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JMCC WELCOMES NEW EDITORIAL TEAM

ISHR’s official journal, the Journal of Molecular and Cellular Cardiology (JMCC), has seen exciting changes this year. In January, a new editorial team took the helm, led by Editor-in-Chief Rong Tian and Deputy Editor Michael Regnier, both from the University of Washington. A new group of dynamic Associate Editors and Consulting Editors join them (see sidebar).

Many thanks to the outgoing Editor-in-Chief, John Solaro, and his team for their outstanding service to maintain the high quality of science published in JMCC. The new team strives to continue this tradition of excellent service to the cardiovascular research community as they also work to help JMCC grow and evolve with today’s science.

In the first few months of 2020, the new team has made some changes to the journal with the goal of increasing JMCC’s impact on cardiovascular research through innovation, rigor and global coverage. The changes were all made with the goal of helping JMCC distinguish itself with unique characteristics to attract the best papers not only in traditional research areas, but also in emerging approaches and state of the art technologies.

Several new initiatives have been put in place for the coming year:

**JMCC has a new look**

Beginning with the January 2020 issue, JMCC has a new cover design. It was chosen from dozens of submissions as part of a design competition.
held by ISHR last fall. The design was chosen for its modern and clean look, with a hint of yellow to reflect the journal’s signature color.

**New article categories and types**

JMCC aims to expand its reach to include not only traditional research areas, but also emerging approaches and technologies. Several members of the new editorial team bring expertise to help the journal expand to include the bioengineering and technology space.

Several Special Issues are underway focusing on both traditional and new areas of interest for the journal. Special sections on “Unsolved Mysteries and Controversies of Mitochondria in the Heart,” and “Cutting Edge Technologies in Cardiovascular Research” began publishing articles this spring, and a special section on Computational Modeling is in the works. In addition, the editors have received an excellent response to a call for papers to address “COVID-19 and Cardiovascular Mechanisms.” The first papers addressing COVID-19 were published in the April issue.

To further expand its reach, JMCC is now publishing several new types of articles, including “Methods/How-To,” “Perspectives,” and “Short Communications.” These are intended to bring attention to novel ideas and approaches and to foster discussions in areas of high impact research. In addition, self-submitted review articles have been phased out. Review articles of high quality are now published at the invitation of the editorial team.

**Focus on the ISHR and ECI community**

This spring JMCC launched a program for junior reviewers who are ISHR members and senior postdoctoral fellows or beginning faculty. Junior reviewers rotate through the editorial board in a one-year term during which they will serve as the third reviewer of the manuscript and receive mentorship from editorial board members.

Beginning in April, JMCC and ISHR began co-sponsoring a Cardiovascular Webinar Series to provide a forum for exchange and dissemination of research findings during a time when many labs worldwide are closed due to COVID-19.

**JMCC gets social**

JMCC is now on social media! The journal’s handle is @JMCCardiology on both Facebook and Twitter. Please follow the JMCC for highlights from our published articles and other journal news and opportunities.

JMCC aims to provide a central forum for discussion and reporting on the cutting edge of cardiovascular research. If you have ideas for additions or improvements to the journal, please contact Rong Tian at rongtian@uw.edu.

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**Meet the JMCC Editorial Team**

**Editor-in-Chief**

**Rong Tian**

*University of Washington, Seattle, Washington, United States*

Rong Tian is joint Professor of Anesthesiology & Pain Medicine and Bioengineering, Adjunct Professor of Biochemistry and Pathology, and Director of the Mitochondria and Metabolism Center at the University of Washington School of Medicine. Her research focuses on the molecular mechanisms regulating cell metabolism and energetics with the goal of understanding the role of mitochondria and metabolism in the pathogenesis of human diseases.

**Deputy Editor**

**Mike Regnier**

*University of Washington, Seattle, Washington, United States*

Michael Regnier is Professor and Interim Chair of Bioengineering, and Director of the Center for Translational Muscle Research at the University of Washington. The focus of his research is to understand the molecular and cellular mechanisms that regulate muscle contraction and its dysfunction with disease using a variety of molecular biology, genetic and biomechanical and computational modeling approaches.

**Associate Editors**

**Johannes Backs, MD**

*Heidelberg University, Heidelberg, Germany*

Johannes Backs is Director of the Department of Molecular Cardiology & Epigenetics and Executive Director of the Institute of Experimental Cardiology at Heidelberg University Hospital. His research in the fields of cardiac gene regulation and metabolism has demonstrated that lipid droplet-associated enzymes regulate histone deacetylases controlling the level of glucose metabolites, thus calcium handling and, ultimately, cardiac function.
Jennifer Davis, PhD  
*University of Washington, Seattle, Washington, United States*  
Jennifer Davis is Assistant Professor of Pathology and Bioengineering and the Director of the Center for Cardiovascular Biology at the University of Washington. Her laboratory utilizes interdisciplinary approaches that include mouse genetics, cellular engineering and transcriptomics to examine the mechanistic basis for striated muscle and extracellular matrix remodeling and cardiac wound healing.

Isabelle Deschênes, PhD  
*The Ohio State University, Columbus, Ohio, United States*  
Isabelle Deschênes is Professor and Chair, Department of Physiology and Cell Biology at the Ohio State University. Her work combines molecular and electrophysiological techniques to study inherited arrhythmias caused by defects in ion channels and acquired disease states, genotype-phenotype discordance in several inherited arrhythmias, and the contributions of ion channels structure, assembly, trafficking and transcriptional regulation to the development of arrhythmias.

Roger S. Y. Foo, MD, FRCP  
*National University of Singapore, Cardiovascular Research Institute, Singapore, Singapore*  
Roger Foo is Professor of Medicine at the National University of Singapore, Senior Group Leader at the Genome Institute of Singapore and Senior Consultant lead for the Cardiac Genetics clinic, National University Heart Centre. His lab studies the epigenome of the heart, using advanced technology including single cell transcriptomics, chromatin conformation assays and Crispr-genome editing to discover novel avenues for therapies or biomarkers.

Ana Maria Gómez, PhD, PharmD  
*UniverSud Paris, Chaténay-Malabry, France*  
Ana Maria Gómez is the Director of Research at INSERM and Chair of the Laboratory of Signaling and Cardiovascular Pathophysiology, Université Paris-Saclay. The aim of her research is to elucidate the roles and the mechanisms of Ca²⁺ flux alterations in cardiac pathologies focusing on established heart failure, hypertrophy/heart failure initiation and on the origin of arrhythmia.

Rebekah Gundry, PhD  
*University of Nebraska Medical Center, Omaha, Nebraska, United States*  
Rebekah Gundry is Professor and Vice Chair of Cellular and Integrative Physiology, Assistant Chief of Basic and Translational Research in the Division of Cardiovascular medicine, and Director of the CardiOmics Program at the University of Nebraska Medical Center. Her laboratory develops and applies innovative mass spectrometry and bioinformatics approaches to study cell surface proteins and glycans to answer outstanding questions in stem cell and cardiac biology and disease.

Åsa Gustafsson, PhD  
*University of California San Diego Skaggs School of Pharmacy and Pharmaceutical Sciences, La Jolla, California, United States*  
Åsa Gustafsson is Professor in the Skaggs School of Pharmacy and Pharmaceutical Sciences at the University of California San Diego, and Chair of the Biomedical Sciences Graduate Program. Her research is focused on understanding the molecular pathways that regulate mitochondrial structure, function and turnover in the heart.
Jolanda van der Velden, PhD
Amsterdam Universitair Medische Centra, Duivendrecht, Netherlands

Jolanda van der Velden is chair of the Department for Physiology at the Amsterdam University Medical Center and director of the Amsterdam Cardiovascular Science Institute. Her main research interest is the role of sarcomere proteins in cardiac performance for which specific protein analyses and functional assays have been designed.

Yibin Wang, PhD
University of California Los Angeles
David Geffen School of Medicine, Los Angeles, California, United States

Yibin Wang is Professor of Molecular Medicine in the Department of anesthesiology and Perioperative Medicine at David Geffen School of Medicine, UCLA. His research mainly focuses on genetic and molecular mechanisms of heart failure and metabolic disorders.

Huangtian Yang, MD, PhD
Shanghai Institutes for Biological Sciences Chinese Academy of Sciences, Shanghai, China

Huangtian Yang is Professor and Head of the Laboratory of Molecular Cardiology at Shanghai Institute of Nutrition and Health, Chinese Academy of Sciences. She is internationally recognized for her expertise in cardioprotection and the cardiac lineage commitment of pluripotent stem cells (PSCs) and their application in cardiac repair.

Ming-Hui Zou, MD, PhD
Georgia State University, Atlanta, Georgia, United States

Ming-Hui Zou is the founding director of the Center of Molecular and Translational Medicine, and Associate Vice President of Research, Georgia State University. He studies the role of oxidative stress in cardiovascular biology and diseases, and has demonstrated that selective modification of two key proteins is critical in the dysregulation of vessel function, that the AMP-activated kinase functions as a redox sensor and modulator of oxidative stress, and that dysfunctional LKB1/AMPK promotes cardiovascular disorders.

Wolfram-Hubertus Zimmermann, MD
Georg-August-Universitat Göttingen Universitätsmedizin, Göttingen, Germany

Wolfram-Hubertus Zimmermann is Professor of Pharmacology and Director of the Institute of Pharmacology and Toxicology at the University Medical Center, Georg-August University in Göttingen. His research interests include novel pharmacological and cell-based approaches to repair failing organs with a special emphasis on tissue-engineered heart repair.

Jenny Kimbel
Managing Editor, JMCC

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Tohru Fukai (Augusta, GA, USA)
Francis Kim (Seattle, WA, USA)
President’s Letter

We are living in special times. The Covid-19 epidemic has been challenging our lives as scientists and citizens for more than four months now, and the end of this worldwide nightmare is still unforeseeable. And even if the number of new infections and Covid-19-related deaths is declining in many countries of the world, it is still on the rise in others, notably in countries with less economic power and health care system capacities than China, Europe and North America. The consequences are still difficult to predict, but are severe and will be long-lasting. The permanent and direct threat to virtually everybody’s health, the restrictions of personal freedom are, in the life of almost every one of us, unprecedented. As are the perceived helplessness of medicine, the surprising lack of simple and cheap medical equipment such as masks and disinfectants, the difficulties in managing quarantine on a state-wide level, closed borders and a return to nationalistic behaviour just to mention a few. And it is, for me, still unimaginable what the whole shutdown of economic and scientific life for months will mean in the long run.

Lastly, the crisis brought a big disappointment for all of us who had organized scientific conferences and put so much personal effort into it. This is also true for most ISHR section meetings which had to be postponed or even canceled in 2020, and I would like to express my sincere thanks to the organizers for their flexibility and urge them to keep on going. Another related consequence is that we as ISHR International had to cancel the entire ISHR Awards and Lectures process for 2021, expecting that 2020 awardees will give their lectures at the conferences in 2021 postponed from 2020. This is, in ISHR terms, truly historical.

But this crisis has also brought a number of positives. As a scientist, I think about what this crisis means for science.

1. Maybe most importantly, the Covid-19 crisis exemplified the power and societal relevance of science. Never before, at least in Germany, were scientists allowed to explain to the public details of virus biology, mechanisms of spreading, potential targets of interventions and epidemiological consequences so extensively, comprehensively and self-critically. The usual 2-3 minute format of statements on medical problems was replaced by extensive podcasts by prominent virologists, uncountable invitations to talk shows and press conferences. And it is obvious, and has been repeatedly expressed in public statements by leading politicians, that much of what was done to contain the virus was done following the advice of scientists. I am aware of the backlash this has had on some scientists who were and are attacked and even threatened on the internet, but the vast majority of the public, at least from what I gather in Germany, stands in full support of this approach and that makes me confident that in the end, science prevails over fake news and conspiracy theories.

2. While most of our laboratories were shut down and most people went into their home office over the past months, everything related to Covid-19 flourished at an amazing speed. If HIV was already a previous example of how public pressure accelerated scientific progress in a relatively short period of time, Covid-19 is historical in this respect.

3. And this is also true for cardiovascular research. In the beginning, Covid-19 seemed a matter only for virologists, hygiene specialists and hospital managers, with cardiologists standing on the sidelines. However, several aspects of the disease quickly put the cardiovascular system into the spotlight. The role of ACE2 as the receptor for SARS-CoV2 raised the question of whether an abundance of high ACE2 is beneficial (as it could be for the established protective role in the RAA system) or detrimental (as it could lead to a higher likelihood of infection and/or faster spreading of the virus). Numerous studies are underway or published to solve this issue, which relates to the question of whether treatment with ACE inhibitors or angiotensin receptor blockers, known in

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IN MEMORIAM –

TRIBUTE TO LIONEL OPIE. MD, DPHIL, DSC, FRCP
1933-2020

We are deeply saddened to announce the passing of Professor Lionel Opie, on February 20th, 2020. We have lost a great mentor and wonderful man, a highly respected and extraordinary experimental cardiologist who dedicated his life to being at the heart of research.

Born in Hanover (a small town in the South African town Karoo) in 1933, Lionel was inspired to study medicine by his father’s example. He graduated in Medicine at the University of Cape Town, South Africa in 1955. After obtaining his DPhil in Oxford in 1959, Lionel went to Harvard Medical School as a research fellow in Boston before returning to London where he undertook a research fellowship in the research laboratories of Nobel Prize-winners Professor Sir Hans Krebs (1964-1966) and Professor Sir Ernst Chain (1966-1968).

Following the successful first heart transplant in Cape Town, Professor Christiana Barnard invited Lionel to return to Cape Town in 1971 to develop basic research. This gave Opie the opportunity to establish his own research group, researching the energy metabolism of the heart and expanding his Glucose Hypothesis focusing on the concept that glucose-glycolysis is protective and excess free fatty acids are harmful during myocardial ischemia. In 1976, he established the South African Medical Research Council ischemic heart disease unit at the University of Cape Town, which, in the late 90s – largely through his sterling efforts with Professor Derek Yellon – became the Hatter Institute.

With an impressive track record of publications (over 540 articles published in scientific journals, 46 books and monographs and 159 chapters in books), Lionel Opie has received many prestigious awards, including the Order of Mapungubwe (Silver), received from the South African President for his contribution to cardiology, and the Lorenzini Gold Medal of the International Society for Heart Research. Beside his extraordinary research discoveries, Lionel made enormous contributions to enhance cardiovascular research. Together with Richard Bing, Lionel Opie founded the Journal of Molecular Cellular Cardiology (the Yellow Journal), and he has played a major role in the establishment of the European Section of the International Society for Heart Research.

In 1969, while on vacation in South Africa, Opie visited Prof Amanda Lochner at the University of Stellenbosch and used this opportunity to learn the in vivo model of ischemia from Prof Eors Bajusz (1926-1973), a farsighted Hungarian then working in the USA who happened to be in South Africa at the same time. In between experiments, brain storming discussions on cardiac metabolism were raised and Prof Bajusz managed to convince Opie that a new cardiovascular research journal, focussing mainly on cardiac metabolism and cardiac molecular studies, was needed as conventional journals were dominated by haemodynamic concerns. Prof Opie rushed back to London (he was a consultant in Medicine, Hammersmith Hospital, Royal Postgraduate School of Medicine, London), contacted Richard Bing and, together, they managed to appoint a prestigious Editorial Board which included eminent figures such as Sir Hans Krebs, Prof Bajusz, Arnold Schwartz, Eugene Braunwald, Arnold Katz, Robert Berne, George Rona, Winifred Nayler, Peter Harris and Ed Sonnenblick. With the invaluable assistance of Carol, Lionel Opie’s wife, (she assisted in the choice of the name of the journal, the cover and she dealt with all the administrative aspects of the Journal until 1986), the first volume of the Journal of Molecular and Cellular Cardiology was published with Academic Press in March 1970.

The creation of the Journal of Molecular and Cellular Cardiology in 1970 was closely linked with what Lionel Opie considers to be the first meeting of the European Section of the ISHR in London. First named as the European Section of the International Study Group for Research in Heart Metabolism, this entity was only officially recognized at the annual meeting in Paris in 1972, under the resolution proposed by Pierre Hatt and stipulating that the Members of the study group will consist of all those who attended the last two meetings (London, 1970, Geneva, 1971). For new members, preference was given to young research workers actively engaged in the field of heart metabolism (for more details on the creation of the European section of the ISHR, refer to Heart News and Views, (2005 13:3)).

Deeply involved in the creation of this new Society, Lionel Opie convened the European Section of the Editorial Board of the Journal of Molecular and Cellular Cardiology at the meetings of the Society since 1971. The Journal naturally became closely related to the Study Group thereby fostering a strong European interest in the Journal. Between 1976 and 1978, he served as the President of the ISHR and in 1986, Bing and Opie handed over the journal to become the property and
offical journal of the International Society for Heart Research. Lionel Opie said that by donating the Journal to the Society, he was simply honoured to be part of the on-going growth of molecular and cellular cardiology.

As much as Lionel was regarded as a celebrity in the field of cardiovascular research throughout the world, he will be remembered for his integrity and humility in his everyday life. Lionel led by example and created a family atmosphere in his research laboratory. As a true mentor, Lionel gave us the space and freedom to grow. He continuously guided us and encouraged us. Lionel taught us how to think out of the box, as he would constantly challenge us to create new knowledge and hypotheses. A lab meeting was always considered a successful one when Lionel would conclude: “I am now confused at a higher level”.

His teaching was also superb: it was a joy to attend his lectures as he always had the magic to translate complex science concepts into very simple and explicit diagrams. But behind the scene, these beautiful diagrams were the results of many hours of reflection and hard work with numerous back and forward versions of his illustrations with his medical illustrator before he would be satisfied with the perfect figure. He would constantly revise his figures for future editions of his books. It is no wonder that his book, Heart Physiology, from Cell to Circulation, is often referred to as the “bible in cardiology” around the world. Since its first edition, it has always been considered as the “book to have” for any student in cardiac physiology. His other major book, Drugs for the Heart, went into eight editions and it remains as the reference on the treatment of heart disease.

We are grateful for the invaluable legacy that Lionel Opie has left to the current and future generations of cardiovascular researchers. On a personal note, I feel privileged to have been part of a beautiful journey with such an extraordinary man… He has left me with beautiful memories that I will cherish forever. Thank you to Carol (Lionel’s wife), Jessica, Amelia (Lionel’s daughters) and family for sharing this remarkable man with us.

Sandrine Lecour, PharmD, PhD
Cape Town, South Africa

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2017 ISHR DISTINGUISHED LECTURE AWARD WINNERS

Brian O’Rourke, PhD
Winner of the 2017 ISHR Keith Reimer Distinguished Lecture Award
“Life on the edge: Mitochondria, emergence, and heart disease”
(July, 2017: Hamburg, Germany)

Dr O’Rourke is Professor in the Division of Cardiology, Vice Chair of Basic and Translational Research for the Department of Medicine and director of the Bernard Laboratory of Fundamental Research in Preventive Cardiology at Johns Hopkins University School of Medicine. His research focuses on the biophysics and physiology of cardiac cells in normal and diseased states, with particular expertise in the areas of mitochondria, excitation-contraction coupling, redox/free radical balance, and the coupling of bioenergetics to the integrated function of the cell.

Tetsuji Miura, MD, PhD
Winner of the 2017 ISHR Janice Pfeffer Distinguished Lecture Award
“Diabetic cardiomyopathy – Adaptation and maladaptation of pro-survival signals and metabolism”
(June, 2017: New Orleans, LA, USA)

Dr Miura is Professor and Chair of the Department of Cardiovascular, Renal and Metabolic Medicine and Vice-President for Education and Research of Sapporo Medical University Hospital. His main interest is in the physiology of myocardial ischemia/reperfusion injury and heart failure, and he has led clinical research projects exploring novel diagnostic methodologies and therapies for cardiorenal syndrome.

Junichi Sadoshima, MD, PhD
Winner of the ISHR President’s Distinguished Lecture Award
“The molecular mechanisms of mitochondrial degradation in the stressed heart”
(December, 2017: Osaka, Japan)

Dr Sadoshima is Professor and Chair of the Department of Cell Biology and Molecular Medicine at Rutgers New Jersey Medical School and Executive Director of the Cardiovascular Institute. He is an expert in the molecular signaling mechanisms of cardiomyocytes during heart failure and myocardial ischemia. His research focuses on the molecular mechanisms of heart failure with a focus on signaling mechanisms, including the Hippo pathway and autophagic mechanisms.
REPORT ON THE XXXVI JAPANESE SECTION MEETING
(DECEMBER 14-15, 2019; KOBE, JAPAN)

The 36th annual meeting of ISHR-Japanese Section (ISHR-JPN) was held on December 14-15, 2019 at the Kobe International Conference Center in Kobe. ISHR-JPN has been organized as a part of Cardiovascular and Metabolic Week (CVMW) for the past 4 years. In CVMW2019, ISHR-JPN collaborated with the Society of Cardiovascular Endocrinology and Metabolism (CVEM) and the Japanese Vascular Biology and Medicine Organization (JVBMO). By sharing the meeting’s theme of “From Global Science to Precision Medicine” with the other conferences, Dr. Masafumi Kitakaze (National Cerebral and Cardiovascular Center, Osaka), the president of ISHR-JPN 2019, assembled a diverse lineup of basic research in cardiovascular medicine. CVMW2019 was quite fruitful and successful, with a total of 550 meeting delegates participating in many enthusiastic discussions.

CVMW2019 began with an opening speech by each president: Masafumi Kitakaze (ISHR-JPN), Koichi Node (JVBMO, Saga University, Saga) and Naoki Kashihara (CVEM, Kawasaki Medical University, Okayama). CVMW2019 consisted of three joint special lectures and two symposia. In the joint special lectures, Dr. Masayuki Yamamoto (Tohoku University) gave an interesting presentation on a novel stress response focused on the KEAP1-NRF2 system. He reported that the KEAP1-NRF2 system is associated with pathogenesis of several diseases and showed the possibility of the development of drugs targeting this system. Dr. Keiichi Fukuda (Keio University) gave a provocative talk on the clinical application of HLA-matched iPS cell-derived ventricular cardiomyocytes. He demonstrated that the transplanted aggregate cardiomyocytes could survive in heart tissue and improve cardiac dysfunction following myocardial infarction. His group is now planning to examine the first in-human clinical trial. Dr. Koichi Yamamoto (Saga University) gave an exciting talk on solid organ fabrication by scaffold-free Bio 3D printing. By using the “Bio 3D printer”, they successfully fabricated cartilage, blood vessels, liver etc., and have already started in vivo studies.

In the joint symposia, the themes of the two sessions were “Frontier of Metabolic Research” and “Genome, Epigenome and Circulation/metabolic Medicine”, and eight presenters gave excellent and educational talks. In metabolic research, Dr Teppei Shimizu (Niigata University) lectured on the role of brown adipocyte dysfunction, and Dr. Yasuko Bando (Nagoya University) presented the role of the glucagon family in the pathophysiology of cardiac diseases. In genome research, Dr Koichiro Kuwahara (Shinshu University) lectured on the involvement of the epigenome and transcriptional pathway in the development of heart failure, and Dr Mashito Sakai (University of California, San Diego) gave a presentation about the niche-specific re-programming of macrophages in non-al-

The award ceremony for the recipients of the ISHR-JPN Best Presentation Award. Dr Masafumi Kitakaze (President of ISHR-JPN 2019; center) and Dr Shin Ito (Secretary General of ISHR-JPN 2019; to the left of Dr Kitakaze).
coholic steatohepatitis. All of these joint sessions were very well-attended, and stimulated active debates.

Of course, ISHR also provided its own sessions: A Young Investigator Award (YIA) competition, symposia, a featured research session, oral sessions and poster sessions. The YIA competition was chaired by Dr. Satoaki Matoba (Kyoto Prefecture University) and Dr. Kazufumi Nakamura (Okayama University). Five YIA finalists were chosen from among 11 applicants, and all gave the excellent presentations. Dr. Hidenori Moriyama (Keio University) won first prize in the competition for his novel study entitled “Epoxygenated omega-3 fatty acid metabolites produced by mast cells attenuate pulmonary vascular remodeling”. There were 9 presentations in 2 symposia; 6 presentations in a feature research session; 15 presentations in 3 oral sessions; and 26 presentations in 7 poster sessions. All stimulated fruitful discussions.

To encourage young investigators to join ISHR-JPN, Dr. Masaki Ieda (Tsukuba University), Dr. Yasuko Bando (Nagoya University) and ISHR members under 45 years old planned a special program titled “The Under 45 (U45) Young Investigator Activation Project”. Nine U45 presenters among the members of the U45 activation project delivered lectures in the presidential symposium entitled “What’s next? Discuss Together with ISHR-U45 Young Scientists”. Active and fruitful discussions were held with the young investigators, and the program was very successful in increasing enrollment in ISHR-JPN. In addition, we presented a Best Presentation Award for each session, motivating young investigators in basic research.

The day before the conference, a presidential dinner was held at Kobe’s prestigious venue, Soshuen, with an 80 year history and a wonderful garden, where we enjoyed a good French dinner and music. At the end of the first day of the meeting, a welcome reception was held at the conference hall. Kobe is famous for Kobe beef and wine, so we enjoyed a delicious meal and deepened relationships with each other.

Overall, the 36th annual meeting of ISHR-JPN, held jointly with other 2 scientific conferences, was quite successful, with no less than 550 participants. We believe that this collaborative style of scientific meeting generates novel ideas drawn from the diverse participants and advances study in each field. We thank all of the participants who supported this meeting and look forward to the 37th annual meeting of ISHR-JPN, to be held on December 11-12, 2020 and organized by Prof. Kenichi Hirata at Kobe University. We sincerely hope that the new coronavirus infection is resolved as soon as possible and pray for the good health of all of the people of the world.

Written by
Shin Ito, Secretary General of the 36th Annual Meeting of the ISHR-Japanese Section
Masafumi Kitakaze, President of the 36th Annual Meeting of the ISHR-Japanese Section
Department of Clinical Research and Development, National Cerebral and Cardiovascular Center, Suita, Japan.
Dr. Jolanda van der Velden studied Medical Biology in the Netherlands at the University of Leiden. The main focus of her research is the investigation of changes in sarcomere protein composition and function, which contribute to impaired cardiomyocyte function in heart failure and may be a target for drug therapy. During her PhD, she initiated studies on the role of sarcomere proteins in dysfunction of the failing heart. She optimized and developed several assays to study isoform composition and the phosphorylation pattern of cardiac tissue. By combining protein analyses with measurements of sarcomeric force characteristics and ATP consumption in several models of heart failure, her research contributed to a better understanding of the sarcomere protein changes that underlie cardiac dysfunction.

In the following years, she developed a method in which one specific myofilament protein is exchanged in single human cardiomyocytes without altering other proteins, a project which was funded by a VENI innovation award (2002) of the Netherlands Organization of Sciences (NWO). This exchange method offers the unique possibility to identify the individual contributions of myofilament proteins to human myocardial performance under (patho)physiological conditions. These innovative studies in single human cardiomyocytes provide a unique niche in human cardiac research. Together with Jennifer van Eyk and Anne Murphy (Johns Hopkins, Baltimore), she studied the role of site-specific troponin I phosphorylation using the protein exchange method in single human cardiomyocytes. Mass spectrometry analysis revealed a new phosphorylation site on troponin targeted by PKCalpha in human myocardium.

The protein exchange method is also applied in Amsterdam to study the role of mutant sarcomeric proteins in inherited cardiomyopathies. With the aid of European funding (FP7 Big Heart consortium) and a VIDI innovation award (2009), her group has shown that mutant proteins impair cardiac function and increase energy utilization of heart contraction. Basic studies in cardiac tissue from cardiomyopathy patients are combined with cardiac imaging studies in collaboration with Cardiology departments in the Netherlands. These in vivo imaging studies in asymptomatic individuals who carry a sarcomere mutation revealed that the energetic deficit is already present before the heart remodells. Based on these studies, van der Velden and colleagues aim to initiate a pilot clinical trial with metabolic therapy in mutation carriers without cardiac hypertrophy. Currently, her group explores the effects of mutant proteins in combination with mitochondrial and energetic perturbations in the heart. Within a national research consortium (2015), coordinated by van der Velden, the role of genetic and environmental factors in cardiomyopathy development is studied.

Together with Michiel Helmes (Ionoptix) and Davide Iannuzzi (Physics, Vrije Universiteit, Amsterdam), she developed a method to measure force-length rela-

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Steven P. Jones, PH.D.
NON-CATABOLIC FATES OF GLUCOSE IN THE HEART
Winner of the 2018 Outstanding Investigator Award
(JULY, 2018: AMSTERDAM, THE NETHERLANDS)

Prof Steven P. Jones received his PhD in Physiology in 2002 from the Louisiana State University Health Sciences Center in Shreveport, Louisiana, USA. There, he studied integrative physiology under Professor David J. Lefer, and during this time he attended his first ISHR conference (2001). After graduation, he joined Professor Eduardo Marbán’s laboratory at Johns Hopkins University, where he focused on mitochondrial function, gene transfer, and confocal imaging with the goal of developing a deeper understanding of the metabolism-dependent mechanisms of cell death and survival. During graduate school and his postdoctoral fellowship, Dr. Jones won several awards from the American Physiological Society and the American Society for Pharmacology and Experimental Therapeutics. In 2004, he was recruited to the University of Louisville where he began his independent research program. Within his first year, he earned an American Heart Association (AHA) Scientist Development Grant, then his first R01 in the following year (2006) and has maintained NIH funding since then. Dr. Jones has risen through the ranks to be Professor of Medicine. During this time, Dr. Jones became a Fellow of the American Heart Association and earned the University of Louisville’s honorific title of University Scholar.

Dr. Jones’ expertise has been broadly recognized by his regular service on editorial boards and review panels for the American Heart Association (AHA) and the United States’ National Institutes of Health (NIH). He has served in multiple roles with the AHA, including, most recently, serving on the Committee for Scientific Sessions Programming and the Melvin L. Marcus Competition Committee. Dr. Jones has served in multiple NIH review capacities and, since 2015, he has been a regular member of the “Myocardial Ischemia and Metabolism” (MIM) NIH study section, which he will also chair from 2018-2020. Dr. Jones serves on the editorial boards of several journals, including Journal of Molecular and Cellular Cardiology, Basic Research in Cardiology, and Circulation Research. Since 2012, Dr. Jones has also been Associate/Consulting Editor for American Journal of Physiology—Heart and Circulatory Physiology. He also coaches a competitive middle school girls’ field hockey team and enjoys spending time with his family.

During his training, Dr. Jones was interested in how metabolic events coordinate cell fate and function. His own independent laboratory has maintained this theme. The Jones laboratory is broadly interested in the molecular explanations of ventricular remodeling and heart failure. This group focuses on the non-catabolic use of glucose in cardiac health and disease. Within this context, the laboratory has addressed the critical role of glucose utilization in a glycolytic accessory pathway known as the hexosamine biosynthetic pathway (HBP). The HBP produces a nucleotide-sugar (UDP-GlcNAc), which is used for several purposes, including the production of the post-translational modification known as O-GlcNAcylation. This unique form of glycosylation has been implicated in a variety of diseases, particularly cardiovascular disease, cancer, and diabetes.

The Jones laboratory has elucidated the role of O-GlcNAc in the context of acute cardiac myocyte injury where they showed that enhanced O-GlcNAcylation limits mitochondrial permeability transition pore formation and, by extension, cell death. After being the first group to demonstrate the cardioprotective effect of O-GlcNAcylation in vivo, his group then showed that O-GlcNAcylation is an essential pro-adaptive signal during infarct-induced heart failure. More recently, his group has begun to unravel the molecular regulation of the O-GlcNAcylation system—work that has significant implications for a variety of diseases. The newest efforts from his group have expanded their purview from metabolism-mediated cell survival to an integration of metabolic cues with shaping the extracellular matrix. This alternative route of glucose disposal relates directly to ventricular remodeling and reflects a larger, integrative view of glucose metabolism in the heart.

Dr. Jones takes pride in contributing to the training of others. In addition to innovative scientific pursuits, the Jones laboratory provides a fertile training environment for biomedical professionals. This is made possible by supplementing traditional training resources with exposure to a wide gamut of approaches and not being afraid of going against conventional wisdom. Because of the central role of the trainees in the Jones laboratory, he insists that they are acknowledged for their contributions to this Outstanding Investigator Award.
exceptional webinars on fraud in scientific research and in clinical trials were notably well attended, generating many questions, and have received many hits on YouTube since going live. In our brave new post-truth world, we are proud that as a community we are not afraid to discuss these uncomfortable truths as well as celebrate good science.

The shear breadth of cardiac research areas and novel technologies presented during the series is a testament to the innovative capacity of our community. We are particularly proud of the way our early/mid-career researchers have engaged. The future of cardiovascular research is safe in their hands and we look forward to watching them develop and drive the cardiovascular research and our community forward. Equally, Prof Heinrich Taegtmeyer gave us a beautiful and moving reflection on the life of Sir Hans Krebs and his contributions to the field of cardiac metabolism. His webinar – “If I have seen further it is by standing on the shoulders of giants.” – Isaac Newton. So, in the spirit of both, looking back at the Webinar Series and looking forward to coming out of lock-down, we are thinking about how we can continue this forum when our world gets back to normal......any volunteers?

In summary, despite the crisis we encountered, as a community we have found a way to continue to share our research findings and maintain our enthusiasm for all things cardiovascular. Recording the webinar series and posting it on our YouTube channel, we have created a resource that will serve as a record of our response to these difficult times. And perhaps, although prompted by adversity, we may find that our new initiative has an ISHR life moving forward beyond Covid-19.

Davor Pavlovic
University of Birmingham

Michael Shattock
King’s College, London

Schedule for Asia-Pacific webinars:

YouTube recordings of webinars:
https://www.youtube.com/channel/UCxVfdGmm-jYoEgRqWEHlSA/videos

Figure 1. ISHR Cardiovascular Webinar Series has galvanised the cardiovascular community across the globe. Geographical locations of speakers shown in blue circles.
tions in intact cardiac muscle cells. This method was published in *Cardiovascular Research*, and the optimized Ionoptix set-up is used by many colleagues throughout the world. The joint effort of physiologists and physicists was essential to achieve the technological advance needed to optimize the Ionoptix set-up. The single cell system is an example of a fruitful collaboration between academy and industry as acknowledged by the VSNU (associations of universities The Netherlands; [http://www.vsnu.nl/valorisatie-in-beeld/vrije-universiteit.html](http://www.vsnu.nl/valorisatie-in-beeld/vrije-universiteit.html)). This novel cell system paves the way for a whole new class of drug tests and physiological studies.

A major observation identified using the single cell method was a defect in relaxation of the failing human heart. During her PhD studies, she proposed that altered properties of the sarcomeres underlie diastolic dysfunction of the end-stage failing heart via an increased sensitivity of myofilaments for calcium. She showed that secondary disease-related posttranslational protein changes (phosphorylation, degradation) underlie impaired relaxation of failing human heart muscle. Importantly, together with colleagues from Amsterdam (Ger Stienen, Walter Paulus) and Debrecen (Attila Borbely, Zoltan Papp), she demonstrated that high passive stiffness of sarcomeres contribute to high end-diastolic pressure in heart failure patients with preserved ejection fraction (HFpEF patients). This observation formed the basis for many studies in human and animal HFpEF models and the discovery that altered phosphorylation of titin is the cause of high cardiomyocyte passive stiffness. Modulation of the signalling pathway regulating titin phosphorylation may represent a way to treat HFpEF patients.

She has trained many PhD students and post-docs, many of whom continued on to a successful career in academia. As a biologist, with training in physiology and cell biology, she aims to build a bridge between basic laboratory studies and clinical studies. In 2013, she became Netherlands Heart Institute Professor of “Cellular pathophysiology of cardiomyopathies,” which enables her to stimulate translation research projects at a national level. As chair of the Physiology Department (since 2014), and director of the Cardiovascular Research Institute in Amsterdam (since 2014; since 2016 director of the Amsterdam Cardiovascular Sciences Institute), she is in the unique position to execute translational research programs to study pathomechanisms from bench to patient by combining *in vivo* cardiovascular imaging with novel methodologies to study both muscular and vascular cellular properties of the heart.

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**Calendar**

*Note that meeting dates may have changed because of COVID-19 considerations*

- **October 18-20, 2020.** XV Annual Meeting of the Chinese Section. Beijing, China. Inquiries: Ming Xu, [xuminghi@bjmu.edu.cn](mailto:xuminghi@bjmu.edu.cn).
- **December 10-13, 2020.** XLIV Annual Meeting of the Australasian Section (held jointly with the Cardiac Society of Australia and New Zealand). Gold Coast, Queensland, Australia.
- **March 11-13, 2021.** XXXVII Annual Meeting of the Japanese Section. Tokyo, Japan.
- **June 29-July 2, 2021.** XXXVI Annual Meeting of the European Section. Torino, Italy. Inquiries: Alessandra Ghigo, [ghigo.alessandra@gmail.com](mailto:ghigo.alessandra@gmail.com).
- **June 12-15, 2022.** XXIV ISHR World Congress. Berlin, Germany. Website: [https://www.ishr2022berlin.de](https://www.ishr2022berlin.de)
animal models to upregulate ACE2, is beneficial or possibly detrimental. Until solid evidence suggests otherwise, the advice to patients is clear – there is no reason to discontinue treatment with these drugs! But cardiology is also involved, because underlying cardiovascular diseases such as hypertension, heart failure and diabetes are clear risk factors for a severe course of the disease. To what extent this involves specific effects on cardiovascular organs by the virus or its consequences, e.g. on the inflammatory or complement system, or reflects “only” the reduced circulatory reserve is one of the critical questions of the time. What seems clear at least is that some of the relevant cardiovascular cell types, such as cardiomyocytes and pericytes, express high levels of ACE2 and could therefore be direct targets of the virus. In vitro findings are difficult to directly translate into conclusions as to the course of the disease as the virus does not, under normal circumstances, circulate freely in the blood. But this has already been shown to change under certain Covid-19 disease conditions. Exciting times!

4. These are busy times for the leading cardiovascular journals. Not only is our society journal, the JMCC, flooded by Covid-19 papers, but so, from my own experience as associate editor, is Circulation. It is not easy to find a good compromise between speed and scientific rigor, but in the end, well-done controlled studies will become the landmark papers in the field.

5. Certainly, the Covid-19 crisis will also leave a mark on the scientific publishing field. The trend toward online-first and open access publications will be accelerated. And a similar trend will be seen in our scientific conferences. It is amazing to see how quickly new formats of communication developed in these months. Surely, we all miss our conferences and the face-to-face interaction. But the widespread availability of Zoom, Go-to-Meeting, Bluejeans and all the other video conferences has taught us that many meetings can in fact be nicely replaced by these electronic formats. And do we really miss the continuous traveling through time zones, containment in economy class seats for 8 hours, rushing through vast conference halls from one session to the other? I am still looking forward to the first open conferences, the intense discussion with colleagues, small talk and the social aspects of many conferences, particularly of the ISHR, but I hope that the Covid-19 crisis will lead to a more permanent replacement of two hour business meetings in far-away places (which take an entire day or more for traveling) with video conferences, and maybe overall a reduction of the number of meetings.

6. For ISHR, Covid-19 brought along two very welcome consequences. As you may remember, there were intense discussions about the tax status of ISHR International with the North American Section. Covid-19 brought them to an abrupt end and I believe that the issue can be solved soon. The second consequence is our ISHR Cardiovascular Webinar series, inaugurated April 1, 2020. This series has been initiated by Davor Pavlovic (University of, Birmingham), and supported by Michael Shattock (Kings College London) and received full backing of Rong Tian, Editor-in-Chief of the JMCC, and the ISHR leadership. The webinar series is held 4-times weekly since April and has been a spectacular success with a fantastic list of speakers and chairs and a mean of 200-300 attendees per webinar. For those of you who missed one and want to see it, please refer to https://www.youtube.com/channel/UCxVfdGmm-iYoEgRqWEHlbSA. In addition, we also have an ISHR Asia-Pacific Cardiovascular Webinar Series, which started May 20, 2020. This is very welcomed as the timing of the ISHR Cardiovascular Webinar at 6 pm CET is convenient for European and American attendees, but challenging for Asians. A big thanks to everybody making this a flagship ISHR project in times of Covid-19!

Finally, there is a life beyond Covid-19. We have recently started the process of assembling a Scientific Programme Committee for our next ISHR World Congress in Berlin, Germany, June 12-15, 2022. This seems, at present, a safe date and will hopefully be another big success. Please save the date and spread the word!

Thomas Eschenhagen, MD
President ISHR
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Editor
L. Anderson Lobaugh
Durham, NC, USA
E-mail llobaugh@nc.rr.com

Founding Editor
T.J.C. Ruigrok
Wijk bij Duurstede, The Netherlands
E-mail t.j.c.ruigrok@xs4all.nl

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Editorial Office
3711 Lochn’ora Parkway
Durham, NC 27705
USA.
Phone/Fax: +1 919 493 4418