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THE NEWS BULLETIN OF THE INTERNATIONAL SOCIETY FOR HEART RESEARCH

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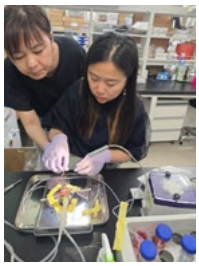

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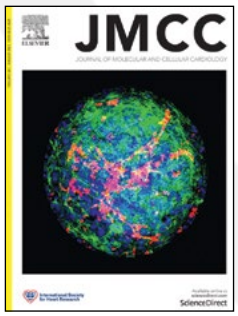

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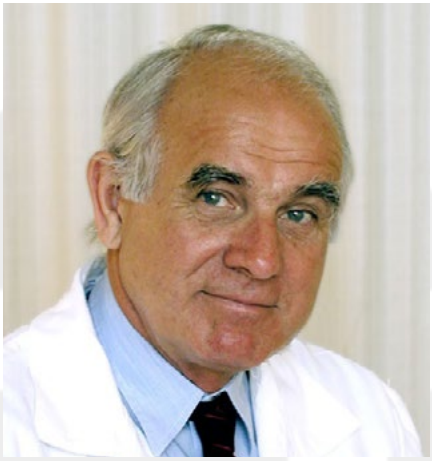
THE HEART OF THE MATTER

MY 60-YEAR CAREER IN CARDIOVASCULAR RESEARCH

The beginning of scientific life, 1963 - 1968



Professor Bohuslav Ošťádal

I was born in Zlin, former Czechoslovakia, January 28, 1940. My university education started in 1957 at the Faculty of Pediatric Medicine of Charles University in Prague where I graduated in 1963. My professional life was fundamentally influenced by outstanding scientific and human personalities. Already during my university studies, Prof. Otakar Poupa, the prominent Czech researcher in experimental cardiology, offered me a volunteer position on his team, and after my graduation as an MD I became a PhD student under his supervision. This exceptional scientist, charismatic teacher, renaissance man in the true sense of this word, founded the cardiology laboratory in the Institute of Physiology of the then Czechoslovak Academy of Sciences. This laboratory worked closely with the Department of Pathological Physiology of the Faculty of Pediatrics (today the Second Faculty of Medicine of Charles University), of which Poupa was also the head. In a short period of time, he managed to create a very unique system of cooperation between the Academy of Sciences and the Faculty of Medicine, both in the field of experimental cardiology and in teaching medical students. He developed broad-based research on the phylogenetic and ontogenetic development of heart muscle, with special attention to the needs of clinical cardiology, particularly pediatric cardiology. Since the very beginning of my scientific career, the main focus of my research has been the development of heart structure and function under normal and pathological conditions. This type of research

(continued on page 2)

My teacher, Prof. Otakar Poupa

would be unthinkable without the advice and help of my second important teacher, advisor and finally very close friend, Dr. Zdenek Rychter, the innovative Czech experimental cardioembryologist. His original studies on experimental morphology of the aortic arches during the heart loop in chick embryos were considered to be at the highest level of world cardiac research. A close cooperation of experimental and clinical cardiologists is essential for developmental cardiology; therefore, I was very fortunate that my third important mentor was the outstanding pediatric cardiologist, founder of the Czech Center of the Pediatric Cardiology, Prof. Milan Samanek. He focused my interest on clinical developmental cardiology, particularly on the comparison of pathophysiology and metabolism of hypoxemic and normoxemic congenital heart defects.

The scientific orientation of Poupa's laboratories attracted many young adepts of science and became the basis of the Prague School of Adaptive and Developmental Cardiology, successfully continuing the Czech tradition of evolutionary medicine. The success of Poupa's Prague School soon crossed the borders of the country. In 1964, during the European Congress of Cardiology, he co-authored the idea (along with the Americans Bing and Bajusz) to create an international scientific society that would bring together experimental cardiologists from all over the world. That idea succeeded a few years later with foundation of the International Study Group for Research in Cardiac Metabolism (now International Society for Heart Research –ISHR), which represents the only international society of its kind. Consequently, Poupa became a founding member of the editorial board of the official journal of this society, the *Journal of Molecular and Cellular Cardiology*, which remains one of the prestigious world-renowned periodicals. The fruitful years of experimental cardiology in Czechoslovakia culminated in the time of Prague Spring when the Poupa received the prestigious State Prize for his research.

1969 - 1989

The Soviet occupation in August 1968, which started the so-called normalization era, adversely affected the development of all areas of Czech science and thus experimental cardiology for many years. Poupa, as one of the authors of the memorable manifesto "Two thousand words", emigrated in September 1968, setting in motion the gradual departure of other Prague School members. In 1969, prof. T.H. Schiebler from the University of Würzburg, Germany, offered me a research fellowship and made me familiar with the possibilities of ultramicroscopic techniques. I thus spent a very fruitful year in his Department of Anatomy.

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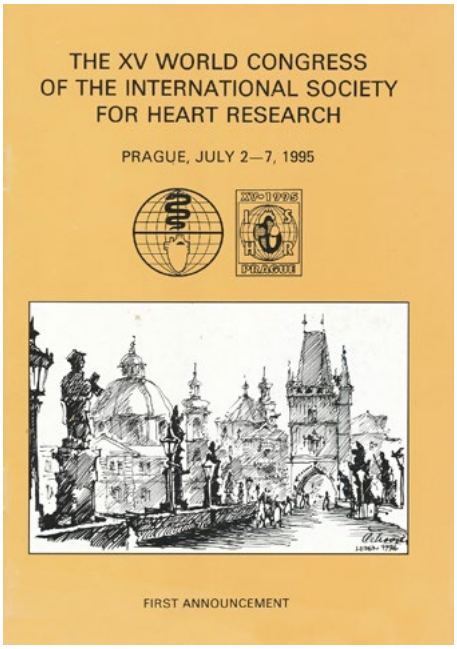


The XV World Congress of ISHR, Prague, 1995 – First announcement

Upon my return to Prague, experimental cardiologists in the Institute of Physiology of the Czech Academy of Sciences followed Poupa's tradition and created a Department of Developmental Cardiology and entrusted me with its management. The main task became the study of the development of structural and metabolic properties of cardiac muscle, which is important for understanding the ontogenetic changes of cardiac resistance to oxygen deprivation. Special attention was paid to the possibilities of protective influence on the myocardium, especially its adaptation to chronic hypoxia. This orientation led to the establishment of very effective cooperation both with other laboratories in the Institute of Physiology as well as with cardiologists dealing with cardiopulmonary diseases (Institute for Clinical and Experimental Medicine, Prague, head Prof. Widimsky) and clinical department of pediatric cardiology (Children's Cardiac Center in Prague, head Prof. Samanek). Unfortunately, the significant limitation of foreign contacts gradually led to professional isolation and lagging behind the accelerating development of world science.

At the moment of greatest depression, my colleague from Brno, Prof. Pavel

The Soviet occupation in August 1968, which started the so-called normalization era, adversely affected the development of all areas of Czech science and thus experimental cardiology for many years.

Braveny, and I came up with the idea to save experimental cardiology by creating a professional forum that would enable its intellectual survival and reduce the negative consequences of the "splendid isolation". We founded the Society for Experimental Cardiology (SEC) at the Physiological Society of the Czechoslovak Medical Society J.E Purkynje, with the main task of introducing theoretical and clinical cardiologists to the advances in world cardiology. The first working conference of the SEC was organized in 1973; the program of the annual meetings was designed monothematically and always "from the molecule up to the patient's bed". It can be stated with pleasure that the character of these meetings has been preserved to the present day. With the passage of years, it is necessary to emphasize that SEC's activities have almost completely fulfilled the goals of its founders. It helped to maintain an acceptable level of awareness, initiated scientific cooperation, educated a number of young cardiologists and, above all, built cardiology as a highly visible science. Last but not least, it created a friendly atmosphere, which in many cases helped to overcome the very complicated relationships of that time.

After 1989

Only the greatest optimist could assume that the possibility of verifying dreams and reality in the open field of world science is not a utopia. The events of November 1989 (so-called velvet revolution) ushered in a transformative era, offering Czech science the invaluable gift of global reintegration. Of course, this also applies to experimental cardiology. Where possible, old contacts were established, long-standing literary acquaintances were personified, and seminal results timidly found their way to scientific meetings and prestigious journals. The explosion of foreign sojourns of young researchers began to bear fruit, and the intellectual and methodological background gradually improved. Very helpful in this respect was Prof. NS Dhalla from the University of Manitoba. In this context it should be stressed that molecular cardiology, without which we can no longer imagine current experimental research, began to be developed without delay. The new grant system established a competitive approach to financial resources and undoubtedly contributed to the improvement of the scientific quality.

My scientific life also changed significantly. In the year 1990, I was elected as the director of the Institute of Physiology of the Czech Academy of Sciences, and I remained in this position for next five years. A great number of concerns arose, related to the unifying of the scientific concept of a large institute (at that time more than 200 employees) and to the constant struggle to secure the necessary financial resources.

The advantage of our experimental cardiology was that it entered the new period organizationally prepared. SEC provided the foundation on which experimental cardiologists from the Institute of Physiology were intrinsically connected, and represented a unique national scientific society, even on a world scale, with its philosophy, organization and scientific activity. This strategic advantage prompted ISHR to entrust SEC with organizing the XV World Congress in Prague. Prof. Pavel Braveny was the President and I had the honor of serving as the secretary general. The entire team of our Department of Developmental Cardiology participated in the organization. We appreciated the help of outstanding scientists and experienced organizers very much, e.g. Professors J. Parratt, NS Dhalla and J. Schaper. With the passage of time, it can be emphasized that the first meeting of ISHR organized east of the Alps, with more than 1200 participants, became a real culmination of the SEC's activities to date. It was also possible to present adequately the traditional issues of our Department, i.e. cardiac development and adaptation.

The scientific research of the Department during this period was concentrated on the question of how to increase cardiac tolerance to oxygen deficiency. Focused investigation probed the molecular and cellular mechanisms involved in the protection of the ischemic myocardium and the analyses of the cardiac resistance during early phases of ontogenetic development. Other studies investigated the effect of increased pressure on neonatal heart growth or right ventricular function in hypoxic pulmonary hypertension. The Department seized opportunities for substantial improvements of methodical equipment as well as for significant expansion of contacts with the top foreign laboratories. The intensive cooperation with groups at the University of Manitoba, Winnipeg, the University of Ottawa, the Max-Planck Institute in Bad Nauheim, Free University Berlin, the University of Strathclyde, Glasgow, INSERM Paris, the Institute for Heart Research, Bratislava, and others was very fruitful. Apart from my scientific work I was active in the committees of several international scientific societies, including ISHR and the International Academy of Cardiovascular Sciences. The international activities of our Department

The events of November 1989 (so-called velvet revolution) ushered in a transformative era, offering Czech science the invaluable gift of global reintegration.

(continued on page 14)

PRESIDENT'S LETTER

It is inspiring to see how many active and engaged early- and mid-career investigators we have in ISHR International and across our local Sections worldwide. I am especially proud of how committed they are to organizing activities for their peers at our World Congresses.

The Early Career Investigator (ECI) activities at the World Congress are planned and led by the ECI-INTL Committee, with the support of the ISHR International Council and the local Congress organizers. Their objective is to support and advance the mission of the ISHR—the discovery and dissemination of knowledge in the cardiovascular sciences worldwide. In line with this mission, the Committee is responsible for organizing all ECI-focused activities at the World Congress. These include a pre-Congress scientific program for ECIs, a networking lunch with senior investigators, and the always-popular ECI social event.

The origins of the ECI-INTL Committee date back to the 2010 Council meeting in Kyoto, where the "ECI Network" was first proposed by a working group. The ECI Network was started under the leadership of Jim Bell (Australasian Section). The goal was to bring together ECIs from across the different ISHR Sections to develop action items for enhancing their participation in future Congresses. Their efforts led to the first ECI events at the San Diego World Congress in 2013. This pioneering group introduced both the pre-Congress ECI event and the Bursary Program (now called the Visiting Research Fellowship), which provides funding for ECIs to visit laboratories in the host region before or after the Congress. These fellowships have been instrumental in supporting skill development, fostering collaboration, and promoting exchange between Sections.

As the ECI-INTL Committee and ECI activities at the World Congress became well established, many of its original members transitioned into the mid-career stage. However, it soon became apparent that mid-career investigators were often overlooked—caught between opportunities focused on early-career researchers and recognition reserved for senior leaders. To address this gap, ISHR International expanded its support for mid-career investigators. At that time, ISHR already offered the Richard Bing Award for ECIs and several awards and distinguished lectures for senior investigators, but none specifically for mid-career members. Under the leadership of then-President Dr. Tish Murphy, the Outstanding Investigator Award was refocused as a mid-career award, and the Mid-Career Investigator (MCI)-INTL Committee was created. The MCI-INTL Committee held its first event at the World Congress in Beijing and has since hosted successful activities at the Congresses in Berlin and Nara.

If you are interested in becoming involved in the ECI-INTL or MCI-INTL Committees, please contact your local Section. The ECI-INTL and MCI-INTL Committees are composed of two representatives from each ISHR Section and are typically assembled in the period immediately following a World Congress. These Committees will be responsible for organizing the ECI and MCI events at the next World Congress, which will take place in Philadelphia in 2028.

Asa Gustafsson
President, ISHR-International

2025 ISHR DISTINGUISHED LECTURE AWARD WINNERS

E. Dale Abel, MD, PhD
Winner of the 2025 ISHR Keith Reimer Distinguished Lecture Award
"Mitochondria, Metabolism and Heart Failure – Beyond ATP"

E. Dale Abel is the William S. Adams Distinguished Professor and Chair Department of Medicine, David Geffen School of Medicine and Executive Medical Director UCLA Health. Dr. Abel has had a distinguished career in endocrine, metabolism and cardiovascular research. His pioneering work on glucose transport and mitochondrial metabolism launched his current research interests: molecular mechanisms responsible for cardiovascular complications of diabetes. His work has been highly cited and has shaped much of current understanding of the metabolic mechanisms underlying heart failure, particularly in obesity and diabetes. He was the recipient of an honorary Doctor of Science degree from the University of the West Indies in 2024. His many awards for scholarship and mentorship include the Fred Conrad Koch Lifetime Achievement Award of the Endocrine Society, the Howard Morgan Award for Distinguished Achievement in Cardiovascular Sciences, International Academy for Cardiovascular Sciences, the A. Ross Mcintyre Award and Lectureship, and the Robert and Margaret Eckel Endowed Lecture in Cardiometabolic Disease. Dr. Abel is a member of the National Academy of Medicine and the National Academy of Sciences of the United States.

Koichiro Kuwahara, MD, PhD
Winner of the 2025 ISHR Janice Pfeffer Distinguished Lecture Award
"Neurohormonal and transcriptional signaling in cardiovascular remodeling"

Since 2016, Koichiro Kuwahara has been the Professor and Chairman of the Department of Cardiovascular Medicine, Shinshu University School of Medicine, where he has been continuously engaged in research on neurohormonal and transcriptional signaling in cardiovascular diseases, while he also has been expanding his research into translational research, including the development of small molecule inhibitors of TRPC6 and 3, as potential drugs for the treatment of cardiovascular diseases, and of clinical application of iPS-derived cardiomyocytes to the treatment of advanced heart failure. Dr Kuwahara has received many prestigious awards, including the Japan Heart Foundation Sato Award (2013), Japanese Society of Molecular Medicine Award (2015), and JHFS Outstanding Investigator Award (2015). In 2025, he will be the President-Elect of the Japanese section of ISHR.

Pilar Alcaide, PhD
Winner of the 2025 ISHR President's Distinguished Lecture Award
"T cell inflammation at the heart of cardiac remodeling"

Dr. Alcaide is a Professor and Vice Chair of the Department of Microbiology and Immunology at the University of Miami Miller School of Medicine, Miami, FL. Dr. Alcaide's research focuses in understanding the role of T lymphocytes in heart inflammation and their impact in the progression of heart failure, with the goal of unveiling new pathways that can potentially be targeted in therapeutic useful ways. Dr. Alcaide's impact extends beyond her work as a leader in the growing field of cardio-immunology into the global scientific arena. As a result of Dr. Alcaide's scientific contributions, it is now generally accepted that T cell immune responses dominate adverse fibrotic remodeling in HF and that the initial trigger of heart inflammation determines the type of immune response. Dr. Alcaide's contributions to the field open new avenues for selectively targeting cardiac inflammation in different HF etiologies that have different responses to current treatments.

A Triumphant Debut:

REPORT ON THE 1ST ANNUAL ISHR-SOUTHEAST ASIAN SECTION MEETING

(October 3-4, 2024; Singapore)

The inaugural and long-awaited 1st Annual Meeting of the ISHR-Southeast Asian Section (ISHR-SEA) was a resounding success! Held on October 3-4, 2024 in the vibrant city-state of Singapore, the conference brought an incredible energy to the NUSS Kent Ridge Guild House. The event joyfully welcomed approximately 200 basic scientists, translational researchers, and clinicians from all over the Asia-Pacific region including Singapore, Malaysia, Thailand, Indonesia, India, Japan, China, South Korea and Australia. Reflecting a wonderful spirit of scientific community and collaboration, the meeting was proud to host distinguished speakers from the neighboring ISHR Indian, Chinese, Australasian, and Japanese Sections who shared vibrant perspectives from their regions.

The scientific program was exceptionally rich and diverse, sparking brilliant new ideas and collaborations. Sessions explored the frontiers of cardiovascular science; topics included Heart Failure, Ischemic Heart Disease, Metabolism and Aging, Vascular Biology, Regenerative Medicine, and Innovative Technologies. The meeting was headlined by five outstanding keynote speakers: Dr. Borja Ibáñez (CNIC, Spain), Dr. Christopher Newgard (Duke University, USA), Dr. Stuart Cook (NHCS, Singapore), Dr. Eun Bo Shim (Kangwon National University, South Korea), and Dr. Howard Rockman (Duke University, USA).

A fantastic highlight of the meeting was its focus on early career researchers, researcher development and interaction. The lively poster sessions were a hive of activity, leading to engaging discussions and exciting new connections. The program shone a spotlight on the next generation through a dedicated **ISHR-SEA Young Investigator Award** session and a dynamic **Early Career Investigator Rapid Fire Session.** Adding immense practical value, an exclusive **JMCC Editors Session** gave attendees a unique opportunity to hear directly from editors of the *Journal of Molecular and Cellular Cardiology* on how to produce high-impact research and successfully navigate the publication process.

We extend our warmest and most enthusiastic congratulations to all our deserving award winners! The prestigious **ISHR-SEA Young Investigator Award** was presented to **Dr. Yifan Wang** (NUS Medicine, Singapore). The **Audience Choice Award** for the Rapid Fire Session was awarded to **Iman Nabilah Abd Rahim** (Universiti Teknologi MARA, Malaysia). We also celebrate the winners of the **three Best Poster Prizes**, who were selected from a field of exceptional research. Congratulations to them on this fantastic achievement!

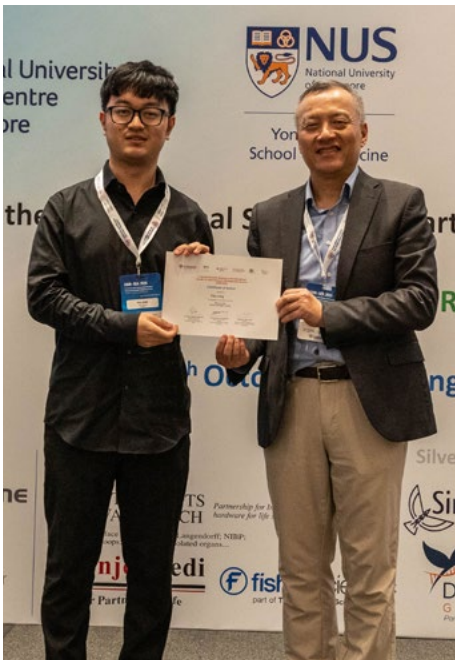
The collaborative spirit of the meeting shone brightly with the signing of a Memorandum of Understanding (MOU) between the NUS Cardiovascular Research Institute (CVRI) and Agilent. Represented by **Dr. Roger Foo** (Director, NUS CVRI) and **Mr. Chow Woai Sheng** (General Manager, Agilent), this partnership marks a thrilling step forward for cardiovascular research in the region.

Leadership and Vision. *The meeting's success was guided by the dedicated ISHR-SEA Council, including (left to right): Mick Lee (Singapore), Patrick Hsieh (Taiwan, President elect), Cheng Yuan Yuan (Taiwan), Elena Aisha Binti Azizan (Malaysia), Yibin Wang (Singapore), Wulan Anggrahini (Indonesia), Kamisah Yusof (Malaysia), Poungrat Pakdeechote (Thailand), Roger Foo (Singapore, President), Derek Hausenloy (Singapore, Secretary), Haojie Yu (Singapore, Treasurer), Yin Hua Zhang (South Korea).*

Sharing cutting-edge research.
Prof. Howard Rockman (Duke University, USA) presents his work on Allosteric Modulators, one of five outstanding keynote presentations at the meeting.

The incredible success of this inaugural meeting was made possible by the visionary leadership of the ISHR-SEA Council and the tireless efforts of the organizing committee. Special recognition goes to President **Prof. Roger Foo** for his guidance, and to Secretary **Prof. Derek Hausenloy** and Treasurer **Prof. Haojie Yu** for their tremendous work behind the scenes. We offer our deepest gratitude to all our phenomenal speakers, participants, and abstract presenters who made these two days of outstanding science and joyful collegial exchange possible. This event has firmly and brightly established the ISHR-SEA meeting as a cornerstone for our research community. The energy from this first meeting has set a magnificent stage for the future, and we cannot wait to build on this success in the years to come! In particular we look forward to our 2nd Annual Meeting of the ISHR-SEA which is planned to be held in Kuala Lumpur, Malaysia.

Dr Cong Shuo, MD, PhD
Postdoctoral Research Fellow in Prof Derek Hausenloy laboratory.
Yong Loo Lin School of Medicine | National University of Singapore, Duke-NUS Medical School, National Heart Research Institute | National Heart Centre Singapore



Celebrating our rising stars!
Young Investigator Award Winner Dr. Yifan Wang (NUS Medicine, Singapore) is recognized for his excellent research. Congratulations to all our awardees!

JMCC PLUS EDITORS' UPDATE

JMCC Plus Receives First Impact Factor

We are delighted to announce that *JMCC Plus* has received its inaugural **Journal Impact Factor of 2.2**, as released in the 2025 Journal Citation Reports. This important milestone is a testament to the quality of the research we publish and the commitment of our authors, reviewers, and editorial board.

Since our launch, *JMCC Plus* has aimed to provide an open-access, rigorous, and inclusive platform for the cardiovascular research community. The awarding of an impact factor marks a significant moment in our development—and coincides with a notable **surge in manuscript submissions** over the past 12 months.

As we continue to grow, we are eager to hear from our community. We **welcome suggestions** on how we can improve the ways we manage the journal, expand our outreach, and strengthen our editorial board. If you have ideas—or are interested in joining our editorial team—we would love to hear from you.

We are also pleased to share that *JMCC Plus* is now active on the **Bluesky** social media platform (@jmccplus.bsky.social) and on LinkedIn (linkedin.com/company/jmcc-journals/). For this we thank our hard-working social media editors, Dr. Daniel Johnson, Dr. Yihua Bei and Ms. Olivia Baines, for their efforts in growing our digital presence, and we encourage readers to follow and engage with us online.

Finally, we invite researchers to propose new **Special Issues** that reflect emerging trends and challenges in cardiovascular science. Please feel free to contact the editorial team at d.pavlovic@bham.ac.uk or rebekah.gundry@unmc.edu with your ideas.

Thank you for your continued support—and for helping us reach this exciting milestone.

Davor Pavlovic, Editor-in-Chief
Rebekah Gundry, Deputy Editor
JMCC Plus

JMCC Calls for Papers from Early Career Investigators

The Journal of Molecular and Cellular Cardiology invites Early Career Investigators to submit to our Call for Papers: **Metabolic Contributions to Heart Disease: Insights from the Next Generation of Cardiovascular Researchers.** This special issue, led by Guest Editors Jarmon Lees, Qutuba Karwi, and Yuan-Yuan Chen, aims to highlight the work of ISHR's ECI members.

Metabolic dysfunction significantly contributes to heart disease. Innovations by early career investigators hold promise for future breakthroughs in this vital field, paving the way for impactful advancements in heart disease prevention and treatment. The topic for this Call for Papers is extremely broad, and the editors will consider reviews and original articles on a variety of cardiac metabolic themes including: physiological and pathological cardiac metabolism, cardiac mitochondria, cardiometabolic diseases and cardiac health, animal or cellular models of cardiac metabolic disease, novel technologies, and perspective pieces.

Eligibility: The first or last author must be all of the following:

1) an ISHR member;
2) an ECI (defined as <8-years post terminal degree); and
3) designated as a (co-)corresponding author (multiple co-corresponding authors are permitted).

Submissions are open through June 1, 2026. When submitting your manuscript please select the article type 'VSI: ISHR ECI Call for Papers' whichever is applicable. The submissions will be accepted for the special issue until June 1, 2026.

Visit www.jmcc-online.com to view Author Guidelines and submit.

REPORT ON THE ISHR-LATIN AMERICAN SECTION MEETING

(Vina del Mar, Chile; October 23-25, 2024)

The Annual Meeting of the Latin American Section of the International Society for Heart Research (ISHR-LAT) took place from October 23-25, 2024, at the School of Medicine of the University of Valparaíso. This event gathered researchers from Chile, Argentina, Brazil, France, and the United States, showcasing a rich scientific program that featured seven symposia—two of which were led by Early Career Investigators—and a poster session presenting 33 abstracts.

The meeting commenced with the 2024 ISHR President's Distinguished Lecture, delivered by Dr. Ana María Gómez from Université Paris-Saclay, France. The second day concluded with a Plenary Lecture by Dr. Héctor Valdivia from the University of Wisconsin-Madison, United States. The closing lecture was presented by Professor Paulina Donoso Laurent from the School of Medicine, University of Chile. The opening day featured the *Journal of Molecular and Cellular Cardiology Symposium*, which highlighted various topics, including the immune system's role in atrial fibrillation (Dr. Emiliano Medei, Federal University of Rio de Janero), signaling pathways involved in perivascular adipose tissue dysfunction in hypertension (Dra. Luciana Venturini Rossoni, University of Sao Paulo), the impact of metabolism on vascular smooth muscle cell behavior and disease (Dra. María Alejandra San Martin, Emory University), and the lysophosphatidic acid-dependent regulation of intrinsic heart rate and persistent tachycardia during sepsis (Dr. Diego Varela, University of Chile).

An evaluation of the poster session was conducted by senior researchers, resulting in awards for the three best undergraduate and three best graduate posters, made possible by the generous support of our sponsors.

Overall, the meeting served as an excellent platform for sharing cardiovascular scientific research, fostering networking opportunities, and providing insightful updates on cardiovascular knowledge generated in Latin America. It was particularly motivating for young researchers.

Dr. Zully Pedrozo Cibils, the ISHR president for the 2024-2025 term, remarked, *"The ISHR International, along with its Latin American section, stands out as one of the few scientific societies dedicated to cardiovascular studies from a basic research perspective. This meeting has been a tremendous opportunity for building collaborative networks and for our students to engage in a relaxed atmosphere with researchers from various parts of Latin America. Such opportunities are essential for our growth as scientists, and we at ISHR-Lat are thrilled to have created this occasion in Chile."*

Dr Ana Maria Gomez (right) receives the 2024 President's Distinguished Lecture award.

Dr. Ivonne Olmedo Alegría, Treasurer of ISHR-Lat, added, *"Beyond the conferences and symposia, the event provided numerous opportunities for idea exchange and strengthening collaborative networks among attendees. The planned activities not only enabled researchers and academics to share their latest cardiovascular research findings but also nurtured the development of future collaborative projects in the region."*

Dr. Jaime Riquelme Meléndez, Secretary of ISHR-Lat, emphasized, *"This society is dedicated exclusively to the study of cardiovascular sciences, with a strong focus on basic sciences. Many individuals in Chile are engaged in cardiovascular research, and events like this offer an excellent opportunity to stay informed about advancements in the field. They facilitate the creation of scientific collaborations among ourselves and with researchers from other Latin American countries. We hope this scientific meeting has also inspired the new generation of researchers."*

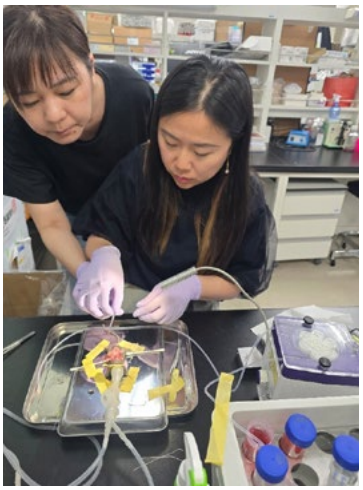
Jaime Riquelme, Secretary ISHR-LAT

Enthusiastic participants in the ISHR-LAT Section meeting in Vina del Mar.

ISHR EARLY CAREER INVESTIGATOR VISITING RESEARCH FELLOWS – 2025

Rongling Wang
Charité – Universitätsmedizin Berlin
Host: Prof. Yuichiro Arima
Kumamoto University

My name is Rongling Wang, and I am currently a postdoc researcher in Prof. Gabriele Schiattarella group at Charite. During ISHR2025Nara, I had the opportunity to visit Prof. Yuichiro Arima's laboratory for a week at the International Research Center for Medical Sciences (IRCMS), Kumamoto University. Prof. Arima's lab focuses on studying ketone body metabolism and the relationship between cardiovascular development and metabolism in cardiac diseases including HFpEF. As my research also focuses on metabolic remodeling and ketone body metabolism in HFpEF, this visit would be a good chance for potential collaboration.



Ms. Miho Kataoka guiding the author through a liver perfusion procedure.

During my stay, I received hands-on training in two key experimental techniques: primary hepatocyte isolation and culture, and nuclei isolation from mouse heart tissue. Ms. Miho Kataoka shared her expertise and guided me through the mouse liver perfusion and primary hepatocyte isolation (Figure 1). I was able to conduct one hepatocyte isolation independently, which was an invaluable learning experience. Also, Ms. Yuqing Xu, a final-year PhD student in Prof. Arima's group, demonstrated the nuclei isolation from neonatal murine hearts and FACS-sorting of cardiomyocytes. In addition to technical training, I was invited to give a lunch seminar, where I presented my current research on reversing cardiometabolism in heart failure with preserved ejection fraction (HFpEF) and its metabolic mechanisms (Figure 2). The discussion that followed was engaging and insightful, with valuable feedback from Prof. Arima and his team.

Beyond the technical training, I had the opportunity to explore the lab and IRCMS core facilities in the institution, attend the weekly IRCMS seminar, and join a happy-hour social event, which gave me a valuable chance to experience the collaborative and academic culture in Japan.

The visit was an enriching experience both scientifically and culturally. I am sincerely grateful to Prof. Arima, Ms. Kataoka, Ms. Xu, and the IRCMS community for their warm hospitality, support, and generosity. Also, I would like to thank the ISHR ECI committee for awarding me the ISHR_ECI Visiting Research Fellowship, and Prof. Arima for hosting me in his lab.

The author presenting her research at a lunch seminar.

Adjei Raymond Lovelace
Mie University
Host: Prof Oto Inoue
Kanazawa University

Grant Purpose and Key Activities
The purpose of the ECI-Visiting Research Fellowship is to facilitate training visits for Early-Career Investigators to laboratories located in the World Congress host city or locale (the Japanese Section). These visits aim to offer skill development, collaboration establishment, and foster exchange between sections. The main aim of this fellowship, as agreed with host lab, was to gain practical/hands-on skills in Exosome isolation and single-cell RNA (scRNA) sequence analysis

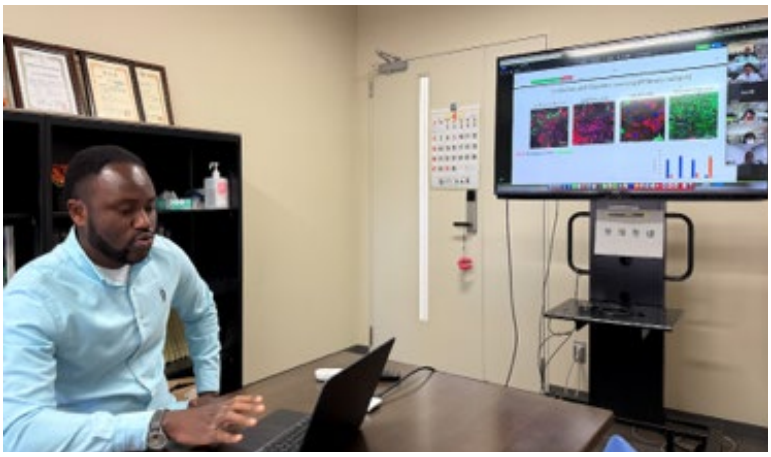
Study background: Obesity-related kidney disease retains pathophysiological characteristics, including insulin resistance and lipid accumulation. Many aspects of the mechanisms involved in how and why fat accumulates remain poorly understood. During the G1 phase of the cell cycle, trichoplein (localized to centrioles) binds and activates Aurora A kinase, suppressing primary cilia formation in proliferating cells. We explored the role of epithelial cells as APs and primary cilia activity using Trichoplein knockout mice (Tchp-/-). ScRNA of the publicly available data was analyzed using the Automated Single-Cell Analysis Portal (ASAP) software (https://asap.epfl.ch/).

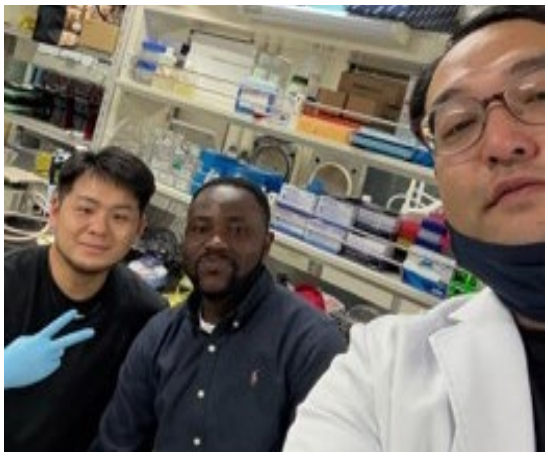
Results and Impact
Publicly available data, reported by Shaub et al. (2023; doi: 10.1172/JCI164486), deposited in the NCBI, were used for the analysis. In total, 22 data sets from human kidney origin were analyzed. This resulted in the UMAP visualization of 42,195 kidney cells. Cytokeratin-18 and Aquaporin-1 double-positive cells, specific to kidney/renal epithelial cells (predominantly, Proximal tubular epithelial cells, PTECs), were the target cell markers of interest.

Consistent with preliminary wet-lab results, comparison of the cytokeratin-18 and AQP-1 double-positive cells expressing C/eBPa (implicated in mature adipocyte differentiation) in Diabetes Mellitus (DM) subjects and non-DM subjects (healthy subjects) showed that renal epithelial cells of the DM subjects retain more lipids compared to their healthy counterparts.

Future Plans
The results of this ScRNA analysis partially open up a new area of research into ectopic fat deposition within the kidney and other vital organs, with a specific focus on epithelial cells. Based on the current results of this research, we intend to conduct further sequence analysis to include more datasets (the current study was limited to 22 subjects), pathway analysis related to this observation, and the identification of differentially expressed genes (DEGs).

Acknowledgements
*ISHR
*Dr Oto Inoue (P.I.) and members of the Oto Lab, Department of Cardiovascular Medicine, Kanazawa University
*Professor Yasuko Bando (P.I.) and Lab Members, Dep't of Molecular Physiology and Cardiovascular Biology, Mie University





A preliminary presentation to give the host lab an overview of my work, with my preliminary data (left) and a selfie during the last day of the wet-lab session (isolation of exosome: right)

Tingting Yang
Shanghai University
Host: Prof Seitaro Nomuro
University of TokyoISHR VRF Report – Visit to the Laboratory of Prof. Seitaro Nomura

As part of the ISHR 2025 Visiting Researcher Fellowship, I had the great opportunity to visit the laboratory of Professor Seitaro Nomura at the University of Tokyo. Prof. Nomura is internationally recognized for his research on cardiovascular regeneration, heart failure, and metabolic remodeling, with a strong focus on translational mechanisms and clinical relevance. His group has made substantial contributions to understanding how metabolic and molecular signals govern cardiac repair and remodeling under pathological conditions.

During my visit, I engaged in in-depth discussions with Prof. Nomura and his team on shared research interests, especially the protective effects of physical exercise on the cardiovascular system. Given my own background in exercise-mediated cardioprotection and molecular mechanisms of ischemia-reperfusion injury, our exchange explored multiple potential intersecting pathways, including mitochondrial metabolism, redox homeostasis, and cardiomyocyte adaptation to mechanical and metabolic stress.

We had meaningful discussions on how exercise modulates gene regulatory networks in the myocardium and how this intersects with their ongoing work on epigenetic regulation and cardiac regeneration. Prof. Nomura provided valuable insights into how basic and translational studies can be integrated, and we discussed several experimental strategies and model systems that may serve as a foundation for future collaboration between our groups.

Prof Seitaro Nomura (Univ of Tokyo) with the author

In addition to the academic discussions, I was given a tour of the laboratory facilities. The lab is equipped with advanced technologies for *in vivo* and *in vitro* cardiovascular research, including cardiac imaging, animal surgery platforms, and molecular biology tools. I was particularly impressed by their integrative experimental approaches, combining omics technologies, genetic manipulation, and functional assessment in cardiac models.

Toward the end of my visit, I also had the privilege of a brief but valuable exchange with Professor Issei Komuro, a renowned leader in the cardiovascular field. Although the conversation was short, it was an honor to connect with such a distinguished scientist whose work has profoundly influenced our understanding of heart failure pathogenesis and signaling pathways.

This visit has been an exceptionally rewarding academic experience. It not only deepened my understanding of advanced cardiovascular research in Japan but also opened up promising avenues for future collaborative work. I am sincerely grateful to the ISHR and the Visiting Researcher Fellowship program for providing this opportunity.

CALENDAR

- **April 28-29, 2026.** II Annual Meeting of the Southeast Asian Section. Kuala Lumpur, Malaysia.
  Inquiries: Dr Kamisah Yusof kamisah_y@hctm.ukm.edu.my
- **May 5-10, 2026.** XVIII Annual Meeting of the Chinese Section. Shijiazhuang, Hebei, China
  Inquiries: Dr Junjie Xiao, junjiexiao@shu.edu.cn
- **May 30-June 4, 2026.** XLIV Annual Meeting of the North American Section. Minneapolis, Minnesota, US.
  Inquiries: Tim O'Connell, tdoconne@umn.edu, Jop van Berlo, jvanberl@umn.edu, Julia Liu, julialiu@umn.edu
- **June 22-25, 2026.** XXXIX Annual Meeting of the European Section. Birmingham, UK.
  Inquiries: Davor Pavlovic, d.pavlovic@bham.ac.uk
- **August 6-9, 2026.** L Annual Meeting of the Australasian Section (held jointly with the Cardiac Society of Australia and New Zealand). Sydney, Australia.
  Inquiries: Julie McMullen, julie.mcmullen@hri.org.au
- **October 3-4, 2026.** XLII Annual Meeting of the Japanese Section. Koriyama, Fukushima-prefecture, Japan.
  Inquiries: Masafumi Watanabe, masafumi-tky@umin.net

Alexia van Rinsum
Wageningen University
Host: Prof James Pearson
National Cerebral and Cardiovascular Center

After attending the conference in Nara, I visited Prof James Pearson in the Department of Cardiac Physiology in the National Cerebral and Cardiovascular Centre. My visit was from May 15th until May 21st. In addition to getting to know the lovely post-docs and technicians working in the lab, I got to observe and learn techniques that we can implement within our own lab.

One of the techniques I wanted to learn was telemetry. Prof. Pearson and his technician showed and explained to me the process of surgical implantation and how to monitor the different processes their telemetry system can register. Another technique I was keen on learning was the isolation of primary cardiomyocytes. I got to see the whole procedure, from excising the heart to mounting it on their self-made Langendorff system. The next day, we observed the isolated cardiomyocytes under the microscope and they showed some of the measurements they would perform using these primary cardiomyocytes.

In addition to the techniques I learned (and protocols I followed), we also discussed quite extensively our research interests with the common theme of lifestyle diseases leading to mitochondrial dysfunction and cardiomyocyte dysfunction and our views on these topics. We concluded the lab visit with an extended invitation for Prof. Pearson to visit our lab in the Netherlands and *vice versa*, fostering future collaboration.

Langendorff perfusion setup in the lab.

The author (center) with Dr James Pearson (second from right) attend a poster session.

Heart of the Matter *(continued from page 3)*

continued with the organization of several scientific meetings, such as Czech-French-Slovak symposium on Basic Cardiology (1994, organized together with INSERM Paris), The Developing Heart (2000), Mendel symposium I on Genes and the Heart (2003), Mendel symposium II (2008) and Symposium on Scientific Basis for the Practice of Cardiology (2010). The interest of many pre- and post-graduate students, both from the Faculty of Science and from the Faculty of Medicine, was gratifying. Intensive cooperation has developed with domestic experimental laboratories of the Faculty of Science or the Second Faculty of Medicine and successful collaborations continue with clinical institutions such as Children's Cardiac Centre and IKEM.

In 1999, the first representative research centres were established in Czech Republic as part of a project of the Ministry of Education, Youth and Sports. An informal group of cardiology-oriented, internationally-experienced and freely-cooperating laboratories of the Institute of Physiology of the Czech Academy of Sciences (Department of Developmental Cardiology, Department of Hypertension), of the Second Faculty of Medicine (Departments of Physiology and Pathophysiology) and Centre for Experimental Medicine of IKEM, served as a suitable model. The "Centre for Cardiovascular Research" was acknowledged among the first established; I served as the responsible researcher. The research concept of this Centre aligned with cardiovascular research priorities in the European Union. The aim of the research activity was to clarify some of the molecular and cellular mechanisms involved in the development of ischemic heart disease and main risk factors, such as atherosclerosis and high blood pressure. The focus on a developmental approach in cardiovascular diseases was based on long-standing traditions of Czech cardiac research. At the end of the five-year period the evaluating council stated that the Centre represented a research base that has no parallels in our country, leading to a refunding endorsement for another seven years. New competition rules led to close cooperation with clinical research facilities, including the Children's Cardiac Centre in Prague and the Departments of Cardiology and Cardiac Surgery of IKEM. The Centre gradually ceased to be a formal grouping of individual workplaces and became a virtual institute. New laboratories were created and methodical approaches and technical equipment increased significantly. The main output of the Centre's activities were high-quality original results published in renowned journals. The Centre was very successful in attracting young researchers: several future cardiologists and cardiac surgeons completed their scientific training in experimental and clinical research. The average number of full-time researchers was 109, 30 of them were under 35 years of age. During the existence of the Centre, 25 postgraduate students defended their doctoral thesis. Regrettably, the successful system of scientific centres officially ended in 2012. Although the cessation of the Centre's activities led to the end of joint funding, the scientific cooperation among partners continued and developed further on a bilateral basis.

> We founded the Society for Experimental Cardiology (SEC) at the Physiological Society of the Czechoslovak Medical Society J.E Purkynje, with the main task of introducing theoretical and clinical cardiologists to the advances in world cardiology.

Participants at the Mendel symposium, Prague 2008

Participants at the symposium Scientific Basis for the Practice of Cardiology, Prague 2010

Last years

My position of the head of the Department of Developmental Cardiology officially ended in 2005, when I reached the age of 65. I was very happy that my successor was my best pupil, the excellent experimental cardiologist Prof. Frank Kolar. I greatly appreciate the fact that, as a pensioner, I can continue to work and thus continue to make a small contribution to the scientific output of our group. Recently, the Department (newly Laboratory) has also shown promising developments in advanced molecular biology methods and their use in the study of epigenetic RNA regulatory mechanisms, involved in the ontogenetic development of the heart and in the pathogenesis of heart disease. The large number of young enthusiastic researchers, modern methodologies and attractive scientific programme bode well for a bright future. I cordially wish the third generation of cardiologists (with the new head Dr. Marketa Hlavackova) all the best!

Conclusions

I am convinced that good mentors play a decisive role in the scientific career of each young enthusiast. I am, therefore, very lucky that this condition was completed already at the beginning of my career, thanks to the above-mentioned outstanding scientific personalities. Another important factor in scientific life is a good team of highly educated collaborators, students and technical assistants. It is impossible to present a long list of my colleagues and friends who helped me during the last sixty years and who created an environment of friendly teamwork. Nevertheless, there are two persons that had very special positions in my career and to whom I would like to express my sincere thanks. My former pupil, colleague and later boss, Prof. Frank Kolar, an exceptional experimental cardiologist and very close friend and, last but not least, my wife Ivana. We have been living together for more than 60 years, and she was close to me throughout all happy and sad times. Moreover, she was working with me on the developing heart; many co-authored publications are evidence of that. I am also happy that both of my sons, Petr and Martin, have chosen the medical profession, particularly in disciplines that are very beneficial to elderly parents: cardiology and orthopedics.

Prof. MUDr. B. Ostadal, DrSc.
Institute of Physiology of the Czech Academy of Sciences

I am convinced that good mentors play a decisive role in the scientific career of each young enthusiast.

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