cardiovascular Medicine, Faculty of Medical Sciences, Kyushu University
David Eisner has been at The University of Manchester since 1999 and has held the British Heart Foundation Chair of Cardiac Physiology since 2000. His undergraduate degree was obtained at the University of Cambridge, and he did graduate work at Oxford with Denis Noble, graduating in 1979. He was on the Faculty at University College London (1980-90) and the University of Liverpool (1990-1999) before moving to Manchester.

Dr Eisner’s research has focused on the basic mechanisms regulating intracellular sodium and calcium concentrations. He demonstrated the steep dependence of contraction on intracellular sodium concentration and thence the role of sodium calcium exchange (NCX) in linking Na regulation to contraction. After developing a method to measure the Ca content of the sarcoplasmic reticulum (SR), he characterized the mechanisms responsible for the normal, stable control of SR Ca content. This process, termed “autoregulation” results from the fact that changes in the amplitude of the systolic Ca transient modulate fluxes of calcium across the sarcolemma. This mechanism explains many, previously perplexing, aspects of calcium regulation including the fact that changes in the properties of the SR Ca release channel (Ryanodine Receptor) have no effect in the steady state on the amplitude of the calcium transient due to changes of SR Ca content. Instabilities in this regulation may be responsible for disorders such as pulsus alternans. Most generally, it emphasises that the cell is in calcium flux balance where calcium influx and efflux must be equal, and this has to be taken into consideration when analysing calcium fluxes. He has studied the mechanisms responsible for the generation of arrhythmogenic Ca waves in the heart and shown that these occur when a threshold level of SR Ca content is exceeded. These waves can be abolished by drugs such as local anaesthetics which decrease RyR opening, a finding which has been developed to therapeutic effect by others. In subsequent work he investigated how a combination of RyR leak and maintained SR Ca content can result in Ca waves and arrhythmias in inherited arrhythmia conditions. His recent work has concentrated on the regulation of diastolic calcium suggesting that many of the changes of diastolic calcium can also be related to the need for the cell to maintain flux balance.

Dr Eisner has been awarded a Wellcome Trust Senior Lectureship, The Wellcome Trust Physiology Prize and the GL Brown Lecture of The Physiological Society as well as the Keith Reimer Lecture of the ISHR, the Carmeliet-Coraboeuf-Weidmann Lecture of the Working Group in Cardiac Cellular Electrophysiology of the European Society of Cardiology, the Bohuslav Ostadal Lecture of the International Academy of Cardiovascular Sciences, and the Annual Review Lecture of The Physiological Society.
R. JOHN SOLARO, PH.D.

Sarcomeres as Hubs of Signaling in the Heart

Winner of the 2017 Peter Harris Distinguished Scientist Award

(JUNE, 2017: NEW ORLEANS, LA, USA)

John Solaro served as Head of the Department of Physiology and Biophysics at University of Illinois at Chicago (UIC) from 1988 to 2015. He moved to UIC from the University of Cincinnati College Of Medicine. He trained for the PhD in the Department of Physiology at University of Pittsburgh School of Medicine and in 1971 immediately moved on to a faculty position at the Medical College of Virginia. His undergraduate degree is in Pharmacy from the University of Cincinnati. In 1975-76 he was a Fellow of the American and British Heart Associations and worked with Professor S. V. Perry in Birmingham, England. In 1987 he was a Fogarty Fellow working with David Allen at University College London. Solaro was appointed Distinguished University Professor in the University of Illinois System in 1998. He is currently director and founder of the UIC Center for Cardiovascular Research. At UIC, Solaro received the University Scholar Award, the Faculty of the Year Award, the Mentor of the Year Award, and the Distinguished Service Award. Solaro was a member of the NIH Physiology study section and is past Chair of the Skeletal Muscle and Exercise Physiology section. He has served as Associate Editor and has been elected as Editor-in-Chief of the Journal of Molecular and Cellular Cardiology beginning in 2017. He is past Associate Editor of the American Journal of Physiology (Heart).

He has also served on the editorial boards of Circulation Research, the Journal of Clinical Investigation, and the Journal of Biological Chemistry.

In his PhD studies with Dr. F. Norman Briggs, Dr. Solaro developed a method for the study of myofilament proteins using “detergent skinning” with Triton X-100. Since its publication in 1971, this method is employed worldwide to investigate sarcomeric function without interference of membrane controlled processes. Using this approach in his PhD work, Dr. Solaro was able to establish the Ca requirements for activation of myofilaments thereby establishing the significance of the relative roles of the SR and mitochondria as sources of Ca. Later work with Dr. Jim Potter established that activation of cardiac muscle occurred with binding of Ca to a single site on troponin C. Using the data in an analog computer model of Ca-fluxes in the heart cell, it became apparent that modulation of Ca control of cardiac myofilaments could be a more significant regulator of cardiac dynamics than appreciated at the time. This idea developed strongly with evidence that cardiac troponin I (TnI) could be phosphorylated in vitro by PKA, which stimulated Dr. Solaro to move to England in 1975 and work with S.V Perry and colleagues, who had identified the sites and developed affinity methods for isolation of TnI. The year of work resulted in a paper published in Nature reporting the phosphorylation of cardiac TnI at its unique N-terminus in the beating heart with the induction of a desensitization of myofilaments to Ca. The data provided seminal information on the now accepted idea that myofilament response to Ca is involved in adrenergic control of cardiac dynamics. A series of papers employing Ca-binding, FRET, and solution NMR further clarified the mechanism of the effect of the phosphorylation. In collaboration with Dr. Litsa Kranias, Solaro published another paper in Nature reporting that both phospholamban and TnI are phosphorylated in the beating heart. These data led the way to investigations of the role of other sarcomeric protein phosphorylations and other post-translational modifications in control of the heartbeat. With the knowledge that neonatal hearts are highly resistant to acidotic stress together with the discovery that the neonatal isoform of TnI is slow skeletal TnI, Solaro returned to England in 1987 as a Fogarty Fellow working with Drs. David Allen and Jon Kentish. The studies using the aequorin technique to measure force and Ca showed that indeed force fell in the heart preparations with no change in systolic Ca and the fall in tension was blunted significantly in the neonatal heart. Later studies employing an adult mouse (continued on page 15)
This new committee recently met in Beijing China during the XXIII ISHR World Congress to begin organizing activities and events to promote networking and collaboration and to enhance and support the career advancement of this unique population of scientists (defined as individuals 8-15 years post terminal degree and those who have not yet reached the rank of full professor).

The ISHR is pleased to announce one of its newest initiatives that just rolled out this year – the creation of a Mid-Career Investigator (MCI) Committee. This international committee is composed of 2 representatives from each of the 7 ISHR sections (listed below and has been given the charge to promote the career development and advancement of this unique population of scientists (defined as individuals 8-15 years post terminal degree and those who have not yet reached the rank of full professor).

The 2019 Middle Career Investigator (MCI) committee: Front row: Sarah Franklin (NAS), Maria Kontaritis (Faculty Advisor for MCI-NAS), Uma Nahar (IND), Han Xiao (CHI), Xue-yan Jiang (CHI); Back row: Kenji Onoue (JPN), Mikito Takefuji (JPN), Davor Pavlovic (EUR), James Bell (AUS), Raj Namakkal-Soorappan (NAS), Alejandro Orlowski (LAT), Jeff Erickson (AUS); Not pictured: Sivasubramanianarah Ramakrishnan (IND), Nina Kaludercic (EUR), Zully Pedrozo (LAT)

This new committee recently met in Beijing China during the XXIII ISHR World Congress to begin organizing activities and events to promote networking and collaboration and to enhance and support the career advancement of MCIs. Over 50 MCI attendees participated in a lively discussion panel and the social event that followed. Among the topics discussed were the need for creation of the MCI community, support for career development, and how the ISHR can help with some of the challenges faced by the members at this career stage.

More updates about the exciting work of this new committee will be shared later in the coming year but right now we are excited to announce this initiative and encourage Mid-Career Investigators to get involved and participate in these efforts. Although this committee is focused on investigators at a specific career stage we encourage all scientists to support this initiative. If you fall into the MCI demographic feel free to reach out to your section representatives – they are eager to hear from you. In addition, to support this initiative and get all the updates, you can follow them on Facebook (https://www.facebook.com/groups/2312750082315181/), LinkedIn (https://www.linkedin.com/groups/12210329/) and the ISHR International MCI page (https://ishrworld.org/group/MCI).

We hope you will join us and participate in this unique community with your fellow mid-career cardiovascular researchers!
2016 DISTINGUISHED LECTURE AWARD WINNERS

Rodolphe Fischmeister, Ph.D.
Winner of the 2016 ISHR Keith Reimer Distinguished Lecture Award
“Cyclic nucleotide microdomains & phosphodiesterases: Small sinks with smart drains can do a lot!”

Beginning in 1992, Dr Fischmeister directed a laboratory at the Faculty of Pharmacy of the University Paris-Sud. In 2015 he stepped down as head of the lab and is now acting as deputy director. In 2010, Dr Fischmeister founded an interdisciplinary laboratory called “The Laboratory of Excellence in Research on Medication and Innovative Therapeutics” (LERMIT). The main focus of his research is the neurohumoral regulation of cardiac function and the adaptation and remodeling processes taking place under pathophysiological conditions such as hypertrophy and heart failure.

Edward Lakatta, M.D.
Winner of the 2016 ISHR Janice Pfeffer Distinguished Lecture Award
“The heartbreak of aging viewed from the angiotensin II-remodeled arterial wall”

Dr. Lakatta founded and directs the Laboratory of Cardiovascular Science in the Intramural Research Program of the National Institute on Aging, National Institutes of Health. He also is an adjunct Professor in the Department of Physiology, University of Maryland School of Medicine, and the Cardiology Division, Johns Hopkins School of Medicine. Dr. Lakatta has made a sustained 40-plus-year commitment to a broad-based research career. Areas of interest in his research program include mechanisms for age associated cardiovascular changes, the interaction of the aging cardiovascular system with chronic disease states, excitation-contraction coupling, pacemaker activity, cardiac/vascular cell survival, and the potential/limitations of new therapeutic approaches to aging and disease states.

Thomas Eschenhagen, M.D.
Winner of the 2016 ISHR President’s Distinguished Lecture Award
“Modelling heart disease in the dish – chances and challenges”

Dr Thomas Eschenhagen is Professor of Pharmacology and serves as Director of the Department of Experimental Pharmacology and Toxicology at the University Medical Center Hamburg Eppendorf (UKE), Germany. Since 2011, he is coordinator and speaker of the German Center of Cardiovascular Research, and is a member of the DFG Senate’s Commission for Collaborative Research Centres since 2012. Dr Eschenhagen has concentrated his research efforts on understanding molecular mechanisms of heart failure with a focus on β-adrenergic signaling, its adaptation in heart failure and consequences on contractile function. He is probably best known for his pioneering work in engineered heart tissue (EHT) as an improved in vitro model and as a contractile heart muscle patch for cardiac repair.
RONG TIAN, MD, PhD
NAVIGATING THE METABOLIC MAZE: DO WE SEE THE LIGHT?
WINNER OF THE 2017 RESEARCH ACHIEVEMENT AWARD
(MAY, 2017: NEW ORLEANS, LA, USA)

Rong Tian was born in Chengdu, China. She obtained her MD from the West China University of Medical Sciences in 1986 and her PhD in Pharmacology in 1992 from Aarhus University in Denmark. After a short period of research in Germany, she went to Brigham and Women’s Hospital and Harvard Medical School for her postdoctoral training with Joanne Ingwall on in vivo NMR spectroscopy and bioenergetics of the heart. She stayed on as faculty and rose through the ranks at Harvard Medical School until 2009 when she was recruited by the University of Washington to establish a multidisciplinary center on mitochondria and metabolism. She is currently professor and center director at the UW School of Medicine in Seattle.

Dr. Tian’s research program focuses on myocardial metabolism and energetics. Her science is prominent in three cutting edge and inter-related areas: bioenergetics, metabolism and mitochondrial biology. In the past twenty years, her laboratory has made seminal contributions to the field by combining the multi-nuclear NMR spectroscopy of genetically engineered mouse models with the powerful technology of genomics, proteomics and metabolomics. Dr. Tian’s contributions to cardiac substrate metabolism, AMP-activated protein kinase (AMPK) signaling cascade and mitochondrial function have challenged the dogma and have brought vitality to a classic field. Her studies address important clinical problems as heart failure becomes a predominant diagnosis in our aging and obese population, and her discoveries are recognized as translational “game changers” in cardiovascular medicine.

At the turn of the century, provocative studies by the Tian laboratory demonstrated that mice with increased glucose transport and utilization in the heart not only did not suffer from “glucose toxicity” but also had increased tolerance to chronic pressure overload accompanied by delayed transition to heart failure. Her subsequent study on the regulation of cardiac metabolism by substrate availability has revealed a critical role of metabolic flexibility for normal cardiac function and has shed new light on the pathogenesis of cardiac glucose- and lipotoxicity, an emerging focus for the field of cardiovascular and metabolic disorders.

More recent work from her laboratory by targeting the acetyl-CoA carboxylase 2 (ACC2) has demonstrated the significance of sustaining fatty acid oxidation in the failing hearts, which was initially controversial but quickly proven to be highly stimulating for the field. Her work continues to be innovative and addresses the biological role of substrates, such as glucose, fatty acids and amino acids metabolism in the control of growth signaling and stress responses of the heart. Dr. Tian’s work on metabolic signaling has identified the AMPK pathway as an intermediary linking impaired energetics and metabolic remodeling in the hypertrophied myocardium. The Tian laboratory has also uncovered mechanisms underlying the human cardiomyopathy caused by point mutations of the gamma2 subunit of AMPK (encoded by Prkag2). She is recognized as the world expert in the pathogenesis of PRKAG2 cardiomyopathy. Dr. Tian’s recent effort using genetic mouse models of defective mitochondrial function as a discovery tool has identified mitochondrial protein hyperacetylation as a mechanism for increased cardiac susceptibility to stresses. Subsequent work in heart failure animal models and patients has revealed molecular mechanisms linking NAD+-dependent protein hyperacetylation and heart failure progression, suggesting that NAD+/NADH ratio is a viable therapeutic target for mitochondrial dysfunction and heart failure.

Dr. Tian is an avid volunteer for the research community. She is the incoming Editor in Chief for the Journal of Molecular and Cellular and has served Circulation, Circulation Research and PLOS Biology as consulting editor and section editor. She is the Established Investigator of the American Heart Association, recipient of the Research Achievement Award from the AHA Basic Science Council, and the Bernard and Joan Marshall Distinguished Investigator Lecturer of the British Society for CV Research.
East European Subsection

During the 1970s, it became evident that it was rather difficult for cardiovascular investigators from the Eastern European countries to participate in the Study Group/ISHR Congresses and even the European Scientific Meetings. This problem was resolved in 1981 by setting up the East European Subsection under the leadership of Secretary Dr. Laszlo Szekeres from Szeged, Hungary. Drs. Otakar Poupa, Bohuslav Ostadal, Karol Siska, Frank Köbel, Jan Slezak, Margratte Fedelesova, Attila Ziegelhöffer and A. Vasku (all from Czechoslovakia), Leonia Will-Shahab, E.G. Krause and W. Schulze (from East Germany) and B. Lewartowski (Poland) helped in the development of membership from this region. The first meeting of the section was held in Berlin-Buch (1982) under the chairmanship of Dr. L. Will-Shahab, and thereafter several high-quality scientific meetings were held in Hungary and Czechoslovakia in association with other medical societies.

Latin American Section

In 1978, it was initially decided to promote membership from the South American countries within the ISHR – American Section. In fact, Dr. Horacio Cingolani, a famous cardiac physiologist from La Plata, Argentina, agreed to help and was invited to serve on the Council of the AS during the Presidency of Howard Morgan (1979-1982). Several prominent cardiovascular scientists, including Ricardo Gelpi (Buenos Aires) and Raul Domenech (Santiago), and other clinical cardiologists from Brazil, Argentina, Peru, Chile, Colombia and Uruguay also showed willingness to develop the membership. However, at an International Symposium on Calcium Antagonists in Buenos Aires in 1980, and at the 8th Peruvian Congress on Cardiology in Trujillo in 1981, several members felt that it would be prudent to organize an independent Section of ISHR for the development of cardiovascular activities in South America. Accordingly, during the 1983 International Congress in London the ISHR Council approved the proposal to establish the Latin American Section in Argentina with Dr. Horacio Cingolani (La Plata) as President and Alicia Mattiazzii (La Plata) as Secretary. Several highly respected researchers, including Drs. J.C. Fasciolo, A.C. Taquini, and M. Rosenbaum, agreed to help as Advisors whereas others such as Dr. J. Milei, G.J. Rinaldi, A.O. Grassi, J.E. Bruees, R. Pichal and L. Sterin Borda extended their enthusiastic support. In addition to organizing several successful meetings in Buenos Aires, La Plata and Rosario during 1984-1991, the Latin American Section organized a high-profile International Symposium on Myocardial Hypertrophy and Failure in Mar del Plata in 1992 with two satellite meetings, one in La Plata and the other in Buenos Aires. Furthermore, the Latin American Section organized several joint meetings with other societies such as the XV Inter-American Congress of Cardiology in Santiago, Chile (1995), 3rd Academic Brazilian Congress on Cardiology and Cardiovascular Surgery in Belo Horizonte (1996) and the First Congresso de Cardiologia del Mercosur in Montevideo, Uruguay (1996). The scientific and social programs organized by Dr. Ricardo Gelpi at the International Symposium on Ischemia-reperfusion in Buenos Aires (1997) were praiseworthy.

Chinese Section

During his Presidency (1980-1983), Professor Peter Harris took a great deal of interest in promoting ISHR in China. However, it was a most challenging task at that time as special permission from government officials was required even to promote membership. After a great deal of difficulty, Peking University permitted Dr. S.G. Chen, a very enthusiastic cardiovascular physiologist, to come to the University of Manitoba as a Visiting Professor for discussions and assessment. Upon his return, Naranjan Dhalla was invited to visit Beijing to explain the mission of ISHR and have discussions with Prof. Chide Han (Vice President, Beijing Medical University) about promoting cardiovascular activities in China. Thereafter, there was a visit by both Drs. Peter Harris and Naranjan Dhalla to different Cardiovascular Centers in various Chinese cities including Beijing, Shanghai, Xian and Harbin and a reciprocal visit by Profs. X. Wang (Xian University) and P. Rong (Shanghai, Medical University) for more discussions in Canada. These events led to a proposal for developing the ISHR Chinese Section, which was approved by the Council with Drs. Chide Han as President and S.G. Chen as Secretary. The establishment of this Section in 1984 received enthusiastic support not only from the Chinese cardiovascular community but also from several prominent individuals associated with ISHR. Consequently, Drs. Howard Morgan, Robert Jennings, Lionel Opie, Peter Harris, Norman Alpert, Yoshio Ito and Naranjan Dhalla were invited to China in 1986 for symposia talks in Beijing and Xian. The Chinese Section held many annual meetings in different cities including Shanghai, Beijing and Chande.

ISHR in 2019:

At present, the ISHR is made up of 7 international Sections (Australasian, Chinese, European [which includes the Israeli Subsection established in 1984]; the history of this subsection will be reported in a future issue of the newsletter], Indian, Japanese, Latin American, and North American). All members are united under the umbrella of ISHR-International by the common mission of the society to “promote the discovery and dissemination of knowledge in the cardiovascular sciences” and the collegial interaction between the various Sections. We look back with gratitude to those members who envisioned this unique collaboration of cardiovascular researchers, and we look forward to the next 50 years of ISHR.

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ECIs of ISHR BLOG
https://eciofishr.wordpress.com

Stay up to date with early career investigators' recent publications, in-depth perspectives and interviews, and latest research techniques.

Interested in contributing? Become a writer - gain experience in scientific writing and cement your professional voice.
ISHR is a great society – we need your help to make it even better. We have a very strong and enthusiastic Council and Executive Committee (Exec Cmt) I am privileged to work with. The Exec Cmt is composed of me (President), Elizabeth Murphy (Past-President), Yoshi Saito (President-Elect), Lea Delbridge (Secretary-General), Åsa Gustafsson (Treasurer), Rong Tian (JMCC Editor) and one At-large member to be elected. And I am also very grateful for the active work of the ECI Committee chaired by Kate Weeks and Chen Gao as well as the newly formed Mid-Career Investigator Committee and its energetic founding chair, Davor Pavlovic.

Please get involved and let us know your ideas for improving ISHR. You will get an e-mail soon with a link to a survey on the World Congress in Beijing. We need your feedback, so please participate. Finally, after the Congress is before the Congress. So let me remind you of the upcoming ISHR World Congress in Berlin, Germany, in 2022! Please spread the word!

Thomas Eschenhagen, MD
President ISHR

expressing ssTnI in heart demonstrated a protective effect against a variety of stresses associated with the induction of sensitization to Ca and metabolic remodeling. In 1979, working together with Drs. Caspar Ruegg and Joachim Herzig in Germany the idea developed regarding the possibility of developing drugs directly enhancing myofilament response to Ca. A 1982 paper in Circulation Research with Dr. Ruegg is a seminal paper supporting this idea. Since that time several drugs have made it to the clinic, and development of sarcomere activators and inhibitors continues to be pursued in biotech and pharma. Solaro’s work was instrumental in emphasizing the role of sarcomeres not only as force and shortening machines, but as hubs of cell signaling. Modifications in Z-disk proteins provided evidence in support of this now generally accepted concept. The idea that myofilament length and strain provide a source of mechano-transduction is a dominant theme in the laboratory with a focus is on the integration of signaling and signal transduction at the level of cardiac sarcomeres. Linkage of common cardiomyopathies to mutations in sarcomere proteins provided a strong underpinning for the further investigation of how a specific change at the level of the sarcomeres can induce adaptive and maladaptive cardiac remodeling. Current translational studies together with Drs. Pieter deTombe, Brenda Russell, and Beata Wolska, focus on prevention and reversal of familial cardiomyopathies by therapeutic approaches involving modification of sarcomere mechanosignaling via sphingolipid signaling, biased ligands at the AT1R, and by agents directly affecting sarcomere activation and deactivation. Dr. Solaro has published 380 peer reviewed papers, and his work has been continually funded by the National Institutes of Health since 1977.
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