



THE NEWS BULLETIN OF THE INTERNATIONAL SOCIETY FOR HEART RESEARCH



ISHR-Intl Poster Competition Winners

CELEBRATION OF THE XXIV WORLD CONGRESS JUNE 12-15, 2022

1,5,7,13



Mercure Hotel MOA Berlin

IN THIS ISSUE:

- **XXIII ISHR World Congress. 1**
- **President's Letter 4**
- **ECI Activities at the XXIV World Congress 5**
- **MCI Activities at the XXIV World Congress 7**
- **JMCC Editors' Update. 8**
- **Report on the Latin American Section Meeting. 9**
- **2022-2025 ISHR-International Council 12**
- **2022 Fellows of the ISHR 12**
- **Visiting Research Fellows. 13**
- **Meetings Calendar 15**

CELEBRATION OF THE XXIV WORLD CONGRESS

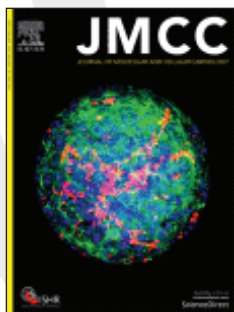
JUNE 12-15, 2022: BERLIN



Congress President, Burkert Pieske, and ISHR Secretary General and Chair of the Scientific Program Committee, Lea Delbridge.

The ISHR World Congress 2022 in Berlin was a great success: The mission of the ISHR – to promote the discovery and dissemination of knowledge in the cardiovascular sciences on a world-wide basis – was fulfilled once more despite difficult circumstances due to the ongoing pandemic.

ISHR meetings remain a premier conference destination for those in the basic and translational cardiovascular research community. This year's ISHR meeting was held in Berlin, Germany, from June 12 - 15, 2022. Despite the ongoing pandemic, ISHR 2022 was well attended with over 650 registered attendees, over 425 posters, and a multitude of offerings, such as Early Career sessions, Local Research



<http://ees.elsevier.com/jmcc/default.asp>
for online submission
of manuscripts

THE NEWS BULLETIN OF THE INTERNATIONAL SOCIETY FOR HEART RESEARCH

Symposia, and a plethora of achievement awards for scientific excellence.

The organization of the ISHR 2022 was led by the Congress chair, Burkert Pieske, and chair of the Scientific Program Committee, Lea Delbridge. The meeting theme, “Heart Research, Innovation, Translation – Cardiovascular science for the next generation” emphasized that transformative basic cardiovascular research requires a global collaborative effort – a message most appropriate for the historical and modern Berlin.



Congress Chair, Burkert Pieske, welcomes delegates to the XXIV ISHR World Congress.

At the opening ceremony, Burkert Pieske reminded all participants of the historical and moral context of this international science conference in Berlin. He illustrated the long-standing tradition of science in Berlin and considered how the spirit of scientific exploration and exchange survived Europe’s darkest years to allow the city to thrive as a vivid and curious global scientific hub, hosting the ISHR World Congress 2022 with enthusiastic guests from all over the world.

ISHR World Congress 2022 was not only the chance to engage in scientific exchange but also to appreciate distinguished achievements by our colleagues. We would like to highlight and congratulate all the winners of awards for outstanding research: Rodolphe Fischmeister (Peter Harris Distinguished Scientist Award), Douglas Lewandowski (Research Achievement Award), Benjamin Prosser (Outstanding Investigator Award), Barbara Casadei (Keith Reimer Distinguished Lecture), Lea Delbridge (Janice Pfeffer Distinguished Lecture), Manuel Mayr (President’s



Delegates mingle at the opening reception.

Distinguished Lecture), Metin Avkiran (Distinguished Leader Award), Andrew Gibb (Richard J. Bing Young Investigator Award) and numerous poster award winners.

Thomas Eschenhagen, outgoing President of the ISHR, highlighted the success story of the society’s journal, the *Journal of Molecular and Cellular Cardiology* (JMCC). Building on this accomplishment, he also announced the recent launch of ISHR’s new open access journal, JMCC PLUS. JMCC PLUS aims to publish basic and translational research that advances knowledge of the mechanisms responsible for both normal and diseased cardiovascular function (see JMCC Editors’ Update, p8 of this issue).

While experienced scientists enjoyed meeting old collaborators and friends, the ISHR World Congress 2022 was the first



ISHR-AUS President, Fadi Charchar, presents the ISHR Janice Pfeffer Distinguished Lecture award to Lea Delbridge.



Manuel Mayr receives the ISHR President's Distinguished Lecture award from Thomas Eschenhagen.



Richard Kitsis and Rong Tian present the 2022 ISHR Research Achievement Award to Douglas Lewandowski.

international scientific meeting for many young researchers to network with their peers. The early and mid-career investigator (ECI and MCI) committees organized a great social program with a fantastic turnout (more than 220 participants at the ECI event), connecting young scientists from all the different ISHR regions - Asia, Australia, North and South America and Europe.

We would like to thank all participants and hope to see all of you at the next ISHR World Congress in 2025 in Nara, Japan.

Burkert Pieske, Congress Chair
Lea Delbridge, Chair of the Scientific Program Committee
Diana Bachran/Djawid Hashemi/Christian Oeing, for the local organizing committee



Chair of the Bing Selection Cmte, Jolanda van der Velden, with (from left) winner of the 2022 Richard J Bing Young Investigator Award, Andrew Gibb, and Finalists Tim Stüdemann and Toshiyuki Ko (not pictured: Finalist Yuliang Feng).I



(from left) Thomas Eschenhagen, Burkert Pieske and Fabio di Lisa join Elizabeth Murphy in congratulating Barbara Casadei, winner of the 2022 ISHR Keith Reimer Distinguished Lecture award.



Delegates enjoy the meeting banquet on the final night of the Congress at the renowned Tipi am Kanzleramt theater.

(continued on page 11)

PRESIDENT'S LETTER



Dear Colleagues,

It is my most profound honor and privilege to serve as President of the ISHR, having previously served our Society as a member of Council (2013-2022), At-large Executive Committee member (2015-2019) and as President-Elect (2019-2022). I would first like to thank outgoing President, Thomas Eschenhagen, and all ISHR Officers for their leadership at ISHR during the difficulties we have faced these past three years. If you recall, starting in 2020, the year after the Beijing World Congress (WC), the world was forced to undergo major changes by the COVID pandemic. Many cities were on lockdown, and many people were prohibited from coming together. The activities of the ISHR in each section were also greatly restricted; however, it was wonderful to see that even in these difficult times, online webinars were conducted mainly by members of the MCI (Mid-Career Investigator) and ECI (Early Career Investigator) networks,

with the support of Thomas Eschenhagen and JMCC Editor, Rong Tian. I would also like to emphasize that this year's World Congress, chaired by Burkert Pieske, was held in person in Berlin and was a great success. I believe that Thomas had a strong desire to allow young researchers to discuss with other scientists in person. Without his strong leadership, the WC could not have been held in person. The scientific programs were successfully executed under the strong leadership of Lea Delbridge (outgoing Secretary-General). In addition, this year Thomas and Rong did a wonderful job in launching the new ISHR open-access journal, JMCC Plus, which is a sister journal of JMCC. I think this was very significant work.

I also appreciate Elizabeth Murphy, the outgoing Past-President of the ISHR, for her outstanding leadership. She has established and supported the ECI and MCI programs, which are working very well. I hope to continue and develop what she has created.

When we look at the world as a whole, the response to the Covid pandemic still varies from Section to Section. As President of ISHR at this difficult time, I believe it is important to reaffirm our mission itself, which is to promote the discovery and dissemination of knowledge in the cardiovascular sciences on a worldwide basis through publications, congress, and other media. In accordance with this mission, I would like to focus on the following:

- (1) Increasing the number of young researchers in the ISHR,
- (2) Encouraging young researchers, through support of graduate students as well as ECI and MCI activities,
- (3) Disseminating and raising awareness of new research techniques, and
- (4) Achieving Inter-Sectional research level harmonization.

To accomplish these goals, I am fortunate to have a very strong and dedicated Council and Executive Committee (Exec Cmt) to work with. The Exec Cmt is composed of me (President), Thomas Eschenhagen (Past-President), Asa Gustafson (President-elect), Jolanda van der Velden (Secretary-General), Livia Hool (Treasurer), Rong Tian (Editor of JMCC), and Bin Zhou (a newly elected At-Large member from Council). I cannot do anything at all on my own. I would like to ask for the help of all Exec Cmt members and all members of the ISHR.

The 2025 WC will be held in Nara, the ancient capital of Japan, under the leadership of Issei Komuro, Congress President, and I look forward to working with the Exec Cmt to make the Nara WC a success. Your advice and support will be greatly appreciated.

Unfortunately, the world is now divided; however, science is independent of politics. Science binds the world's scientists together. Although ISHR's activities might appear to be small in power, I believe that ISHR activities will unite scientists and promote world peace.

Yoshihiko Saito MD.
President, ISHR

REPORT ON THE 2022 XXIV ISHR WORLD CONGRESS

EARLY CAREER INVESTIGATOR EVENTS

JUNE 12 – 15, 2022

The 2022 XXIV ISHR World Congress in Berlin marked the fourth consecutive World Congress to incorporate Early Career Investigator events to kick-off what was an incredible celebration of scientific achievement and therapeutic advancement. The 2022 ECI World Congress Committee was organized to further two paramount goals centered around the World Congress:

1. To increase involvement of and opportunities for ECIs in all sections of ISHR, and
2. To promote unity and comradery amongst ECIs in diverse ISHR sections

These goals and ECI investment have been met with overwhelming support from the ISHR Council and the emphasis continues to be on ECIs pro-actively engaging to maximize the benefit and support for career development. As such, the ECI Committee worked diligently with a local organizing committee in Berlin (Drs. Burkert Pieske, Djawid Hasemi, Frank Heinzl, and Diana Bachran) to coordinate an exemplary program. Furthermore, in the wake of this successful conference bringing together ECIs from the various sections of the ISHR, the ECI Committee will continue to work to set in motion initiatives in coordination with, and with

support from, the ISHR Council aiming to further our two goals.

ISHR World Congress ECI Events

We are excited to share that we received more than 200 ECI abstracts with noted interest in oral presentation from which a stringent and difficult rating process selected 18 top abstracts for presentation at the two ECI symposia. The abstract review committee strived for representation across all ECI sections and general research topic, while still prioritizing the quality of the research and written abstract. The review committee was over-



Career Panelists (from left to right) Prof. Christine Des Rosiers, Dr. Friederike Cuello, Dr. Chris Toepfer, Prof. Burkert Pieske, Prof. Emiliano Medei, and Dr. Kate Weeks.

whelmed by the overall quality of the science coming out of the ECI community, specifically from the younger trainees. Congratulations to all ECIs selected to participate in these symposia for your incredible research accomplishments:

Parisa Aghagolzadeh, Antonio Mura, Bethany Claridge, Romina Di Mattia, Brian Lin, Charles Rabolli, Michael Berlin, Hiran Prag, Yow Keat Tham, Joshua Godoy Coto, Carolina Jaquenod De Giusti, Volha Golubeva, Julie Pires da Silva, Alina Bilal Amara Khan, Zunhan Lu, Daniel Donner, and Joana Silva

These symposia were followed by a career development panel, comprised of leaders in our community at various stages of their careers, which was able to provide incredible insight into the focused topic of “Building Sustainable Research Careers”.



ECIs celebrating an incredible international gathering with over 250 in attendance at the ECI Social Event at The Sage Restaurant.



The ISHR World Congress ECI Committee celebrating after a great day of presentations at the ECI symposia and invaluable lessons taken away from the Career Panel and Café

We are grateful to these panelists for taking the time to share their experiences, successes, and failures with the next generation of cardiovascular scientists:

Prof. Christine Des Rosiers, Prof. Emiliano Medei, Dr. Delphine Mike, Prof. Burkert Pieske, Dr. Kate Weeks, and Dr. Chris Toepfer

Our ECI sessions ended with a “Career Café” luncheon where ECIs were treated to dedicated time with a ‘who’s who’ list of cardiovascular researchers and giants in the field. It’s incredibly inspiring to have such a supportive community of mentors who will unquestionably set aside time to share their views with our ECIs over lunch:

Christine Des Rosiers, Emiliano Medei, Delphine Mika, Burkert Pieske, Christopher Toepfer, Kate Weeks, Alejandro Aiello, Johannes Backs, James Bell, Lucie Carrier, Friederike Cuello, David Eisner, Ana Maria Gomez, Lisa Heather, Livia Hool, Litsa Kranias, Gary Lopaschuk, Rebecca Ritchie, Rong Tian, Ron Vagnozzi, Jolanda van der Velden, Jenny Van Eyk, and Sara Nunes Vasconcelos

Finally, it wouldn’t be an ISHR World Congress without an ECI Social Event which was spearheaded by none other than Drs. Burkert Pieske and Djawid Hashemi and took place at the marvelous outdoor venue, The Sage. This was an excellent opportunity to catch-up with old friends and make new connections at this international gathering.

Continued ECI Initiatives

The ISHR ECI community is indebted to the ISHR Council who generously supported a record breaking 11 Visiting Research Fellowships that allowed ECIs to travel to host labs to learn new methodologies that would enhance their own research programs! It’s also worth noting

that there certainly was no shortage of host labs who readily volunteered to take on an ECI which, again, speaks to the supportive nature of this community (see Visiting Research Fellows p13 of this issue).

A second blossoming initiative to emerge out of the World Congress was the announcement of an ECI Special Issue supported by the *Journal of Molecular and Cellular Cardiology* that will allow for ECIs to collaboratively work towards submitting a review article or short communication, with the aim of promoting career development.

Finally, as we look towards the 2025 ISHR World Congress in Japan, the ECI Committee is working to establish a standing committee with a representative that will sit in on the ISHR Council meetings as an *ex officio* member. The goal will be to continue to foster inter-Section collaboration and community development while building a stronger and more expansive ECI member base and pathway for career enhancement.

Erik Blackwood
Chair, ECI-Intl Committee

2022 ISHR World Congress ECI-Intl Committee

Faculty Advisors

Litsa Kranias, PhD
University of Cincinnati College of Medicine

Friederike Cuello, PhD
University Medical Center Hamburg-Eppendorf

Executive Committee

Erik Blackwood, PhD (Chair, NAS)
University of Arizona College of Medicine – Phoenix

Yow Keat Tham, PhD (Vice-Chair, AUS)
Baker Heart and Diabetes Institute, Melbourne, Australia

Carolina Jaquenod De Giusti, PhD (Secretary, LAT)
University of La Plata, Argentina

ECI Members

Alejandro Ciocci Pardo, PhD (LAT)
Dr. Horacio E. Cingolani Cardiovascular Research Center, La Plata, Argentina

Edward Lau, PhD (NAS)
University of Colorado School of Medicine

Bernadin Ndongson-Dongmo, PhD (EUR)
Oslo University Hospital

Julie Pires da Silva, PhD (EUR)
University of Toulouse, France

Celine Santiago, PhD (AUS)
Victor Chang Cardiac Research Institute, Sydney, Australia

Zhaoyang Chen, MD, PhD (CHI)
Union Hospital of Fujian Medical University

Jinlong He, PhD (CHI)
Tianjin Medical University

Seitaro Nomura, MD, PhD (JPN)
The University of Tokyo

Tomokazu Murakawa, MD, PhD (JPN)
Osaka University Graduate School of Medicine

Berlin Local Organizing Committee

Djawid Hashemi, MD (EUR)
Charite – Medical University of Berlin

Frank Heinzl, PhD (EUR)
Charite – Medical University of Berlin

Diana Bachran, PhD (EUR)
Charite – Medical University of Berlin

MID-CAREER INVESTIGATOR EVENTS AT THE 2022 ISHR WORLD CONGRESS

In 2019, ISHR International established a Mid-Career Investigator (MCI) Committee that pledged to promote interests of the MCIs, i.e. researchers 8-15 years post terminal degree and those who have not yet reached the rank of Full Professor. The second live meeting of the MCI community took place at the 2022 ISHR World Congress in beautiful and vibrant Berlin.

Following the very successful first event of the MCI community back in 2019 at the Beijing World Congress and the inevitable break imposed by the world-wide pandemic on in-person meetings, researchers from all around the world were eager to physically meet again in Berlin. Indeed, the enthusiasm and the need to interact in person were strongly felt at the second MCI event. Although not all Sections could be represented at the meeting due to several remaining pandemic-related travel restrictions, the 2022 Berlin World Congress was well attended by the MCIs: over 50 abstracts were submitted directly by MCIs for the Congress, additional abstracts were submitted by younger researchers working in groups led by MCIs, and each of the symposia at the World Congress included at least one talk given by an MCI.

The MCI researchers from all over the world gathered on June 13th at the MCI panel and social to meet their colleagues and discuss the priorities and needs of this particular community. We initially provided an overview of new MCI initiatives implemented by the MCI Committee over the past three years. This included the Outstanding Investigator Award that has now been reassigned to recognize research excellence at the MCI career stage, the active participation of MCI speakers in

the World Congress and Section Meeting symposia, the MCI discussion panel & social event at the World Congress, and the Annual MCI column in *Heart News & Views*. When discussing future directions, a clear need for networking and staying connected emerged within this community. Towards that end, the MCI representatives of the Japanese Section made a major step forward and established a website to enhance science/collaboration/understanding among young researchers in the field of cardiovascular research (<https://www.u45ishr.com>) – an excellent initiative that could be expanded across the different Sections. The Panel also discussed organizing an MCI-International online meeting on a yearly basis, the possibility of supporting MCI travel to the World Congress through travel awards and the involvement of MCIs at the editorial level in the Society journals.

The panel discussion was followed by the social event and reception, kindly supported by the ISHR-International Council. MCIs continued to network and socialize in a more informal environment and new connections were made between researchers across the different Sections. The lively and friendly atmosphere attracted many researchers and inevitably ran late into the night!! Overall, the second MCI event in

Berlin was very successful and helped to establish a strong base for a dynamic and well-connected MCI community. We look forward to seeing these activities develop further at future World Congresses.

Authored by Nina Kaludercic (National Research Council of Italy) and James Bell (La Trobe University, Australia)

2022 ISHR-International MCI Committee

Nina Kaludercic, Co-Chair,
Berlin Congress

Jim Bell, Co-chair, Berlin Congress

Davor Pavlovic

Alejandro Orłowski

Jeff Erickson

Marcella Sorelli

Hideki Uosaki

Seitaro Nomura

Ippei Shimizu

Nicole Purcell

Susmita Sahoo

Xue-Yan Jiang

Han Xiao

Uma Nahar Saikia

Sivasubramanianarah Ramakrishnan

To stay updated on MCI activities and events follow us on the MCI Facebook page (<https://www.facebook.com/groups/2312750082315181>), LinkedIn page (<https://www.linkedin.com/groups/12210329/>), and Twitter (@IshrMci).

JMCC EDITORS' UPDATE



Introducing:

JMCC Plus, ISHR's new open access journal

We are pleased to announce the launch of a new open access journal called *Journal of Molecular and Cellular Cardiology Plus (JMCC Plus)*. JMCC Plus is the companion journal to our flagship JMCC, established over 50 years ago by the International Society for Heart Research (ISHR). With the strong commitment of the Society, we are confident that JMCC Plus will be of high scientific merit and credibility. The new journal's first issue, published in September 2022, can be read online at: <https://www.sciencedirect.com/journal/journal-of-molecular-and-cellular-cardiology-plus>

Led by Editor in Chief, Rong Tian, and Deputy Editor, Davor Pavlovic, the new JMCC Plus publishes fundamental and translational research that advances knowledge of the mechanisms responsible for both normal and diseased cardiovascular function. JMCC PLUS focuses on robust scientific validity and high technical quality. In addition to mechanistic research, the journal will consider rigorously tested negative results, replication studies, studies repeating key experiments in different model systems and datasets generated from functional or multi-omics studies as resource papers. We will accept submission of Research Articles, Resource papers, Reviews, Editorials and Correspondence.

One motivation to launch JMCC Plus is to improve the scientific dialogue and build a stronger community by integrating publishing with contemporary communication platforms such as our associated webinar and podcast opportunities, and other social media channels. Our goal is to develop the journal into a go-to vehicle for rapid and reliable dissemination of cardiovascular research findings.

Collaboration between JMCC and JMCC Plus

The two journals will share the editorial board initially. Direct submissions to JMCC Plus will undergo fast and rigorous peer review, with expected turnaround times of 2-3 weeks. We will also cascade

exciting original research from our companion journal JMCC, on the basis of recommendations from the JMCC editorial team. For the papers that have already undergone review and have been recommended for transfer from the JMCC, we will not require any new experiments to be performed. We would only request that the authors satisfactorily address the reviewers' concerns. We hope that this will be attractive to authors whose work does not quite reach a required novelty threshold for JMCC but are keen to expedite the publication process. As soon as the paper is accepted and formatted it will be published online.

Authors of studies that are deemed of high interest to our readers will be offered opportunities to present their work as part of our successful webinar and podcast series. Webinars will be posted on our established JMCC-ISHR YouTube channel (<https://www.youtube.com/channel/UCxVfdGmm-jYoEgRqWEHibSA>) and our Scientist in the Spotlight podcast series is available to listen to on Apple Podcasts, Google Podcasts, Pandora and Podbean. Our social media team will work hard to promote your work on our social media channels.

Special issues and call for papers

JMCC Plus will publish special issues of chosen theme on a regular basis. Currently, we have several special issues under development, including one on

“*Structural and Electrical Remodelling in HFpEF: What is actually preserved?*” and another on “*Electrical and optical mapping technologies for cardiovascular research*”. If you have an idea for a special issue, please get in touch with us at rongtian@uw.com or D.Pavlovic@bham.ac.uk with your proposal.

We have also launched an open call for papers on “*Reproducibility and Reporting of Negative Results in Cardiovascular Research*”. Reproducibility of scientific research is becoming a major issue. Part of the problem is publication bias, in that studies reporting positive data are more likely to get published. At JMCC Plus, we feel that if the study methodology is valid, the results are of value, irrespective of the outcome. We hope that publishing credible negative results will not only help prevent publication bias but also avoid unnecessary duplication of work, reduce animal usage and waste of valuable lab resources. To this end, we encourage you to submit the work that is technically valid and robustly executed but does not necessarily have the highest novelty. Types of studies we will consider, include:

- original research reporting negative data
- original research with rigorous but unsuccessful effort to reproduce a published result
- original research confirming previously published studies but in a different experimental model or species

We hope that you will engage with JMCC Plus as a reader, viewer and listener, and of course we encourage you to send us your work for publication. Note that there are no publication charges for papers submitted before January 31, 2023. We look forward to seeing your work in the pages of JMCC Plus soon.

Rong Tian, MD, PhD
Editor-in-Chief

Davor Pavlovic
Deputy Editor, JMCC Plus

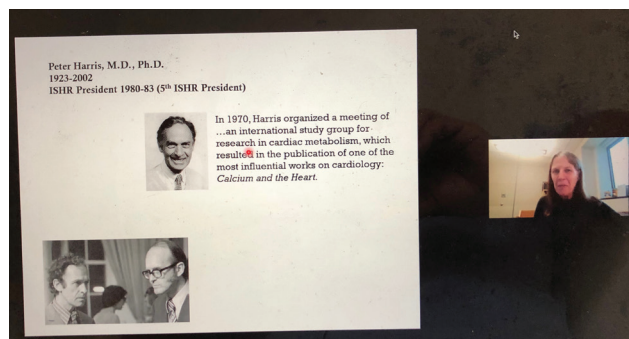
REPORT ON THE LATIN AMERICAN SECTION MEETING

(MARCH 22-26, 2022; VIRTUAL MEETING)

The 2021 ISHR – LA Annual Meeting was held online from November 22-26, 2021. A highlight of this week was the opening Peter Harris Distinguished Scientist Award lecture presented by Dr Elizabeth Murphy (NHLBI, NIH, USA). In addition, we had the honor of attending a brilliant presentation by Dra Alicia Mattiazzi (CIC, CONICET, UNLP, La Plata, Argentina) to close the meeting. The remainder of the meeting was devoted to presentations from young investigators. Four early career investigators (ECIs) and 2 mid-career Investigators (MCIs) presented their work. For the first time in the Annual Meeting we also invited young speakers, thus, 11 Ph.D. students were invited to speak and gave short, but so impressive, talks. The sessions were attended by about 100 people every day!

On the last day we had an “ISHR-LA Assembly”, in which we presented a brief report about our activities over the past two years. We also held an election in which Dr. Alejandro Aiello from University of La Plata – Argentina was elected as President of ISHR-LA for the next two year period.

Emiliano Medei
Federal University
Rio de Janeiro, Brazil



Elizabeth Murphy delivered the 2021 ISHR Distinguished Scientist Award lecture, which honors the renowned scientist and 5th President of ISHR-International, Peter Harris.



Incoming ISHR-LA President (2022-2023), Alejandro Aiello.



Outgoing ISHR-LA Officers, Emiliano Medei (President, upper left), Marcela Carneiro Ramos (Treasurer, upper right) and Danilo Roman Campos (Secretary, lower middle).

The Latin American ISHR 2021 meeting had wonderful talks; however, I think the most important aspect was the opportunity that our Ph.D. students and early career investigators (ECI) had to show their work and interact with more senior researchers.

Zully Pedrozo – University of Chile - Chile



Meeting attendees on ZOOM.

Latin American Congresses 2020 and 2021: Success over adversity

In the last two years (2020-2021), the ISHR Latin American Section was chaired by Emiliano Medei. Right from the beginning, Emiliano and his group began to delineate the future activities of the Society, among which the two following Latin American Congresses would be their main priority. Their plan was that at least one of the Congresses would be held in the appealing and warm city of Rio de Janeiro, where Emiliano lives and works. Unexpectedly, the pandemic cast a cloud over their enthusiastic projects, preventing an in-person meeting.

The cloud was dissipated, however, by a luminous idea of Emiliano's. The 2020 Congress (July 13-17, 2020) was virtual as it had to be; however, the distinction, compared to other Congresses, was not the virtual format. The great difference was that it was conceived as a "Theme Congress" in which Latin American women associated with the ISHR-LA were honored. This sincere and warm tribute to five different female scientists, one at the beginning of each congress session, worked as an antidote against the impersonal nature of a virtual event, bringing the climate of friendship and affection that usually reigns in the ISHR Congress.

2021 was again a "pandemic and virtual year". Emiliano and his team had to deal once more with the same obstinate and threatening obstacle. And again, they were able to make a difference. In this opportunity the "theme" was "young scientists". With the exception of the opening and closing lectures, the five days of the Congress were filled with talks,

posters and different activities that exclusively involved young scientists, some of them students. The experience was more than positive. The young people showed great thoroughness in their presentations, presenting new and interesting results, some of them obtained during the hard pandemic days. In addition, they brought to the Congress a refreshing and somewhat optimistic atmosphere, that we all needed and enjoyed.

Congratulations to Emiliano and his team for their excellent work!

**Alicia Mattiazzi, FISHR, University of La Plata
- Argentina**



ISHR-LA scientists who spoke in the event and were honored with the "ISHR-LA Contributing Women of Distinction Award" included Dra Mattiazzi, Paulina Donoso (University of Chile), Elena C. Lacano (University of Favaloro), Gina Sanchez (University of Chile) and Rosana Almada Bassani (UNICAMP).

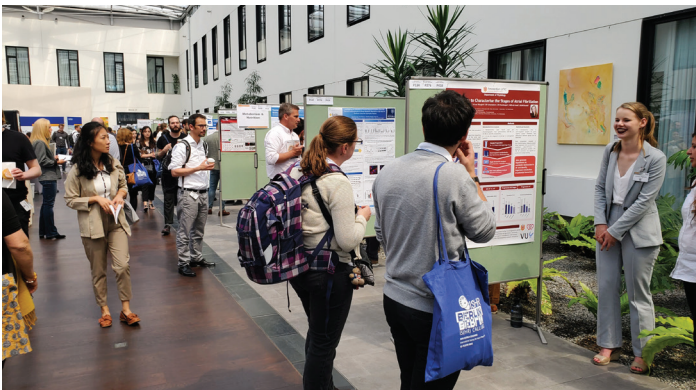
(continued from page 3)



Rodolphe Fischmeister presents the 2022 Peter Harris Distinguished Scientist Award lecture.



Incoming and outgoing ISHR Officers: (from left) Asa Gustafsson (President-Elect), Thomas Eschenhagen (Past-President), Elizabeth Murphy (outgoing Past-President and 26 year member of the ISHR-Intl Council), Livia Hool (Treasurer), Yoshi Saito (President), Lea Delbridge (outgoing Secretary General and Chair of the Scientific Program Cmte) and Jolanda van der Velden (Secretary General).



Lively scientific exchange and networking took place at the three afternoon poster sessions.



**ISHR-International Council
2022-2025**

President

Y Saito *Japan*

President-Elect

A Gustafsson *USA*

Past President

T Eschenhagen *Germany*

Secretary General

J Van der Velden *Netherlands*

Treasurer

L Hool *Australia*

Journal Editor

R Tian *USA*

Bulletin Editor

LA Lobaugh *USA*

Council

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L Carrier *Germany*

F Charchar *Australia*

J Elrod *USA*

M Giacca *UK*

Ana-Maria Gomez *France*

E Hirsch *Italy*

M Ieda *Japan*

N Kaludercic *Italy*

T Kamp *USA*

L Kirshenbaum *USA*

D Lefer *USA*

L Leinwand *USA*

R Ritchie *Australia*

I Shiojima *Japan*

KK Talwar *India*

Y Wang *USA*

M Xu *China*

M Yano *Japan*

Bin Zhou *China*

Yi Zhu *China*



2022 Fellows of the ISHR

Maha Abdellatif, *USA*

E Dale Abel, *USA*

Gianluigi Condorelli, *Italy*

Jennifer Davis, *USA*

Christine des Rosiers, *USA*

John Elrod, *USA*

Stefan Engelhardt, *Germany*

Mark Entman, *USA*

Daniel Garry, *USA*

Mauro Giacca, *UK*

James Hudson, *Australia*

Steven Jones, *USA*

Timothy Kamp, *USA*

Maria Kontaridis, *USA*

Sergio Lavandero, *Chile*

David Lefer, *USA*

Frank Lezoual'ch, *France*

Christoph Maack, *Germany*

Timothy McKinsey, *USA*

Yoshikazu Nakaoka, *Japan*

Jeanne Nerbonne, *USA*

Benjamin Prosser, *USA*

Rebecca Ritchie, *Australia*

Sakthivel Sadayappan, *USA*

Tatsuya Shimizu, *Japan*

Long-sheng Song, *USA*

Jil Tardiff, *USA*

Andrew Trafford, *UK*

Gregoire Vandecasteele, *France*

Li Wang, *China*

Martin Young, *USA*

Ying Yu, *China*

Jianyí (Jay) Zhang, *USA*



**International Society
for Heart Research**

A NEW LOOK FOR ISHR IN 2022!

Thanks to the initiative and vision of ISHR-North American Section President, David Lefer, and his team, ISHR has a new logo beginning in 2022!

Results of our poll in July indicated that members overwhelmingly preferred a dark blue and red color scheme - a nod to our previous logo and long and distinguished ISHR history. Our new look reflects new ISHR initiatives and brands ISHR as a strong and modern research community moving forward.

Look for the new logo on all ISHR websites and communications!



ISHR EARLY CAREER INVESTIGATOR VISITING RESEARCH FELLOWS – 2022

Dulasi Arunthavarajah

University of Oslo, Norway

Host: Dr Gabriele Schiattarella

Charité Universitätsmedizin, Berlin

During the week of July 18th, I visited Gabriele Schiattarella's lab at Charité Universitätsmedizin in Berlin. I am currently working on CNP treatment in a mouse model of HFpEF, and the model I am trying to replicate is the 'two-hit mouse model of HFpEF'¹ that Dr Schiattarella has established in his lab. Our research interests are very similar as I am also eagerly interested in the role of the mitochondria in HFpEF and the crosstalk between peripheral organs and the heart.



Measuring oxygen consumption in isolated mitochondria

I observed how Dr Rongling Wang prepared the L-NAME in drinking water and high fat diet to induce HFpEF and we were able to discuss the differences between the preparation of feeding regimes employed in both labs. Dr Rongling Wang also took me through the process of isolating mitochondria from fresh mouse heart tissue and taking oxygen consumption measurements using the Neofox and Neofox Viewer software (Figure 1).

Dr Schiattarella was able to teach me their method of image capturing and analysis of echocardiography (echo) on the mice which involved measuring systolic parameters and cardiac wall dimensions (conscious echo) as well as diastolic parameters, tissue strain and flow (unconscious echo).

I would like to thank the ISHR ECI committee and ISHR-Intl Executive Committee for awarding me a Visiting Research fellowship and Dr Gabriele Schiattarella for hosting me in his laboratory.

References:

1. Schiattarella, G. G. *et al.* Nitrosative stress drives heart failure with preserved ejection fraction. *Nature* **568**, 351–356 (2019).

Julia Liu

University of Minnesota

Host: Dr Christoph Maack

University Hospital of Würzburg

I am a new assistant professor at the University of Minnesota in the Department of Integrative Biology and Physiology. My lab is broadly interested in the role of mitochondria in generating, signaling, and responding to cellular stress, particularly in cardiac and skeletal muscle. We currently focus on how the dysregulation of mitochondrial Ca²⁺ impacts the physiology of the heart and potentially alters disease progression. Given my interests in the role of mitochondria in bioenergetics as well as cell death, visiting the lab of



Julia (fourth from the right) on an outing with the Maack lab group (Dr Maack is on the far left).

Dr. Christoph Maack at the Universitätsklinikum Würzburg was an exceptional opportunity. Dr. Maack is an expert in the interaction between mitochondrial energetics and excitation-contraction coupling, and studies how this interaction is impaired in cardiac diseases. His lab has published seminal papers on how mitochondrial Ca²⁺ affects these processes.

The Maack lab hosted me and two other ISHR visiting fellows, and we worked closely with several lab members who were collaborating on an ongoing project. Each day adult cardiac myocytes (ACMs) were isolated from a rat heart via the Langendorff perfusion method, and mitochondria were isolated from the remaining tissue by dounce homogenizing. ACMs were used for experiments measuring contractility via sarcomere length, the redox state of NAD/FAD, reactive oxygen species (ROS) via DCF, cytosolic Ca²⁺ via Indo-1 and membrane potential via TMRM. Each of these was measured on multiple ACMs during a sequence of pacing and isoproterenol perfusion on a MultiCell High Throughput System from IonOptix. Seeing this caliber of experimentation inspired me to start working with a manual IonOptix in my department and eventually develop perfusion capabilities. Simultaneously, the Maack lab measured oxygen consumption in the isolated mitochondria using an Oroboros O2k, which can simultaneously monitor oxygen and fluorescent signal, for example using AmplexRed to sense ROS. I had read about this technology previously but learned much more from seeing the experiments in real time.

I enjoyed my week in Würzburg immensely, both scientifically and personally. I stayed in an Airbnb in a quaint residential area not far from the town center and a 20-minute walk from the lab. I had a little time for sightseeing on some evenings, and I was lucky to have two other fellows, Gaia and Joshua, to explore with. Dr. Maack was also kind enough to invite us along on a lab canoeing trip and dinner. Overall, I learned so much inside and outside the lab and made connections with wonderful and collegial scientists. I highly recommend the visiting fellowship to future applicants and thank the ISHR and the Maack lab for this amazing opportunity.

Gaia Calamera

University of Oslo, Norway

Host: Dr Christoph Maack

University Hospital of Würzburg



Gaia Calamera

During the week of June 20th, I visited Christoph Maack's lab at the Comprehensive Heart failure center at the University Hospital of Würzburg. I am currently working on the natriuretic peptides' effect on mitochondria function and as I am new to the field, I wanted to learn more about the role of mitochondria in the heart and the various techniques available to study organelle function.

In Christoph Maack's lab they are focusing on the interplay between EC coupling and mitochondrial energetics; to do so they have established several experimental techniques to measure mitochondria function in intact isolated cardiomyocytes and also in isolated mitochondria. During my visit, Dr Michael Kohlhaas showed me how to use their equipment for cellular electrophysiology and I was able to go through how to measure NADH and FADH in adult cardiomyocytes together with contraction relaxation measurements. I also observed the engineers and medical students performing isolation of adult cardiomyocytes from adult rat and isolation of mitochondria from heart tissue. During the week, I also worked closely with Dr Jan Duke who taught me the Seahorse methodology and this allowed me to test natriuretic peptides' effect on oxygen consumption and respiratory rate on isolated cardiomyocytes.

Finally, I would like to thank the whole group for the fruitful week in Dr Maack's lab and the ISHR ECI Committee together with the Executive Council for awarding me the fellowship.

Emma Robinson

University of Colorado

Host: Dr Gabrielle Schiattarella

Charite

For a few days either side of the ISHR World congress meeting held in Berlin 12 – 15th June 2022, I visited the laboratory of Dr Gabriele Schiattarella at Charité Universitätsmedizin in Berlin. Dr Schiattarella is expert in oxidative metabolic stress, cardiac physiology and pre-clinical models of heart failure with preserved ejection fraction (HFPEF). Our research interests very much align in understanding metabolic perturbations in different organs in HFPEF and crosstalk between peripheral organs and the heart in cardiometabolic disease.

On Thursday 9th and Friday 10th June, we went through the process of isolating mitochondria from fresh mouse heart tissue and taking oxygen consumption measurements and analysis using the Neofox and Neofox Viewer software. We have exchanged protocols for mitochondrial isolation from fresh and frozen tissue and I plan to implement this in my home lab on mouse heart and adipose tissue. I also shadowed Dr Rongling Wang performing Seahorse (Agilent) assays to measure ATP production in H9c2 rat myoblast cells and went through the analysis.

Following the ISHR World congress, I spent the remainder of the week back in the lab with Dr Schiattarella, learning how to image and analyze echocardiography (echo). This included systolic parameters and cardiac wall dimensions (conscious echo) as well as diastolic parameters, tissue strain and flow (unconscious echo, Figure 1). I also observed the preparation of high fat diet and L-NAME in drinking water to progressively induce diastolic dysfunction in mice, which we plan to emulate in our lab back in Colorado.^{1,2} I'd like to thank the ISHR ECI committee and Executive Council for awarding me a Visiting Research fellowship in 2022 and to Dr Gabriele Schiattarella for hosting me in his laboratory. I learned techniques in the host lab that I had not previously used and will implement them in my home lab.

Relevant Tweet: <https://twitter.com/Robinson7L/status/1537945312932732929>

References:

1. Schiattarella, G. G. *et al.* Nitrosative stress drives heart failure with preserved ejection fraction. *Nature* **568**, 351–356 (2019).
2. Tong Dan *et al.* Female Sex Is Protective in a Preclinical Model of Heart Failure With Preserved Ejection Fraction. *Circulation* **140**, 1769–1771 (2019).



Analyzing echocardiography images on the Vevo 3199 for diastolic function 06-16-2022.

CALENDAR

- **December 16-17, 2022.** XXXIX Annual Meeting of the Japanese Section. Tokyo, Japan.
Inquiries: Michihiro Yoshimura, m.yoshimura@jikei.ac.jp
- **June 1-3, 2023.** Annual Meeting of the ISHR-Latin American Section. Mendoza City, Argentina.
Inquiries: Maria Celeste Abrille, mcvillaabril74@gmail.com
- **June 26-30, 2023.** XLII Annual Meeting of the ISHR-North American Section. Madison, WI, USA.
Inquiries: Tim Kamp, tjk@medicine.wisc.edu
- **June 10-13, 2023.** XXXVII Annual Meeting of the European Section. Porto, Portugal.
Inquiries: Paula da Costa Martins, p.dacostamartins@maastrichtuniversity.nl
- **August 4-6, 2023.** XLVII Annual Meeting of the Australasian Section (held jointly with the Cardiac Society of Australia and New Zealand). Adelaide, Australia.
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