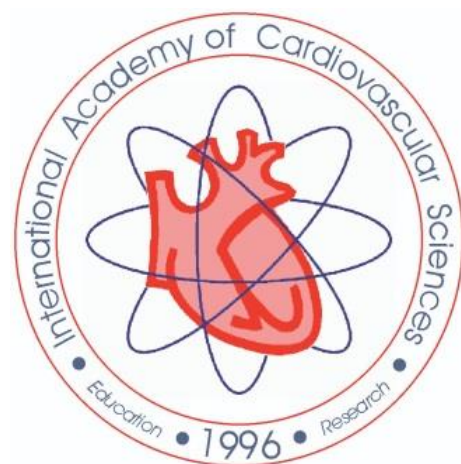


Promoting Cardiovascular Education, Research and Prevention

CV Network

THE OFFICIAL BULLETIN OF THE INTERNATIONAL ACADEMY OF CARDIOVASCULAR SCIENCES

PUBLISHED WITH THE ASSISTANCE OF THE ST. BONIFACE
HOSPITAL ALBRECHTSEN RESEARCH CENTRE

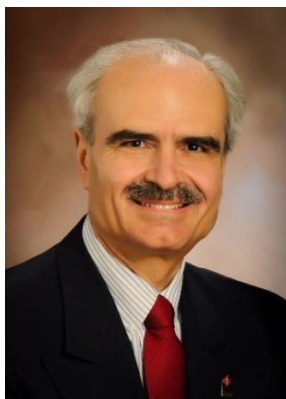


In this Issue

	Page #
Message from the President of IACS	2
Announcement for the Naranjan Dhalla Honorary Lecture Medal	4
Academy Awards Presented at the IACS Meeting in Vrnjacka Banja, Serbia	5
A Brief on Psycho-Cardiology (or Cardio-Psychiatry)	18
Awards at the Symposia in Ankara	19
Extra-ordinary Achievement Award for Dr. Naranjan Dhalla	23
Officers of Different Sections of the Academy	23
Announcement of International Symposium on Cellular Therapy in Cardiovascular Medicine, Ankara, Turkey	24
Official Journal of the IACS: Reviews in Cardiovascular Medicine	25
Partnering Journals of the IACS	26
A Tribute to Dr. Glenn A. Langer: Cardiovascular Scholar, Inspirational Mentor, Humanitarian	27
A Tribute to Dr. Michael Hess: Cardiovascular Leader and Visionary	28
Report of Activity Conducted by Anand Pharmacy College under the Aegis of IACS - India Section	29
Intermittent Fasting: Hacking Heart-Health	30
Center of Experimental Medicine of the Slovak Academy of Sciences in Bratislava	31
CV Network Editorial Board	32
Announcement of IACS-India Section International Conference of Cardiovascular Sciences	33
Announcement of the 8 th Annual Meeting of IACS-North American Section	24
Announcement of the 7 th Meeting of IACS-European Section	36

Message from the President of IACS

**Roberto Bolli, M.D., Chief, Division of Cardiovascular Medicine
Director, Institute of Molecular Cardiology
Executive Vice Chair, Department of Medicine
University of Louisville, Louisville, USA
Email: roberto.bolli@louisville.edu**



Dr. Roberto Bolli

It is a true honor and a privilege for me to have been elected President of the International Academy of Cardiovascular Sciences. I assure you that I will do my best to further develop and strengthen this wonderful organization.

Before I say anything else, I would like to extend my deep gratitude to Professor Naranjan Dhalla, the father of the IACS, whose visionary leadership and indefatigable

efforts have led to the creation of the Academy and its rapid growth over the past 20 years. We are all indebted to Naranjan for his work, which has enabled us to participate in this organization. I am absolutely delighted to be able to work with him – a wonderful colleague and friend – toward our common goal of advancing the Academy. I would also like to thank the Officers of the Society, who have entrusted me with the responsibility of being President of the IACS. I will do all that I can to live up to their expectations and promote and expand the Academy. Finally, I would be remiss if I did not thank the members of the IACS for their participation and contributions to our shared objectives.

The Academy, a young organization, has experienced a remarkable growth in the past two decades, but I believe the best is yet to come. We are in an upward trajectory, and this is helped by the fact that there is a palpable need for something different than the existing cardiovascular organizations. Many may ask: Why do we need another cardiovascular society? After all, there are already many societies whose stated mission is to promote cardiovascular research and education: the American Heart Association, the American College of Cardiology, the International Society for Heart Research, the Heart Failure Society of America, the Heart Rhythm Society, the Cardiovascular Section of the American Society of Physiology, etc. The field is really crowded. So, what is the rationale for joining and participating in the activities of yet another society? What makes the IACS different from the aforementioned organizations?

I believe there are compelling reasons why we should be proud members of the IACS and become actively involved in its activities. Although the goals of the IACS (to promote research, education, and health) may appear similar to those of the above organizations, there are fundamental differences that make the Academy unique. Interestingly, these differences lie not so much in what the IACS is, but in what it is not. I list below several aspects of the aforementioned organizations that, thankfully, do not appear among the features of the IACS.

1. First, we are not burdened by a bloated, suffocating bureaucracy. The IACS volunteers handle the affairs of the Academy with virtually no bureaucratic hindrance. This is incredibly refreshing in this day and age when participation in larger societies involves a good amount of red tape: forms, paperwork, long procedures, passwords, and the like.
2. We are not controlled by an overpowering staff. Unlike at least one large cardiovascular association, where the power resides with the staff rather than with the scientists (i.e., major decisions are made by the association's employees, not by the volunteer scientists), the IACS is run by scientists. I am not sure if the IACS has any full-time staff member, but if so, their role is to assist the scientists rather than the other way around. That a scientific organization ought to be run by scientists seems obvious, but as I mentioned, this is not always the case nowadays. It is quite liberating to know that in the IACS we, the scientists, run the show.
3. We are not a huge, impersonal conglomerate of members. We are a relatively small group of colleagues and friends. The very smallness of the IACS is one of its greatest strengths. We know each other. We interact with each other on a personal basis. Our meetings are informal, personal, intimate, and allow much time for developing relationships, personal interactions, and social activities. Contrast that with the large cardiovascular organizations, where most members do not know most of the other members and are so remote from leadership that, at times, they do not even know – or interact with – the officers who run the organization. Compare our intimate meetings with those of large organizations where the schedule is so jam-packed and hectic that there is hardly anytime left

to interact with friends and colleagues. The personal nature of the IACS is a unique and wonderful advantage.

4. Our meetings are held in unusual, often charming and exciting locations – unlike larger meetings that are held in less attractive venues. Our social programs are definitely more appealing than those of many large societies.
5. We are not beholden to corporate donors. When a cardiovascular association receives large amounts of money from a donor, the agenda of the association is often controlled by the donor (usually, a large corporation or a multi-millionaire/billionaire). Inevitably, this results in loss of freedom and subjugation to the agenda (at times political) of the donor. Thankfully, this is not the case for the IACS. We are free. No one can tell us what to do, how to do it, what political or social ideas to promote, and how to run the Academy. Sure, we do not have the financial resources that the largest organizations have, but there is nothing like freedom, particularly freedom from the political and social agendas of donors.
6. We are not politicized. Unlike large cardiovascular associations, the IACS has not been contaminated by the obtuse bigotry of political correctness, and does not push any political agenda. Unlike large cardiovascular associations, we are tolerant and inclusive: we tolerate and respect a diversity of religious, social, and political ideas and we do not exclude individuals because of their religious and moral convictions. Unlike large cardiovascular associations, we do not discriminate against individuals because of their race, gender, or faith. At IACS you will find a community of scientists that is not sullied by the intolerance, exclusion, and race- and gender-based discrimination that, tragically, are practiced by some large cardiovascular associations. We respect individuals. We look at each person as a unique human being, not as a member of a group. We value and honor the personal characteristics of each individual, their talents, their skills, and their moral character, regardless of their race, ethnicity, gender, or other characteristics that are utterly irrelevant to science. Our scientific recognitions are based on merit and scientific achievement, not on extraneous considerations that have nothing to do with science and merit.

The above considerations explain why it is so refreshing to operate in the IACS. Much progress has been made in the past 20 years. We are proud to be a truly international organization that spans the entire world and embraces the talent and scientific contributions of many different countries and cultures. We are proud to organize meetings in countries where other societies do not usually hold their meetings. We give a voice to many scientists who often

do not have a voice in other societies. We are open to anyone. We bring together leading scientists with fledgling investigators, icons of cardiovascular medicine with aspiring physicians, famous researchers with less famous colleagues. It is clear from these considerations that we occupy a unique niche and fulfill a unique function in the world of cardiovascular science. This is our mission - a global mission.

Where should the Academy go from here? I believe we should continue in the direction that we have pursued over the past 20 years. That is:

- We should embrace our international nature, serving as a bridge among cardiovascular scientists in every part of the world.
- We should strive to promote, above all, excellence in research and in education.
- We should honor investigators and educators at all stages of their career, from students to Nobel laureates, because these recognitions foster energy and passion for science, and because many of these awardees are role models for others. As discussed above, the selection of the awardees should be based solely on individual merit, not on extraneous, non-scientific considerations dictated by political correctness.
- We should promote cooperation globally, particularly in countries that do not often participate in other societies.
- We should organize our meetings in such a way that individuals can have meaningful, intimate, personal interactions.
- We should continue to champion the development of young investigators, as we have been doing thus far; personally, I would like to expand these initiatives, for young scientists are the future of cardiovascular science.
- We should update and expand our website since in this day and age, this is the principal portal through which the IACS communicates with the world and IACS members gather information about each other and the Academy.
- We should invite our Fellows to periodically contribute columns for CV Network.
- One very important goal will be for the IACS to have its own journal where quality papers and reviews are published. I will work in earnest to accomplish this objective.

By implementing the above agenda, the IACS will continue to play an invaluable role in the cardiovascular community and to maintain its own distinctive personality. I look forward to serving the Academy. I welcome your feedback, input, and suggestions. Please email me your thoughts at rbolli@louisville.edu.

Announcement for the Naranjan Dhalla Honorary Lecture Medal

The President, Dr. Andras Varro and Council of the European Section of IACS has announced the selection of Dr. Grant Pierce of Winnipeg, Canada, for the 4th Naranjan Dhalla Honorary Lecture to be given at the 6th Meeting of European Section and 7th Meeting of the North American Section of the IACS. Dr. Pierce is invited to give this Special Lecture and receive the Medal at Vrnjacka Banja, Serbia during September 11-14, 2019. Previous Medal Award recipients were: Dr. Ursula Raven, Freiburg, Germany; Dr. David Eisner, Manchester, U.K.; Dr. Ger Stienen, Amsterdam, The Netherlands.

Dr. Grant N. Pierce: Honorary Lecture Award Medal



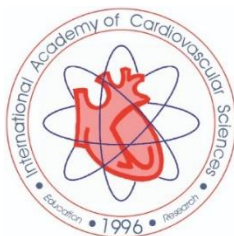
Dr. Grant N. Pierce

Dr. Grant N. Pierce received his Ph.D. from the Department of Physiology, University of Manitoba. After completing

postdoctoral training at UCLA (1983-86), Dr. Pierce obtained his

first faculty appointment in the Dept. of Physiology, Faculty of Medicine at the University of Manitoba, Winnipeg, Canada. Dr. Pierce has published about 250 peer reviewed research manuscripts and written or edited 8 textbooks on a variety of topics concerning metabolism, nutrition and cardiovascular health. His research papers have been cited well over 8000 times. His work on the diabetic cardiomyopathy and ischemic heart disease has been pioneering and highly cited. His work has identified an exciting new dietary strategy for controlling hypertension. With Dr. Pavel Dibrov, he has recently identified an entirely new platform for the development of antibiotics that avoid multi-drug resistance. Dr. Pierce has served on the Editorial Boards of the top basic science cardiovascular journals in the world including Circulation Research, the American Journal of Physiology and the Journal of Molecular and Cellular Cardiology. He has served as Assistant Editor of Molecular and Cellular Biochemistry for more than 30 years. He is past Editor of the Canadian Journal of Physiology and Pharmacology. He has been invited to give over 150 lectures at meetings and Universities throughout the world. Dr. Pierce is

currently the Executive Director of Research at St. Boniface Hospital. He has received many awards in recognition of research excellence (including those from the American Heart Association, the International Society for Heart Research, the International Academy of Cardiovascular Sciences, the Heart and Stroke Foundation of Manitoba, the Canadian Institutes for Health Research, etc and from many countries). He serves as a member of the Board of Directors of several health-related institutions. He is currently President Elect of the International Academy of Cardiovascular Sciences. He is a past Chair of the Scientific Review Executive Committee for the Heart and Stroke Foundation of Canada where he oversaw all peer review conducted by this organization. He is a Fellow of the American College of Cardiology, the American Heart Association, the International Society for Heart Research, the International Academy for Cardiovascular Sciences, the Canadian Academy of Health Sciences and the Royal Society of Medicine (London). In 2013, Dr. Pierce received the Queen Elizabeth II Diamond Jubilee Medal in recognition of contributions to Manitoba and Canada. He was awarded the 2016 Research Canada Leadership Award. He has received Canada's highest honour for a scientist by being inducted as a Fellow into the Royal Society of Canada. In 2018, Dr Pierce was invested with the Order of Manitoba. The Order of Manitoba is the Province of Manitoba's highest honour and recognizes Manitobans who have demonstrated excellence and achievement, thereby enriching the social, cultural or economic well-being of the province and its residents.



Academy Awards to be Presented at the IACS Meeting in Vrnjacka Banja, Serbia

IACS Council approved the following Awards to be given at the Joint IACS Meeting of European Section and North American Section, Vrnjacka Banja, Serbia during September 11–14, 2019.

Academy Awards:

1. **Medal of Merit:** Dr. Jan Slezak, Bratislava, Czech Republic
2. **Lifetime Achievement Award in Cardiovascular Science, Medicine and Surgery:** Dr. Jawahar L. Mehta, Little Rock, USA
3. **Lifetime Achievement Award in Cardiovascular Science, Medicine and Surgery:** Dr. Pavel Hamet, Montreal, Canada
4. **Lifetime Achievement Award in Cardiovascular Science, Medicine and Surgery:** Dr. Vladimir Jakovljevic, Kragujevac, Serbia
5. **Distinguished Leadership Award in Cardiovascular Sciences:** Dr. Dragan M. Djuric, Belgrade, Serbia
6. **Distinguished Service Award in Cardiovascular Science, Medicine and Surgery:** Dr. Vladimir Zivkovic, Kragujevac, Serbia
7. **Distinguished Service Award in Cardiovascular Science, Medicine and Surgery:** Dr. Ivan Srejsovic, Kragujevac, Serbia

Named Awards: North American Section:

1. **Howard Morgan Award for Distinguished Achievements in Cardiovascular Research:** Dr. Martin Morad, Charleston, USA
2. **James Willerson Award for Excellence in Cardiovascular Sciences:** Dr. Marek Michalak, Edmonton, Canada
3. **Norman Alpert Award for Established Investigators in Cardiovascular Sciences:** Dr. Peter Ferdinandy, Budapest, Hungary
4. **Grant Pierce Award for Excellence in Cardiovascular Sciences:** Dr. Zoltan Papp, Debrecen, Hungary
5. **Dennis B. McNamara Award for Excellence in Cardiovascular Sciences:** Dr. Madhu Anand-Srivastava, Montreal, Canada

Named Awards: European Section:

1. **Bohuslav Ostadal Award for Excellence in Cardiovascular Sciences:** Dr. Lorrie Kirshenbaum, Winnipeg, Canada
2. **Jan Slezak Award for Excellence in Cardiovascular Sciences:** Dr. Andrew R. Marks, New York, USA
3. **Andras Varro Award for Excellence in Cardiovascular Sciences:** Dr. Michael Czubryt, Winnipeg, Manitoba

Dr. Jan Slezak: Medal of Merit



Dr. Jan Slezak

Dr. Jan Slezak received his M.D. Degree in 1963 from the Medicine Comenius University, Bratislava, Czechoslovakia and completed his Ph.D. in 1968 at the same institute. He received D.Sc. degree in 1984 in Functional Morphology from the University of Safarik, Kosice, Czechoslovakia. Dr. Slezak

became Associate Professor in 1990 and Full Professor of Physiology at Comenius University since 1996. He became a Fellow of the IACS in 2002. He is currently head of the Department of Histochemistry and Electron Microscopy, Institute for Heart Research, Slovak Academy of Sciences and Vice-rector of the Slovak Medical University in Bratislava since 2010. Dr. Slezak was the Vice-rector of Slovak Medical University from 2010-2014 and First Vice-President of Slovak Academy of Sciences Bratislava from 1998 to 2009. He was also the Director and Chairman of the Institute for Heart Research, Slovak Academy of Sciences, Bratislava,

Slovak Republic from 1988 to 1998. From 1978 to 1988, Dr. Slezak was Deputy Director of the Institute of Experimental Surgery, Slovak Academy of Science, Bratislava, Czechoslovakia.

Dr. Slezak has been a visiting Professor for several times at many different institutes including, Institute of Cardiovascular Sciences, St. Boniface Hospital Research Centre during 1990 to 1998, at the Department of Cardiothoracic Surgery and Department of Pathology, Mount Sinai School of Medicine, New York, USA (1979-1986) and at the Department of Anatomy, University of California, Los Angeles, USA (1970-1972). From 1991 to 2011, Dr. Slezak was the President of the Slovak League for Prevention and Treatment of Cardiovascular Diseases as well as President of the Slovak Histochemical and Cytochemical Society (President 1990-2000). Since 1971, his research interests have been primarily involved in a national cardiovascular research projects, and has been carrying out research into experimental and/or molecular cardiology. He has been involved in basic academic research problems, such as artificial circulation and heart transplantation with special emphasis on the study of histochemical, cytochemical, immunocytochemical and ultrastructural changes in the myocardium under various experimental conditions e.g. ischemia and reperfusion injury, calcium paradox, adaptation of the myocardium to ischemia, effect of radiation on cardiovascular system and prevention of its adverse effect, molecular hydrogen effect and treatment. His teaching specialities are in the fields of morphology, histochemistry, electron microscopy, physiology, pathophysiology, experimental and/or molecular cardiology and has trained/supervised 22 Ph.D. students.

Dr. Slezak has received almost 60 Domestic and international honours and awards; including the Gold Medal of Slovak Academy of Sciences (2005), 1st price of Academy of Education for popularization of science (2005), Gold Medal of University of Constantine Philosopher for Scientific Achievements in Medical Sciences (2006), President of Slovakia – Presidential State Award of Slovak Republic – 1st Class Ľudovít Štúr Order (2006), Doctor Honoris Causa (Dr.h.c.) from the Žilina University (2008), Great Medal of Mikovíni for lifetime achievement in science and technology from the Minister of Education, Slovak Republic, Medal of Merit, Institute of Cardiovascular Sciences, ISHR (2001), Honorary Citizen of the City of Winnipeg, Canada (2001), IACS Norman Alpert Award for Established Investigators in Cardiovascular Sciences (2002), Institute of Cardiovascular Sciences Vincenzo Panagia Distinguished Lecturer Award (2011), IACS Distinguished Leadership Award in Cardiovascular Sciences (2014), IACS Naranjan Dhalla Award for Innovative Investigators in Cardiovascular Sciences (2015) and Medal for Outstanding Contributions to the IACS (2015). Dr. Slezak has over 550 publications as full length papers in journals, book chapters and proceedings with more than 3,000 citations. He has been an *invited symposia speaker* for national and international meetings over 50 times. Dr. Slezak is/has been council member/fellow of several organizations including IACS, ISHR, Slovak Cardiological Society, Slovak Physiological Society and serves on the editorial board of several international journals including Canadian Journal of Cardiology, Canadian Journal of Physiology and Pharmacology, General Physiology and Biophysics (Field Editor) and The Histochemical Journal.

Dr. Jawahar L. Mehta: Lifetime Achievement Award in Cardiovascular Science, Medicine and Surgery



Dr. Jawahar L. Mehta

Dr. Jawahar Mehta received his M.D. degree from Medical College, Amritsar, India (Summa cum laude) and Ph.D. in University of Uppsala, Uppsala, Sweden, and completed his post-graduate education in Mount Sinai School of Medicine, New York, NY and University of Minnesota, Minneapolis, MN. Following his training, he joined the faculty of the University of Florida College of Medicine,

Gainesville, FL where he rose to be University Research Foundation professor.

He moved to Little Rock, Arkansas in 2000 as the first Stebbins Chair in Cardiology and Professor of Medicine and Physiology and Biophysics. He led the Division of Cardiovascular Medicine at the University of Arkansas for Medical Sciences and the affiliated Central Arkansas Veterans Affairs Medical Center.

Dr. Mehta is known for his original work on platelet biology and thrombosis in myocardial ischemia in late 1970s and early 1980s. This seminal work led to the trials of aspirin and other anti-platelet drugs in cardiac patients.

Dr. Mehta's research has focused over the last 15 years on the biology of LOX-1, a receptor for oxidized low density lipoprotein, which has opened a new target for cardiovascular therapy. His recent work has led to the development of small molecules targeting LOX-1, and development of biologics by major pharmaceutical companies Amgen and MedImmune. His work has been supported the NIH, AHA and the Department of Veterans Affairs, and several pharmaceutical companies-continuously for the last 36 years.

Dr. Mehta serves or has served on the editorial boards of several major cardiology, physiology and pharmacology journals, including Circulation, Hypertension, American Journal of Cardiology, European Heart Journal, Journal of the American College of Cardiology, and the World Journal of Cardiology.

He has published over 1300 papers, abstracts and book chapters. He has published 7 books and has 11 patents. His h-index as of August 15 2019 as per Google scholar is 102, with 87667 citations and i10-index of 550, which places him among the top <0.01% of all clinicians and scientists world-wide
https://scholar.google.com/citations?user=d0XP_y8AAA-AJ&hl=en.

He is a member of several prestigious academic societies, including the Association of American Physicians, American Society for Clinical Investigation and Association of University Cardiologists. Grateful patients have established a Mehta Chair in Cardiovascular Research at UAMS in his honor. Recently, Jay and Paulette Mehta Lectureship in Internal Medicine was established in their honor.

He has received major national and international awards. Some of them include- the Medal of Merit from the International Society for Heart Research, 2001, Fellowship of the International Academy of Cardiovascular Sciences in 2002, Albrecht Fleckenstein Memorial Award and the Life-time Achievements Award in Basic Science from the World Congress of Cardiology

in 2003; Swan Award for the Opening lecture "The saga of angiogenesis" at the 16th World Congress of Cardiology, Vancouver, Canada in July 2011.

Recent major awards include, the Pericle d'Oro International Prize from the Magna Graecia University, Catanzaro, Italy in May 2014; the UAMS Dean's Distinguished Faculty Scholar Award in October 2015, Albert Nelson Marquis Lifetime Achievement Award in 2018. In July 2018, he was named Distinguished Professor by the University of Arkansas for Medical Sciences, and Distinguished Professor by the Anhui University, China in October 2018.

In December 2015, he was invited to the Nobel award ceremonies in Stockholm, Sweden as a special guest. He is listed in Marquis Who's Who in America, Who's Who in the World, Who's Who Medicine and Healthcare, and Leading Physicians of the World.

As a testament to his clinical skills, Prof. Mehta was named among the top 27 cardiologists in the United States by Forbes magazine
<https://www.forbes.com/sites/matthewherper/2017/12/05/27-top-cardiologists-picked-by-big-data/#6b2b4d2b6a7e>.
 He has been frequently listed among the Top Doctors in the US, and the Best Doctors in Arkansas.

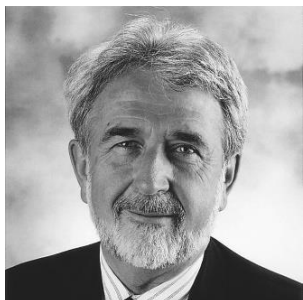
Dr. Mehta has lectured in over 35 countries. He is an honorary professor in the University of Rome, Rome, Italy, an adjunct Professor in the Clinton School of Public School in Little Rock, AR, and serves as consultant to the University of Arkansas in Nanotechnology and Biomedical Engineering in Fayetteville, AR.

Many of his trainees occupy positions of prominence in many countries, including China, India, Italy and Japan. His biggest assets are - his wife Paulette, a Professor of Hematology/Oncology at UAMS, his daughter Asha Mehta (Wharton MBA), senior VP at Acadian Investments, and his son Jason (Harvard JD), a former Assistant US attorney, is a senior partner with Bradley LLP, Tampa, FL.

Dr. Pavel Hamet: Lifetime Achievement Award in Cardiovascular Science, Medicine and Surgery

Dr. Pavel Hamet is a Canada Research Chair on Predictive Genomics, Chief, Gene Medicine Services (CHUM), Member, Endocrinology Services (CHUM), Director of the Laboratory of Molecular Medicine (CHUM) and past Director-Founder of the Research Centre at the Centre hospitalier de l'Université de

Montréal from 1996–2006. He is also a tenured Professor in the Department of Medicine at the Université de Montréal, Adjunct Professor in the Department of Medicine at McGill University and Visiting Professor at the First Faculty of Medicine at Charles University, Prague, Czech Republic, where he received his doctorate



Dr. Pavel Hamet

Academy of Health Sciences, founded in 2005.

Pavel Hamet is author and co-author of over 450 scientific publications and holds several international patents. He serves on many national and international boards including the Institute of Circulatory and Respiratory Health of the Canadian Institutes of Health Research (CIHR), the Canadian Academy of Health Sciences and the Canadian Biotechnology Advisory Committee of the Government of Canada. Active in many societies, Dr. Hamet is President-Elect of the International Society of Pathophysiology.

in medicine in 1967. He also received a Ph.D. in experimental medicine in 1972 from McGill University and his CSPQ in Endocrinology in 1974 from the Université de Montréal. He has been a Fellow of the Royal College of Physicians and Surgeons of Canada since 1984 and Fellow of the Canadian

He has received many prizes, including the “Harry Goldblatt Award” from the American Heart Association in 1990 for his achievements in the field of hypertension. In 1994, he was appointed Honorary Professor of the Shanghai II Medical University in China and received the Golden Medal of J.E. Purkyne of the Czech Academy of Sciences, Prague, Czech Republic, the same year. In 1996, Dr. Hamet received the Distinguished Scientist Award from the Canadian Society for Clinical Investigation and the Achievement Award from the Canadian Cardiovascular Society. In January 2000, he was awarded the “Physician of Merit Medal” for the 20th anniversary of the journal *L’Actualité médicale*; in 2001, he received the prestigious Wilder Penfield award from the Quebec government. In 2005, Pavel Hamet was appointed Honorary Member of the Czech Medical Academy in February and in October, he received the Michel Sarrazin Prize from the Club de recherches cliniques du Québec for his contributions to the advancement of biomedical research, as well as the Canadian Hypertension Society Distinguished Service Award.

Dr. Pavel Hamet was inducted into the Academy of Great Montrealers in the Scientific category in 2006 and was named a Commander of the Ordre de Montréal in 2016.

Dr. Vladimir Jakovljevic: Lifetime Achievement Award in Cardiovascular Science, Medicine and Surgery



Dr. Vladimir Jakovljevic

papers in journals indexed in Science Citation Index list. Dr. Jakovljevic finished Ph.D. thesis in 2004 and specialization in Clinical Physiology in 2005 in University of Belgrade. His main research interests represent examination of the changes in the cardiovascular system in various pathophysiological conditions and role of oxidative stress and reactive species in occurrence of cardiovascular diseases. Dr. Vladimir Jakovljevic is highly dedicated to education of

Dr. Vladimir Jakovljevic, Professor and Head of Cardiovascular Research Laboratory, Faculty of Medical Sciences University of Kragujevac, Serbia. After more than 20 years of research experience, Dr. Jakovljevic is a leading scientist in the field of cardiovascular science in Serbia and this part of the World, with more than 80

students of medicine, pharmacy, dentistry and postdoctoral students, to whom unselfishly transfer knowledge from the areas of his expertise, using interdisciplinary approach, thus providing strong intellectual basis for future medical doctors, pharmacists, dentists and young investigators.

He is president of the Serbian Physiological Society from 2014. Dr. Jakovljevic was directly involved in organization of several eminent scientific meetings, such as 2nd European Section Meeting of the International Academy of Cardiovascular Sciences held in Belgrade in 2015, under the auspices of the International Academy of Cardiovascular Sciences. All the efforts that Dr. Jakovljevic invests in the organization of scientific meetings and spreading of scientific thought, are strongly supported by Dr. Naranjan Dhalla, a man with outstanding energy and passion dedicated to scientific research in the field of Cardiovascular System. Dr. Jakovljevic was awarded by Distinguished Leadership Award in Cardiovascular Sciences in 2015 by International Academy of Cardiovascular Sciences. He is Editor in Chief of the Serbian Journal of Experimental

and Clinical Research published by the Faculty of Medical Sciences University of Kragujevac.

Recently Dr. Vladimir Jakovljevic was elected as the new Dean of the Faculty of Medical Science for a mandate of 3 years. The Council of the Faculty of Medical Sciences unanimously elected Professor Jakovljevic, bearing in mind his exceptional successes as previous Vice-dean for Pharmacy Department. As a new Dean Professor Jakovljevic established cooperation with several

universities from all over the world, such as Karolinska Institute (Stockholm, Sweden), The First Moscow State Medical University I.M. Sechenov (Moscow, Russian Federation), Medical Faculty University of Montenegro (Podgorica, Montenegro), and Medical Faculty University of Banja Luka (Banja Luka, Bosnia and Herzegovina). Faculty of Medical Sciences under the leadership of professor Jakovljevic and his team will continue to conquer new scientific and educational heights, always striving towards the higher.

Dr. Dragan M. Djuric: Distinguished Leadership Award in Cardiovascular Sciences



Dr. Dragan M. Djuric

Dr. Dragan M. Djuric (born in 1961 in the city of Krusevac, Serbia), received his MD degree in 1987, MS degree in 1991, PhD degree in 1993, and Board certified in Clinical Physiology in 2007, all from the Faculty of Medicine University of Belgrade.

Academic positions: Research Assistant (1989-1991), Assistant

Research Professor (1991-1994), Assistant Professor (1994-1999), Associate Professor (1999-2008), Full Professor of Medical Physiology at the Faculty of Medicine University of Belgrade (2008-present). Postdoctoral training obtained in Germany (Max Planck Institute for Physiological and Clinical Research - Kerckhoff Heart Centre, Bad Nauheim, 1998, 2001-2002), and USA (College of Medicine, University of South Alabama, Mobile, 2000). From 1997-2000 he was Head at the Centre for Atherosclerosis and Vascular Biology in the Dedinje Cardiovascular Institute, Belgrade. In period 2006-2009 he was a Director, than in period 2009-2012 he was a Chair of the Board of Medical Physiology "Richard Burian" at the Faculty of Medicine University of Belgrade. He initiated and co-founded PhD program in physiological sciences (2009), and from that time he is a Chairman of that program at the Belgrade University Faculty of Medicine. He initiated and co-founded the establishment of the Yugoslav Atherosclerosis Society in 1998, then he was a first Secretary General (1998-2002). He was a President of the Executive Committee and Assembly of the Serbian Physiological Society (2006-2013), President of the Program and Nominating committee of the Serbian Physiological Society (2013-2017), and he was elected again as a President of the Assembly of the Serbian Physiological Society (2018-2021). Dr. Djuric also had a lot of international responsibilities: 2000-present, Council

Member, International Atherosclerosis Society; 2003-2013 Council Member, Federation of European Physiological Societies (FEPS); 2005-2009 Council Member, International Union of Physiological Sciences (IUPS); 2006-2014 Council Member, International Society for Pathophysiology; 2011-present, Member, Steering Committee, Global Network for Global Fight Against Cardiovascular Diseases, International Academy of Cardiovascular Sciences (IACS); 2015-present, Council Member, European Section, International Academy of Cardiovascular Sciences; 2018-present, Executive Council Member, International Academy of Cardiovascular Sciences. He was elected as Visiting Professor, Faculty of Medicine, University of Banja Luka, Banja Luka, Bosnia and Herzegovina (2019).

Dr. Djuric published 754 different publication units in English, German, Russian and Serbian languages, with 126 full-length papers in peer-reviewed journals plus 7 editorials, introductions and reports from meetings all indexed in Journal Citation Reports / Clarivate Analytics / Thomson Reuters Scientific / Master Journal List / Web of Science / Current Contents / Science Citation Index / Science Citation Index Expanded; and plus full-length 15 papers indexed only in PubMed as well as 30 chapters in books/monographs; he wrote or edited 4 monographs about endothelium, atherosclerosis and nutrition (in Serbian language), and edited/co-edited 14 books of abstracts from scientific congresses/conferences (all in English language). He was cited more than 1500 times, and was invited for presenting the lectures 74 times in Serbia as well as 43 times abroad at different foreign institutions and international meetings. He was reviewer many times in international and domestic scientific journals, and also served on editorial boards of the following journals: Canadian Journal of Physiology and Pharmacology (Associate Editor), Molecular and Cellular Biochemistry, Acta Physiologica Hungarica, Experimental and Clinical Cardiology, Pathophysiology, Mediterranean Journal of Nutrition and Metabolism,

Medical Science Monitor Basic Research, Current Research: Cardiology, Archives of Medical Sciences - Atherosclerosis Diseases (Section Editor), Scripta Medica (Banja Luka), Reviews in Cardiovascular Medicine (IMR Press), Yugoslavica Physiologica et Pharmacologica Acta, Serbian Journal for Experimental and Clinical Research; furthermore, he was a member of editorial board of CV Network (global bulletin of the International Academy of Cardiovascular Sciences) (2007-2015). He was a guest editor or co-editor in a few special issues of certain journals from JCR/ISI list: Acta Physiologica Hungarica (2006); Canadian Journal of Physiology and Pharmacology (2008, 2016, 2019 a, 2019 b); General Physiology and Biophysics (2009); Medicinal Chemistry (2012); Current Medicinal Chemistry (2018); and Oxidative Medicine and Cellular Longevity (2018-2019). He has been invited as a reviewer for book's proposals (international publishers: Elsevier and Springer Nature). He was abstract grader at large international meetings, reviewer on different grant's proposals (Serbia, Poland, Slovakia, Hungary, Canada), foreign member of dissertation committee (Slovakia), proposer for the position of full professorship in the field of physiology and pathophysiology (Romania), and proposer for prestigious fellowships in Germany, Sweden, Canada and USA.

He was a co-editor of the translation to Serbian language of the whole edition of the Textbook of Medical Physiology by Guyton AC and Hall JE in 2008 (Saunders 11th ed.), co-editor of the chapter translation of the Ganong's Review of Medical Physiology by Barrett KE, Barman SM, Boitano S, Brooks HL in 2015 (McGraw-Hill/Lange Basic Science 24 ed.) as well as editor/co-editor of 4 textbooks and demonstration manual in the field of medical physiology in Serbian language.

He organized/co-organized numerous scientific meetings and activities in Serbia: the first Yugoslav congress on atherosclerosis (Belgrade, 2001), satellite symposium of XIV International Symposium on Atherosclerosis (IAS Belgrade, 2006), international conference on nutrition and cardiovascular health (Novi Sad, 2007), 2nd European Section Meeting of the International Academy of Cardiovascular Sciences (Belgrade, 2015), and jointly held 6th Meeting of European Section and 7th Meeting of North American Section of the International Academy of Cardiovascular Sciences (IACS) (Vrnjacka Banja, 2019). He also organized/co-organized 4 congresses of physiological sciences (2005, 2009, 2014, 2018, respectively) as well as 8 conferences and meetings of physiological sciences with international participation in Serbia (2003, 2004, 2008, 2011) including jointly held Serbian-Slovak (2013, 2016, 2019) and Serbian-Hungarian bilateral physiological meetings (2017). He was also organizer of the jubilee symposium on the

occasion of the 90th anniversary of the founding of the Institute of Medical Physiology "Richard Burian" at Belgrade University Faculty of Medicine (2011). He organized the celebration of the 80th anniversary of the installation of a memorial plaque in the lobby of Institute of Medical Physiology, Faculty of Medicine University of Belgrade, in honour and memory to Scottish doctor Elsie Maud Inglis, which was a heroin in the First World War and a leader of the famous military unit entitled "Scottish Women's Hospitals") (2009).

He served many times as a co-chair of the sessions at different meetings; at FEPS congresses (Bratislava 2007, Budapest 2014); he organized thematic symposia on nitric oxide and cardiovascular regulation (FEPS Bratislava 2007); he co-organized the symposium on nutrition and cardiovascular health, and new perspectives in prevention and therapy (FEPS Budapest 2014). He served as a member of Homocysteine Expert Panel (Germany); he served as a member of the International Lipid Expert Panel (ILEP, 2015-present) and Lipid and Blood Pressure Meta-Analysis Collaboration (LBPMC) Group (2017-present). In addition, he served as a member of the scientific/organizing committee at the international conference entitled "Advances and Controversies in B-Vitamins and Choline" (Leipzig, Germany, 2012), a few times at congresses of the International Atherosclerosis Societies (IAS), and as a member of the organizing committee of the FFC's 26th International Conference on "Functional Foods, Bioactive Compounds and Nutraceuticals in Health and Disease" (2019, San Diego, USA). He was principal investigator in national-funded grants in Serbia (since 2005), and now he participates as a member of the managing committee of the COST action [CA16225 RS] "Realising the therapeutic potential of novel cardioprotective therapies (EUCARDIOPROTECTION, 2017-2021)". He served also as a member of the managing committee of the COST action [BM1005 Biomedicine and Molecular Biosciences] "Gasotransmitters: from basic science to therapeutic applications (MC, ENOG: European Network on Gasotransmitters, 2011-2015). His researchs was supported by grants from Kerckhoff Klinik GmbH, Bad Nauheim, Germany; Solvay Pharma, Hannover, Germany; and Pfizer GmbH, Belgrade, Serbia.

Professor Dragan M. Djuric was elected as a Fellow of the International Academy of Cardiovascular Sciences (FIACS, 2011). He has been awarded with Distinguished Leadership Award in Cardiovascular Sciences, International Academy of Cardiovascular Sciences (2019), Andras Varro Award for Excellence in Cardiovascular Sciences (2018), Serbian Physiological Society Award for Lifetime Achievement in Physiological Sciences (2016), Lifetime Achievement Award in Cardiovascular Science, Medicine and Surgery by the

International Academy of Cardiovascular Sciences (2015), Samuel Racz Medal and Honorary Member for the Contribution in Physiology from the Hungarian Physiological Society (2010), Honorary Member of the Bulgarian Society for Cell Biology (2009), Honorary Member of the Romanian Society for Laboratory Medicine (2008), Medal of the Yugoslav Society of Cardiology (2002), and Belgrade City October Award (1987). He was also awarded as the best session organizer at the FFC's 26th International Conference and Expo - 14th International Symposium of ASFFBC "Functional Foods, Bioactive Compounds and Nutraceuticals in Health and Disease" (May 9-10, 2019, San Diego

Convention Center, San Diego, CA, USA).

His scientific interest included both research on experimental models of cardiometabolic diseases and clinical research, ie. heart failure, diabetic and pre-diabetic cardiomyopathy, myocardial infarction, cardiovascular effects of acute-, subchronic hyperhomocysteinemia, and methionine overload, ischaemia-reperfusion as well as cardiovascular protection and therapy [sulphur-containing acids (methionine, cysteine, N-acetyl-L-cysteine), gasotransmitters (NO, H₂S, CO), and vitamins (folic acid, vitamin B₆, vitamin C)].

Dr. Vladimir Zivkovic: Distinguished Service Award in Cardiovascular Science, Medicine and Surgery



Dr. Vladimir Zivkovic

Dr. Vladimir Zivkovic (born 1984), Associate Professor at the Department of Physiology, Faculty of Medical Sciences, University of Kragujevac, Serbia. Dr. Zivkovic received his M.D. degree in 2010 from the University of Kragujevac and completed his Ph.D. in 2014 under supervision of Professor Vladimir Jakovljevic. Since 2007 he is member of the Laboratory

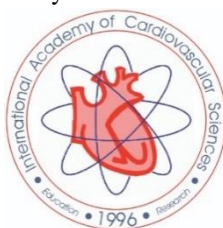
for Cardiovascular Physiology, lead by Professor Jakovljevic. He finished postdoctoral education at the Institute of Normal and Pathological Physiology, Slovak Academy of Sciences, Bratislava, Slovakia. In 2013, he recieved the award for the Best Young Physiologist "Juraj Antal", awarded by the Institute of Normal and Pathological Physiology, Slovak Academy of Sciences, Bratislava, Slovakia.

His main area of interest covers cardiovascular physiology and pathophysiology with emphasis on the oxidative stress, homocysteine metabolism and ischemia/reperfusion injury. To date, he was the author and co-author of more than 55 original papers published in journals indexed in Science Citation Index list. Dr. Zivkovic was a mentor in 4 defended Ph.D. thesis. He participates in several scientific projects financed by

Ministry of Education and Science of the Republic of Serbia and Faculty of Medical Sciences University of Kragujevac. His teaching process encompasses students of medicine, pharmacy, dentistry and postdoctoral students on the Faculty of Medical Sciences, University of Kragujevac.

As a member of organizing committee, he took part in the organization of several international congresses and symposia organized by Serbian Physiological Society under the auspices of the International Academy of Cardiovascular Sciences, such as: 2nd Congress of Physiological Sciences of Serbia with International Participation held in Kragujevac in 2009, 3rd Congress of Physiological Sciences of Serbia with International Participation held in Belgrade in 2014, 2nd European Section Meeting of the International Academy of Cardiovascular Sciences held in Belgrade in 2015, 4th Congress of Physiological Sciences of Serbia with International Participation held in Nis in 2018.

Dr. Zivkovic is a member of the Editorial board of the Serbian Journal of Experimental and Clinical Research, published by the Faculty of Medical Sciences University of Kragujevac. He is general secretary of the Serbian Physiological Society. Dr. Zivkovic participate in the translation of the 24th edition of the Ganong's Review of Medical Physiology to Serbian language and he is co-author of chapters in the national and international textbooks as well as international monographs.



Dr. Ivan Srejavic: Distinguished Service Award in Cardiovascular Science, Medicine and Surgery



Dr. Ivan Srejavic

Dr. Ivan Srejavic (born 1985), Assistant Professor at the Department of Physiology, Faculty of Medical Sciences, University of Kragujevac, Serbia. Dr. Srejavic received his M.D. degree in 2012 from the University of Kragujevac and completed his Ph.D. in 2017 under supervision of Professor Vladimir Jakovljevic. He is member of the Laboratory

for Cardiovascular Physiology, lead by Professor Jakovljevic, since 2012.

His major research interest focuses on the studying of the roles of free radicals in various pathophysiological conditions of cardiovascular system, N-methyl-D-aspartate receptors in cardiovascular physiology, heart conditioning phenomena. To date, he was the author and co-author of more than 45 original papers published in journals indexed in Science Citation Index list. Dr. Srejavic participates in several scientific projects financed by Ministry of Education and Science of the Republic of

Serbia and Faculty of Medical Sciences University of Kragujevac. His teaching responsibilities include teaching of students of medicine, pharmacy, dentistry and postdoctoral students on the Faculty of Medical Sciences, University of Kragujevac.

He took part in the organization, as member of organizing committee, of several international congresses and symposia organized by Serbian Physiological Society under the auspices of the International Academy of Cardiovascular Sciences, such as 3rd Congress of Physiological Sciences of Serbia with International Participation held in Belgrade in 2014, 2nd European Section Meeting of the International Academy of Cardiovascular Sciences held in Belgrade in 2015, 4th Congress of Physiological Sciences of Serbia with International Participation held in Nis in 2018.

Dr. Srejavic serves as member of the editorial staff of the Serbian Journal of Experimental and Clinical, published by the Faculty of Medical Sciences University of Kragujevac. He is member of the Serbian Physiological Society and Serbian Medical Society from 2012. Dr. Srejavic took part in the translation of the 24th edition of the Ganong's Review of Medical Physiology to Serbian Language.

Dr. Martin Morad: Howard Morgan Award for Distinguished Achievements in Cardiovascular Research



Dr. Martin Morad

Martin Morad, Ph.D., is Professor of Regenerative Medicine and Cell Biology at the Medical University of South Carolina (MUSC) and the University of South Carolina (USC) and Professor of Bioengineering at Clemson University. He is the Director of the Cardiac Signaling Center and holds the BlueCross Blue Shield of South Carolina Endowed Chair in Cardiovascular Health, which includes a

unique three-way faculty appointment at the USC, MUSC and Clemson University.

Dr. Morad is an internationally recognized scientist in the field of cardiac electrophysiology and calcium signaling. He has pioneered many seminal findings and technologies in the fields of electrophysiology and Cardiac signaling. He has had over 300 original publications, 20 of which have appeared in Science and Nature, and has trained over 90 Graduate students and postdoctoral fellows, most of whom have leading academic positions in American, European, and Asian Universities. Dr. Morad's career is marked by an incessant drive to formulate new physiological and molecular concepts based on innovative technology and experimental approaches unique to his lab. He has had a distinguished scientific career as professor of Physiology and Medicine at University of Pennsylvania, Professor and Chair at Georgetown University, and now as an Endowed professor at the three leading universities of SC. He was awarded the German Government senior Scientist Alexander von Humboldt

prize for his seminal work in cardiac electrophysiology. He was elected as a founding fellow of international society of heart research (ISHR) and a fellow of International academy of cardiovascular sciences.

Dr. Morad's current research is focused primarily on the pathophysiology of heart failure and cardiac arrhythmias. Recently he has succeeded in developing beating heart cells from the skin biopsies of human volunteers that can be used to repair damaged hearts, using adult stem cell technology. Similar approach is now underway in his

Center in Charleston to engineer biologically based pacemaker from patient's skin fibroblasts to correct the irregularities of heart rhythm. To this end he and his team are using genetically engineered probes to examine the calcium signaling nano-domains of proteins involved in the pacemaking in adult hearts as well as in stem cell derived and spontaneously beating cardiomyocytes. The possible creation of a biological pacemaker derived from genetically engineered cells will provide major therapeutic advances in treatment of cardiac arrhythmias.

Dr. Marek Michalak: James Willerson Award for Excellence in Cardiovascular Sciences



Dr. Marek Michalak

Dr. Marek Michalak is a Distinguished University Professor in the Department of Biochemistry, Faculty of Medicine & Dentistry, University of Alberta, a Fellow of the Royal Society of Canada and a fellow of the Canadian Academy of Health Sciences. Michalak earned a master's degree at the University of Warsaw and then a Ph.D. in biochemistry at the Nencki Institute for

Experimental Biology, in Poland, before coming to Canada and the University of Toronto. He undertook his postdoctoral training at the University of Toronto and at the Swiss Federal Institute of Technology Zurich. Dr. Michalak joined the Faculty of Medicine and Dentistry, University of Alberta in 1987. He served as Chair of the Department of Biochemistry from 2005-2009 and a Vice-Dean (Research), Faculty of Medicine and Dentistry from 2009-2013. He has been recognized by numerous prestigious distinctions including being a Heart and Stroke Foundation of Canada Scholar, a Canada Institutes for Health Research Scholar, Scientist and Senior Scientist, and an Alberta Heritage for Medical Research Scholar, Senior Scholar and Scientist. He is a recipient of University Cup from the University of Alberta, the highest honour for scholarly research, teaching and service offered by the University.

Michalak's research program explores two fundamental biological processes that affect virtually every aspect of cellular physiology and stress responses: protein folding and Ca^{2+} signaling. To understand their impact on human disease, his research program unifies and connects these

two research areas and biological systems with a major emphasis on stress responses in the cardiovascular system. Biological responses to stress are an integral part of cardiovascular physiology and pathology. Endoplasmic reticulum (ER) stress is a key contributor to cardiac and vascular diseases. The ER is a multifunctional membrane system capable of sensing a wide variety of external and internal perturbations. The ER mounts a coping response, the multi-pronged unfolded protein response (UPR), to mitigate or eliminate stress in the cardiovascular system that could lead to cardiac pathology. Michalak's research supports the view that cellular Ca^{2+} , an essential nutrient, is tied to ER stress signaling, cellular proteostasis and energy metabolism, all important factors in cardiac physiology and pathology.

Michalak's research program evolved from the initial discovery that calreticulin is a molecular chaperone and a major Ca^{2+} buffer in the ER lumen. They were first to show that mutations in the protein folding machinery (calreticulin) severely impairs cardiogenesis and the cardiac conductive system. They identified ER Ca^{2+} homeostasis as critical to development of the cardiac conductive system; impairment of this system leads to the pathology of complete heart block seen in children. In their preclinical studies, they discovered that pharmacological blocking of the UPR pathway prevents cardiac fibrosis; the first evidence that cardiac fibrosis is preventable. This is now being transitioned to clinical investigations. A recent discovery from Michalak's group indicates a new, previously unrecognized link between ER Ca^{2+} homeostasis and cholesterol metabolism. Dr. Michalak's research team has published over 286 publications including 24 academic book chapters plus 3 textbooks. His work has been highly cited (>18,000 times) and highlighted internationally and nationally.

Dr. Peter Ferdinandy: Norman Alpert Award for Established Investigators in Cardiovascular Sciences



Dr. Peter Ferdinandy

(www.pharmahungary.com).

He received an M.D. diploma in 1991 and a PhD degree in 1995 from the University of Szeged, Hungary. He was a postdoctoral fellow of MRC Canada for 2 years (1997-1999) at the Department of Pharmacology, University of Alberta, Edmonton, Canada. He became a registered clinical pharmacologist in 1999, and obtained a D.Sc.

Dr. Péter Ferdinandy is a Professor of Pharmacology and Clinical Pharmacology, Director of the Department of Pharmacology and Pharmacotherapy, Semmelweis University, Budapest

(www.semmelweis.hu/pharmacology) and the CEO of Pharmahungary Group

degree from the Hungarian Academy of Sciences in 2004. He completed MBA studies in Finance and Quality Management in 2004 at the Budapest University of Technology and Economics. He was the founder of Pharmahungary Group, a group of R&D companies (www.pharmahungary.com) and consulted hundreds of industrial drug development projects in cardiovascular and metabolic diseases.

He published over 200 papers and listed on HighlyCited 2014 and 2017 (www.highlycited.com - the most influential scientists) in the field of pharmacology and toxicology. He is member of the editorial boards of Br. J. Pharmacol., Basic Res. Cardiol., J. Mol. Cell. Cardiol., and J. Pharmacol. Toxicol. Methods. He was the President of the International Society for Heart Research, European Section, and currently the past chair of the Working Group of Cellular Biology of the Heart, European Society of Cardiology.

Dr. Zoltan Papp: Grant Pierce Award for Excellence in Cardiovascular Sciences



Dr. Zoltan Papp

He was a Research Fellow at the Department of Physiology, Katholieke Universiteit Leuven, Belgium for one year (1992-1993) and a postdoctoral fellow at the Department of Physiology, Vrije Universiteit Amsterdam, the Netherlands for two years (1998-1999). He obtained DSc degree from the Hungarian Academy of Sciences in 2010. He published more than 100 papers in scientific journals earning about 5000 citations (Hirsch-index: 32, cumulative impact factor: >400). Professor Papp

Dr. Zoltán Papp is head of the Division of Clinical Physiology and the Research Center for Molecular Medicine at the Faculty of Medicine, University of Debrecen, Hungary. Currently, he also serves as Vice-Dean for Scientific Affairs at the Medical Faculty of the same University. He received his M.D. degree in 1989 and Ph.D. degree in 1995 from the University of Debrecen.

presented more than 100 invited lectures and was the organizer of 10 scientific (national and international) conferences. He is member of the editorial boards of Cardiovascular Research, Cardiovascular Therapeutics, Molecular and Cellular Biochemistry, Reviews in Cardiovascular Medicine and Deputy Editor of ESC Heart Failure. Presently, Professor Papp is Secretary of the European Section of the International Society for Heart Research (ISHR-ES), member of the Council of the International Academy of Cardiovascular Sciences (IACS, European Section), and formerly served as chairperson of the Basic Science Section of the Heart Failure Association (HFA) of the European Society of Cardiology (ESC).

In 2000, Dr. Papp established an experimental research division within one of the largest clinical cardiology centers of Hungary at the University of Debrecen. He attracted a number of highly motivated young scientists and raised funds through national and international grant applications, thereby allowing the development of basic cardiovascular research in close collaboration with clinical cardiology and cardiac surgery at his University.

The employed experimental methods combine investigations on cellular physiological processes and microcirculatory vascular dynamics with supporting molecular biological and biochemical assays. The fields of interest include molecular characteristics of acute and chronic heart failure, endothelial and vascular characteristics during diabetes and obesity, and

cardiovascular pharmacology.

During the past years Professor Papp has made repeated efforts to promote scientific interaction among Eastern European cardiovascular researchers and to foster their integration at the global level.

Dr. Madhu Anand-Srivastava: Dennis B. McNamara Award for Excellence in Cardiovascular Sciences



Dr. Madhu Anand-Srivastava

Dr. Madhu B. Anand-Srivastava is Professor, Department of Pharmacology and Physiology, University of Montréal. Dr. Anand-Srivastava received her Ph.D. degree in Physiology from the University of Manitoba, Winnipeg in 1978 and post-doctoral training at Vanderbilt University

(1978-1980) Nashville, Tennessee. In 1981, she moved to Clinical Research Institute of Montreal as a senior investigator and in 1982, she was awarded a Scholarship from Canadian Heart and Stroke Foundation of Canada. In 1990, she received a prestigious MRC Scientist Award from Medical Research Council of Canada and moved to the Department of Physiology, University of Montreal. She was also awarded Vincenzo Panagia Distinguished Lecture Award in 2004 from Institute of Cardiovascular Sciences, Ramesh Goyal Award for excellence in Cardiovascular Sciences in 2018 and Dennis B. McNamara award for excellence in Cardiovascular Sciences in 2019 from International Academy of Cardiovascular Sciences. She is a fellow of International Academy of Cardiovascular Sciences and Indian Society of Hypertension. The main theme of her research is directed towards understanding the mechanisms that underlie the cellular and molecular basis of hypertension.

She is an internationally recognized expert in the area of G proteins and hypertension and has made significant contributions in defining the role of $G_{i\alpha}$ proteins in the pathogenesis of hypertension. Dr. Anand-Srivastava is also a pioneer and internationally known scientist in the field of atrial natriuretic peptide receptor-C (NPR-C) and cell signaling and has contributed significantly in the mechanism of action of NPR-C and its involvement in vasculoprotection. Her work is highly cited. She has published 162 papers, 31 book chapters and 230 abstracts and edited 3 books in the area of G-proteins and hypertension and role of NPR-C in physiology and pathophysiology. Her papers are in high impact journals such as Hypertension, J. Hypertension, Circ. Res., J. Biol. Chem., Biochemistry, Cardiovas. Res., Pharmacological Reviews, Mol. Pharm. etc. She has trained more than 50 graduate students and post-doctoral fellows and has been invited to several National and International conferences and Academic Institutions to present her work. She has served or is currently serving on the different committees of Canadian Institutes of Health Research and Heart and Stroke Foundation of Canada and also on the Editorial boards of scientific publications including Journal of Molecular and Cellular Cardiology and Molecular and Cellular Biochemistry. She also served as a guest editor of Pharmacological Research and Canadian Journal of Physiology and Pharmacology and has organized several National and International conferences on Cell Signaling and Cardiovascular system.

Dr. Lorrie Kirshenbaum: Bohuslav Ostadal Award for Excellence in Cardiovascular Sciences

Dr. Lorrie Kirshenbaum is the Director of the Institute of Cardiovascular Sciences, Albrechtsen Research Centre, St. Boniface Hospital. He is principal investigator of Cardiac Gene Biology, Institute of Cardiovascular Sciences, Albrechtsen Research Centre, St. Boniface

Hospital, and Professor, Department of Physiology and Pathophysiology, University of Manitoba. He holds a Canada Research Chair in Molecular Cardiology. Dr. Kirshenbaum is also currently the Director of Research Development, College of Medicine, University of



*Dr. Lorrie A.
Kirshenbaum*

Manitoba. His research is setting the stage for the use of gene therapy in the treatment of cardiovascular diseases and is supported by a Foundation grant from the Canadian Institutes of Health Research, the Heart and Stroke Foundation of Canada, and the St. Boniface Hospital Foundation. Dr. Kirshenbaum is a Fellow of

the International Academy of Cardiovascular Sciences, International Society for Heart Research, American Heart Association and Canadian Academy of Health Sciences. For most of the last 20 years, Dr. Kirshenbaum has been engaged in determining ways to keep heart cells alive and to prevent heart failure by preventing Bnip3 from turning on in the first place. He has published well over 120 papers and received several national and international honors and awards including the University of Manitoba 2018 Distinguished Alumni Award Recipient for Professional Achievement as a cardiovascular pioneer.

Dr. Andrew R. Marks: Jan Slezak Award for Excellence in Cardiovascular Sciences



Dr. Andrew R. Marks

Dr. Andrew R. Marks received his undergraduate degree from Amherst College in 1976 where he was the first student to graduate with honors in two subjects (Biology and English), and his M.D. from Harvard Medical School in 1980. He did an internship and residency in internal medicine at the Massachusetts General

Hospital (MGH), a post-doctoral fellowship in molecular genetics at Harvard Medical School, and a clinical cardiology fellowship at MGH. He is board certified in internal medicine and in cardiology. In 1987 Dr. Marks joined the faculty of the Cardiology Division at the Brigham and Women's Hospital. In 1990 he moved back to his hometown, New York, as an Assistant Professor of Molecular Biology and Medicine at Mount Sinai School of Medicine and an attending physician in cardiology. In 1995 he was named Fishberg Professor of Medicine at Mount Sinai. In 1997 he was recruited to Columbia University College of Physicians & Surgeons as the Founding Director of the Clyde and Helen Wu Center for Molecular Cardiology and Wu Professor of Medicine and Pharmacology. In 2003 Dr. Marks was appointed Chair and Professor of the Department of Physiology and Cellular Biophysics. He was elected to the Council of the American Society of Clinical Investigation (1997-2000), and from 2002-2007 served as Editor-in-Chief of the Journal of Clinical Investigation.

His honors include: the Established Investigatorship Award from the American Heart Association (1993), elected to American Society of Clinical Investigation (ASCI) (1995), American Association of Physicians (AAP) (1999), the Distinguished Clinical Scientist Award of the Doris Duke Charitable Foundation (2000), the Dean's Distinguished Lecturer in Basic Science at Columbia (2004), the National Academy of Medicine (2004), Basic Research Prize from the American Heart Association (2005), American Academy of Arts and Sciences (2005), National Academy of Sciences (2005), Doctor of Science Honoris Causa from Amherst College (2009), Docteur Honoris causa, de l'Université de Montpellier (2016), ASCI Stanley J. Korsmeyer Award (2010), Pasarow Foundation Award for Cardiovascular Research (2011), the Ellison Medical Foundation Senior Scholar in Aging Award (2011), and the Glorney-Raisbeck Award from NY Academy of Medicine (2016). In 2015 Dr. Marks presented the Ulf von Euler lecture at the Karolinska Institute.

Dr. Marks served on the NHLBI Advisory Council (2007-2011), the SAB of Centocor and of Novartis, the advisory committee of the Gladstone Institute for Cardiovascular Disease (UCSF) and the Harrington Discovery Institute (Case-Western Reserve University). Dr. Marks is chair of the SAB of ARMGO Pharma, Inc., a company he founded in 2006 to develop novel therapeutics for heart, muscle and CNS diseases, and is the inventor on eleven U.S. patents for these new treatments. In 2001 he founded the Summer Program for Under-represented Students (SPURS) at Columbia. SPURS provides mentored research training at Columbia University for under-represented and

economically disadvantaged students primarily from the New York City public colleges and universities. In 2002 Dr. Marks founded IAFI (International Academic Friends of Israel) a not-for-profit organization devoted to promoting and supporting the free and open exchange of ideas and information in the international academic community.

Dr. Marks' interest in fundamental biological processes and translating new understandings into therapies for patients lead to his identification of the mechanism of action of inhibition of vascular smooth muscle proliferation and migration by the drug rapamycin. This discovery was the basis for the development of the first drug-eluting stent (coated with rapamycin) for treatment of coronary artery disease which substantially reduced the incidence of in-stent restenosis. He also showed that rapamycin reduced accelerated arteriopathy following cardiac transplantation. Over the past 25 years the major focus of his work has been elucidation of the role of intracellular calcium in regulating fundamental cellular processes including cardiac and skeletal muscle contraction, lymphocyte activation, cognitive function,

and glucose metabolism. Dr. Marks defined the structure, function and regulation of the intracellular calcium release channels known as ryanodine receptors and inositol-1,4,5-trisphosphate receptors. In 2014, using cryo-EM in collaboration with Joachim Frank and Wayne Hendrickson, Dr. Marks reported the high resolution structure of the mammalian type 1 ryanodine receptor/calcium release channel (required for excitation-contraction coupling in skeletal muscle) which he had cloned and worked on since 1989. In 2000 he discovered that "leaky" intracellular calcium release channels contribute to heart failure, fatal cardiac arrhythmias, impaired exercise capacity (e.g. in muscular dystrophy), post-traumatic stress disorder (PTSD), Alzheimer's Disease and diabetes. Dr. Marks discovered a new class of small molecules (Rycals), developed in his laboratory, that target leaky ryanodine receptor channels and effectively treat cardiac arrhythmias, heart failure, muscular dystrophy and prevent stress-induced cognitive dysfunction in pre-clinical studies. Rycals are being developed in Phase II clinical trials for the treatment of patients with heart failure, cardiac arrhythmias, and Duchenne Muscular Dystrophy.

Dr. Michael Czubryt: Andras Varro Award for Excellence in Cardiovascular Sciences



Dr. Michael Czubryt

Dr. Michael Czubryt is a tenured Professor of Physiology and Pathophysiology at the University of Manitoba, and a Principal Investigator of the Institute of Cardiovascular Sciences at the St. Boniface Hospital Albrechtsen Research Centre. His research program focuses on how

genes are activated or silenced, how these regulatory mechanisms contribute to heart disease, and how this knowledge can be exploited to create new therapies for cardiac patients. The work from his laboratory has provided critical new insight into the processes by which altered gene regulation leads to heart dysfunction, and more importantly has shown the way forwards to innovative and novel treatments not previously envisioned.

In 2004, he was awarded the McDonald Scholarship from the Heart and Stroke Foundation of Canada, given to the highest ranked New Investigator in Canada each year, as

well as the Young Investigator Award of the Canadian Cardiovascular Society. His laboratory is currently working to identify lead pharmaceutical compounds representing first-in-class for cardiac fibrosis treatment. For this work, he was recently honored with the Ronald Duhamel Innovation Fund Award.

Dr. Czubryt has published 60 papers, and has over 1400 citations to his work with an H-index of 17. He has been continuously funded by national granting agencies since opening his laboratory. He was recently elected as Fellow of the American Physiological Society Cardiovascular Section, of the American Heart Association, and of the International Academy of Cardiovascular Sciences. He has served on the editorial board of four scientific journals, and has reviewed manuscripts for nearly 60 in total. He has served on numerous national and international peer review committees, including chairing the CIHR India-Canada Collaborative Teams in Childhood Obesity Research Committee, the Nova Scotia Health Research Foundation Medical Committee, and both the M.Sc. and Ph.D. Studentship Committees of Research Manitoba. He also served as Scientific Officer of the CIHR University-Industry Committee for nine years, as the Deputy Chair of the Heart & Stroke

Foundation of Canada ERLI Committee, and is the incoming Chair of the HSFC Budget Review Committee. He served three years on the American Physiological Society Education and Joint Program Committees, and currently serves as the Cardiovascular Section Committee on Committees representative and member of the Steering Committee. He has served on the organizing committees of ten national and international conferences, and was

Organizing Secretary of the 2nd Cardiovascular Forum for Promoting Centers of Excellence and Young Investigators hosted by the International Academy of Cardiovascular Sciences. For his service work, he received the Distinguished Service Award from the Academy, and two Merit Awards for Service from the University of Manitoba.

A Brief on Psycho-Cardiology (or Cardio-Psychiatry)

Daniel R. Wilson, M.D., Ph.D., President & Professor
Western University of Health Sciences, Pomona, California, USA
Email: President@westernu.edu

"The heart has reasons that reason cannot know". French philosopher Blaise Pascal

"Every affection of the mind that is attended with either pain or pleasure, hope or fear, is the cause of an agitation whose influence extends to the heart". William Harvey

What a delight was the excellent Joint Meeting of the European and North American Sections in beautiful and historic Vrnjacka Banja, Serbia, held last month!

It was wonderful to meet new colleagues from around the world and to be so warmly welcomed despite being merely a psychiatrist-anthropologist. It was especially nice of Prof. Dr. Dhalla to invite this brief commentary based on a presentation I (with co-authors Victoria Wilson and Devendra Agrawal) made on "Depression, biological rhythms and chronic cardiovascular diseases".

I am both surprised and pleased with the kind reception colleagues had for this particularly as it seemed to me a too-brief recap of an immensely complicated domain of emerging science.

A gap in understanding between heart and brain has yawned over the world for millennia as poets as well as philosophers and theologians argued which holds primacy. In essence, both views are correct as is increasingly evident in accumulating science demonstrating remarkable reciprocal interactions between these two key organs that instantiate all animal life as a novel and much more comprehensive understanding of the intimate interactions of the brain and heart.

Increasing attention is paid to exploration of how the heart affects emotion and intuition as it is in a constant two-way dialogue with the brain. It was known 200 years ago (but was mainly overlooked) that afferent signals to the brain regulate diverse autonomic nervous system functions,

e.g., thalamus, hypothalamus, and amygdala. That is, the heart has a direct governance function in human (and animal) perception, thought, emotions, and existential experiences.

The heart is a key sensory organ that processes information with its own extensive neural system that usually acts in tandem with the brain but sometimes effects autonomous 'behavior'. Indeed, the heart can remodel its neural connections and, thereby, 'learn'. Charles Darwin noted this adaptive reactivity which he attributed to the "pneumogastric", or, Vagus nerve.

For its part, the brain exerts major influence on the heart. Indeed, cardiovascular disease and psychiatric syndromes are increasingly seen in a bidirectional relationship with common risk factors and pathophysiological manifestations. Comorbidities of stress and stress susceptibility, genetic and epigenetic factors, psychosocial and environmental influences, and lifestyle choices underly a great deal of the disease phenomenology in heart and brain.

For example, circadian rhythms of blood pressure and heart rate are regulated by the suprachiasmatic nucleus (SCN) of the hypothalamus. This biological clock modulates autonomic nervous system activity of the heart and blood vessels. The SCN controls the diurnal biorhythms of activation and sleep and thereby, periodically induces humoral mediators. Disruptions of these biopatterns have important clinical implications

traversing a wide range of health and disease in both the heart and brain.

The further study of these reciprocating biological phenomena will repay with scientific and translational

insights that, eventually, will not only better treat disease but truly sustain wellness.

So dawns the day of “Psycho-Cardiology” (or “Cardio-Psychiatry”), and what a bright morning it promises.

Awards at the Symposia in Ankara

The IACS Council has approved the following Awards to be given at the Symposia on Cellular Therapy in Ankara, Turkey during October 30-November 2, 2019:

Academy Awards:

1. **Distinguished Leadership Award in Cardiovascular Sciences:** Dr. Belma Turan, Ankara, Turkey
2. **Distinguished Service Award in Cardiovascular Science, Medicine and Surgery:** Dr. Kamil Can Akcali, Ankara, Turkey

Named Awards:

1. **Makoto Nagano Award for Distinguished Achievements in Cardiovascular Education:** Dr. Buddhadeb Dawn, Las Vegas, USA
2. **Naranjan Dhalla Award for Innovative Investigators in Cardiovascular Sciences:** Dr. Ren-Ke Li, Toronto, Canada

Dr. Belma Turan: Distinguished Leadership Award in Cardiovascular Sciences



Dr. Belma Turan

Dr. Belma Turan is a Professor and Head of Biophysics Department at the Ankara University, Faculty of Medicine since 1993. She obtained her PhD at 1982, in Ankara University, and in the field of Basic Medical Sciences. Her general research interest is in the field of Cardiovascular Sciences and she and her team specialized on topics of cardiac electrophysiology,

calcium and zinc ion regulations and their transporters, oxidative stress, antioxidants, diabetic cardiomyopathy, sarco(endo)plasmic reticulum and mitochondria. She set up a first high-tech electrophysiology research laboratory connected to molecular biology at the cellular level in Turkey and got funded with 29 national and 6 international research grants. She was visiting scientist in France (INSERM), Canada (University of Ottawa &

Institute of Cardiovascular Sciences), and USA (Lab. Toxicol. Pharmacol. NIEHS, North Carolina), for several times, at long and short periods, to continue some collaborative research. She has editorial activities in 6 international journals and was reviewer and panelist in EU F7-frame and Horizon-2020 projects. She also organized international workshops and symposiums financed by NATO, EMBO and ICGEB. She supervised 11 Ph.D. thesis and 12 M.Sc. thesis and published 116 original and review articles in SCI, 27 in Peer-Reviewed Journals, 73 Conference Abstracts Published in SCI Journals and 200 other presentations in scientific meetings as well as 57 times invited as speakers for international meetings. She is editor of an International Book and 13 Book chapters. Her articles are cited 1958 time (WOS) or 2186 (SCOPUS), and her H-index is 25 (WOS) or 27 (YSCOPUS). She was awarded and honored with 20 International and 7 national organizations. Currently, her team focused to investigate the underlying mechanisms of how sarco(endo)plasmic reticulum-mitochondria cross-talk has important role in either aging or metabolic syndrome associated cardiac dysfunction.

Dr. Kamil Can Akcali: Distinguished Service Award in Cardiovascular Science, Medicine and Surgery



Dr. Kamil Can Akcali

Dr. Kamil Can Akcali M.D., Ph.D. is a Full Professor of Cellular and Molecular Biology. He received M.D. from Ankara University and Ph.D. from University of Cincinnati, Department of Cellular Biology. Currently he is a faculty member at Ankara University, School of Medicine. He is also vice president in Stem Cell Research Institute at Ankara University. He is an expert in

stem cell and developmental biology. He is also independent genetics consultant specialized in stem cell and frequently requested to act as an expert in stem cell based medical operations dispute.

His research focuses on mesenchymal stem cells and

cellular therapies. He set up a state of the art molecular and cellular research laboratory including animal facility at Stem Cell Institute of Ankara University. He has received 19 national and 2 international research grants. Ministry of Development of Turkish Republic has awarded two infrastructure grants to him for the establishment of Stem Cell Research Center. He is the recipient of many prestigious scientific award including of Novartis Science Award, Vehbi Koç Health Award and Gordon Research Conference Award. He has been advisor of 7 Ph.D. and 8 M.Sc. students. He published 42 original and review articles in SCI Journals with more than 1100 citations. His h-index is 18. He has editorial activities in 3 international journals and acts as reviewer and panelist in National and European projects.

Dr. Akcali is also co-founder of a startup biotech company, Biftek.co. Biftek.co is the first and only company in the area of cell-based clean meat in Turkey.

Dr. Buddhadeb Dawn: Makoto Nagano Award for Distinguished Achievements in Cardiovascular Education



Dr. Buddhadeb Dawn

Dr. Buddhadeb Dawn is the inaugural Chairman of the Department of Internal Medicine and Chief of the Division of Cardiovascular Medicine at the University of Nevada, Las Vegas School of Medicine. He received his medical degree from the Medical College, Calcutta, and after a brief stint in the UK, arrived in the USA in 1994 with two suitcases and a dream to pursue academic

medicine. He completed residency in Internal Medicine at the University of Missouri-Columbia and fellowship in Cardiology at the University of Louisville (UofL). In 2000, Dr. Dawn Joined the Division of Cardiology at UofL as Assistant Professor and rose through the ranks to become a tenured Professor. In 2009, Dr. Dawn moved to the University of Kansas Medical Center (KUMC) as the Maureen and Marvin Dunn Chair and Director of the Division of Cardiovascular Diseases, and Vice Chair for

Research in the Department of Internal Medicine. At KUMC, Dr. Dawn was also the founding Director of Cardiovascular Research Institute since 2009, and the founding Director of Midwest Stem Cell Therapy Center since 2013. He joined the University of Nevada, Las Vegas in 2018.

As a consummate physician-scientist, Dr. Dawn has practiced medicine and cardiology for nearly three decades. In the US, shortly after graduating from cardiology fellowship, he started academic practice as a noninvasive cardiologist. Echocardiography is Dr. Dawn's primary area of expertise, and his clinical interests are focused on atrial fibrillation and clinical cell therapy. He enjoys taking care of the sickest in the CCU and the bedside teaching opportunities.

Dr. Dawn's research interests have evolved over the years from cardioprotection and cardiac cytokine signaling to cardiac repair with adult stem cells. As a fellow at UofL, he secured two consecutive American Heart Association fellowship grants so that he could have protected time in the lab to learn basic cardiovascular research. As a junior

faculty, Dr. Dawn secured a Scientist Development Grant from the AHA that enabled him to set up his laboratory. This was followed by several grants from the National Institutes of Health and other national agencies as the Principal Investigator or a collaborator or a mentor. He played key roles toward building comprehensive stem cell research programs both at UofL and at KUMC. More recently, his laboratory has been working with exosomes and human umbilical cord-derived stem cell subpopulations. As a translational scientist, it is immensely gratifying to Dr. Dawn that a specific type of stem cell from the umbilical cord that was produced in his laboratory at KUMC has shown promise in a phase 1 trial in patients with severe graft-vs-host disease. With regard to clinical cell therapy, his team performed the first comprehensive meta-analysis of pooled data from clinical trials of bone marrow cell therapy in patients with ischemic heart disease. Arriving at meaningful conclusions in this rather murky field through meta-analysis remains a goal of Dr. Dawn's research.

Dr. Dawn has published more than 180 articles and book chapters, and research work from his laboratory has been presented on more than 200 occasions at national/international meetings. He has been a member of numerous grant review panels, and was a charter member of the MIM study section at the NIH. He currently serves on the Editorial Board or as the Associate or Guest Editor for seven scientific journals, and reviews for countless others. He has delivered invited lectures at many US

universities and meetings as well as in other countries. He has been the recipient of several honors, accolades, and fellowships, including that of the International Academy of Cardiovascular Sciences. Dr. Dawn has served on a multitude of local as well as national committees, and also as the Course Director for the Annual Midwest Conference on Cell Therapy and Regenerative Medicine, a highly acclaimed meeting that he launched in 2013.

In the spirit of the Makoto Nagano Award, education of postdoctoral fellows, residents, and medical students has always been a top priority for Dr. Dawn. As the cardiology Division Director at KUMC, he revamped the cardiovascular fellowship program. The complement increased from 9 to 15, didactic conference number and quality improved substantially, cardiovascular grand rounds were initiated, faculty participation in fellow education increased vastly, and the number of publications and presentations at national meetings increased dramatically. At UNLV, within a short time, Dr. Dawn has been able to bring about several positive changes in education. New training programs have already started or are in the process of initiation. A testament to his dedication to education and mentoring, several of Dr. Dawn's former trainees have successfully started their research/academic careers at medical institutions across the US and in other countries. Dr. Dawn believes that selfless mentoring and succession planning should be integral parts of our academic mission to produce the next generations of leaders.

Dr. Ren-Ke Li: Naranjan Dhalla Award for Innovative Investigators in Cardiovascular Sciences



Dr. Ren-Ke Li

Dr. Ren-Ke Li, M.D., Ph.D. is a Professor of Medicine in the Department of Surgery, Division of Cardiac Surgery at the University of Toronto. Dr. Li is also a Senior Scientist at the Toronto General Research Institute, University Health Network working in the field of stem cell transplantation and tissue engineering. He is the Canada Research Chair in Cardiac Regeneration (Tier 1) and the

Fellow of the Canadian Academy of Health Sciences. He was a Career Investigator of the Heart and Stroke Foundation of Canada.

Professor Li graduated from Harbin Medical University in 1983 with a Bachelor's Degree in Medicine and a Ph.D.

from the University of Toronto in 1992 in Clinical Biochemistry. He was appointed as an Assistant Professor in 1993 by the Department of Surgery of the University of Toronto, Canada and promoted to Associate Professor in 1998 and Full Professor in 2002. Dr. Li has been on the forefront in the field of cell transplantation and tissue engineering. Over 25 years his research group has defined muscle cell transplantation for Cardiac Repair, followed by stem cell transplantation for Cardiac Regeneration. Both cell repair and regeneration technologies have been translated to clinical application at Phase I and II levels. Since the patients with heart failure are aged population, currently, his research group is attempting to determine the mechanisms by which transplanted cells exert their beneficial effects by rejuvenation of aged stem cells and aged recipients. Clarifying these mechanisms of repair, regeneration and rejuvenation will allow them to develop the "next generation" of cell therapy for restoration of heart function of aged patients. Dr. Li has published 252 peer-reviewed papers in Scientific Journals.

Professor Li has made unique contributions to medical sciences by developing novel cell therapies and cardiac tissue engineering to restore heart function for patients who have suffered extensive cardiac injury as described below:

1. Cell Therapy for Heart Repair, Regeneration and Rejuvenation: Congestive heart failure remains a major medical problem worldwide with significant morbidity and mortality, especially in the aged population. Dr. Li has devoted his career to developing a novel cell therapy for repairing and regenerating the injured heart. He also identified the mechanisms underlying this successful therapy, helped pioneer the translation of this innovative therapy to clinical trials and logically extended this work to develop next generation models of therapy.

Muscle Cell Transplantation for Cardiac Repair. Dr. Li was the first to report that cardiomyocyte implantation into the damaged heart improves cardiac function after injury, thereby creating a novel paradigm to restore heart function.

Stem Cells for Cardiac Regeneration. Building on this work, He sought to address the fact that differentiated muscle cells are a limited source of donor cells for cell therapy—precluding the successful translation of his findings to the clinic. As such, he developed the concept of using stem cells as an autologous and accessible donor cell source. He demonstrated for the first time that bone marrow-derived stem cells can localize to the heart and differentiate into functional muscle cells. Moreover, he has published more than 100 studies investigating the mechanisms underlying the benefits of cell therapy, describing effects at the tissue, cell, protein and gene levels; such mechanisms include paracrine effects, matrix modulation and cellular transdifferentiation—providing insights to tissue injury beyond the cardiovascular field.

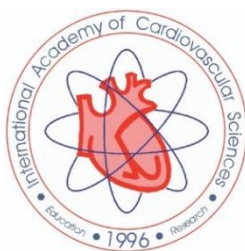
Stem Cell Rejuvenation. He noted that cell therapy was not as effective in aged individuals as it was in young individuals. Interestingly, the limited benefit was not only due to the diminished regenerative capacity of the implanted aged cells, but also the decreased recipient repair response. To overcome this, Dr. Li replaced bone marrow cells of an aged individual with those from a young individual—thereby rejuvenating aged individual. This facilitated the natural migration of functional stem cells into multiple organs. The homed stem cells helped

enhance cell, tissue and organ function, and repair capacity after injury—improving the quality of life in aged populations. The scientific path of Dr. Li over the past 25 years is from heart repair to heart regeneration to heart rejuvenation,

2. Cardiac Bioengineering – Novel Techniques to Improve Cardiac Function: After a heart attack, cardiomyocyte necrosis causes a scar to form on the heart. The scar tissue modulation results in ventricular dilation and heart failure. In heart failure, the heart thins and dilates like a stretched balloon and cannot pump blood effectively. Dr. Li investigated the best materials to create a cell-seeded, biodegradable cardiac patch. Such grafts offer new options for the surgical repair of congenital heart defects as well as heart failure after myocardial infarction.

It is known that synchronized cardiac muscle contraction is regulated and controlled by cardiac conduction system. The cardiac scar tissue as well as implanted cardiac patches have greater impedance and stops the normal path of electrical signals that make the heartbeat. The disrupted signals can cause arrhythmia, which is an abnormal heartbeat leading to sudden cardiac death. To reduce cardiac tissue resistivity and correct abnormal heart conductivity, Dr. Li recently created a conductive biomaterial to enhance bioconductivity of myocardial scars and reduce arrhythmias caused by the uneven conductivity post-heart attack. The new conductive biomaterials enhanced the spread of the electrical signals in the heart with scar tissue and restored the normal pattern of coordinated heart contraction for the heart diseases described above. This research discovery provides a new treatment option for cardiac patients that will be more effective than current therapies. Our research may allow patients to return to their former lifestyles and remain active. The overall impact of our proposed research is to reduce the burden of heart disease, for both individual patients and the health care system.

Dr. Li's research excellence has been recognized internationally. He is currently a Fellow of the Canadian Academy of Health Sciences, the American Heart Association, the International Academy of Cardiovascular Science and the Canadian Cardiovascular Society. He has received a number of national and international awards for his research excellence. He is a scientist in the field of stem cell therapy for cardiac repair and regeneration.



Extra-ordinary Achievement Award for Dr. Naranjan Dhalla



Dr. Naranjan S. Dhalla

At the 10th Annual Gala Dinner, attended by more than 800 people in Surrey (B.C), Darpan Magazine presented Dr. Naranjan Dhalla with Extra-ordinary Achievement Award – Industry Marvel on September 13, 2019. Since Dr. Dhalla was away in Europe at that time, this Award was received on his behalf by his son, Romel Dhalla, and his wife, Ranjit Dhalla. Darpan Magazine is

dedicated to South Asians and recognizes their accomplishments. This magazine has already published a detailed interview with Dr. Dhalla with respect to his academic and professional achievements (Darpan, Jan./Feb, p. 20-22, 2019; www.darpanmagazine.com). Dr. Dhalla is Distinguished Professor of the University of

Manitoba at the Institute of Cardiovascular Sciences, St. Boniface Hospital Albrechtsen Research Centre. He has been working on discovering the mechanisms and developing the therapy of ischemic heart disease, heart failure, stress-induced heart disease, hypertension and diabetic cardiomyopathy. In his capacity as Secretary General and then as President of the International Society for Heart Research for 26 years, he promoted cardiovascular research all over the world. Since 1996, he has been engaged in promoting cardiovascular education and prevention of heart disease in his capacity as Executive Director of the International Academy of Cardiovascular Sciences. For the past 32 years, Dr. Dhalla has been serving as Editor-in Chief of an international journal “Molecular and Cellular Biochemistry” published monthly by Springer Nature, New York. He is a Fellow of the Royal Society of Canada and is recipient of both the Order of Canada and the Order of Manitoba. He was inducted into the Citizen’s Hall of Fame in Winnipeg, Manitoba in 2000 and has recently been inducted into the Canadian Medical Hall of Fame in London, Ontario.

Officers of the Different Sections of the Academy

IACS – North America

President:
Vice President:
Past President:
Secretary General:

Gary Lopaschuk, Edmonton, Canada
Michael Czubryt, Winnipeg, Canada
Grant Pierce, Winnipeg, Canada
Dinender K. Singla, Orlando, USA

IACS – Europe

President:
Vice President:
Vice President:
Past President:
Secretary General:

Andras Varro, Szeged, Hungary
Tatiana Ravingerova, Bratislava, Slovak Republic
Danina Muntean, Timisoara, Romania
Karl Werdan, Halle, Germany
Istvan Baczko, Szeged, Hungary

IACS – Japan

President:
Hon. Life President:
Secretary General:

Naoki Makino, Beppu, Japan
Makoto Nagano, Tokyo, Japan
Atushi Takeda, Tokyo, Japan

IACS – India

President:
Vice President:
Vice President:
Vice President:
Past President:
Secretary General:

Chandrasekharan Kartha, Trivandrum, India
Ramesh K. Goyal, New Delhi, India
Ajit S. Mulasari, Chennai, India
Tejal Gandhi, Anand, India
Praveen Kerala Varma, Kochi, India
Suresh K. Gupta, New Delhi, India
Surya Ramachandran, Trivandrum, India

IACS – South America

Hon. Life President:
President:
Vice President:
Past President:
Secretary General:
Advisor:
Advisor:

Otoni Gomes, Belo Horizonte, Brazil
Melchior L. Lima, Vitoria, Brazil
Alexandre C. Hueb, São Paulo, Brazil
Ricardo Gelpi, Buenos Aires, Argentina
Elaine M.G. Freitas, Belo Horizonte, Brazil
Elias Kallas, Minas Gerais, Brazil
Enrique C. Saldana, Lima, Peru



ANKARA UNIVERSITY
&
INTERNATIONAL ACADEMY OF CARDIOVASCULAR
SCIENCES



AN INTERNATIONAL SYMPOSIUM ON CELLULAR
THERAPY IN CARDIOVASCULAR MEDICINE: STEM CELL
OPPORTUNITY



30 October-1 November 2019
Ankara University, Ankara, Turkey
www.ctcm_sco_2019.ankara.edu.tr

CO-ORGANIZERS

Prof. Belma Turan

Department of Biophysics, Ankara
University Faculty of Medicine,
Ankara/TURKEY

Prof. Kamil Can Akcali

Stem Cell Institute, Ankara University
Ankara/TURKEY

CONFERENCE SECRETARIAT

Dr. Erkan Tuncay

Department of Biophysics, Ankara
University Faculty of Medicine,
Ankara/TURKEY

Dr. Verda Ceylan Bitirim

Stem Cell Institute, Ankara University
Ankara/TURKEY

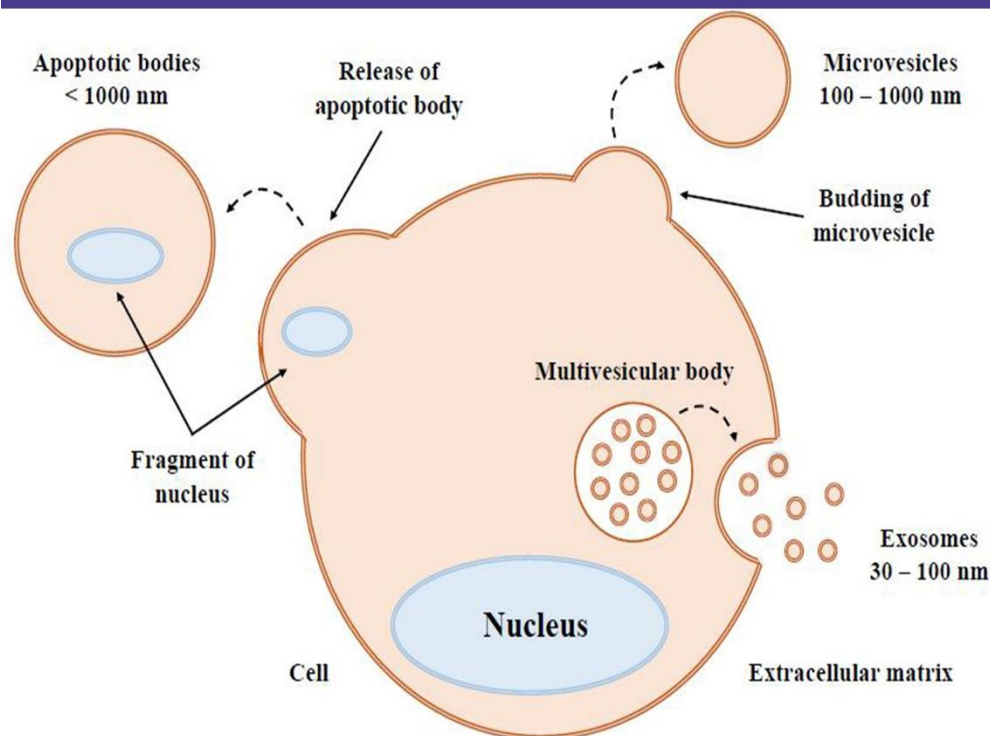
ctcmsco2019@gmail.com

Reviews in Cardiovascular Medicine

The IACS has recently adapted the Reviews in Cardiovascular Medicine as Official Journal effective 2019. Prof. Andras Varro has accepted the appointment as Editor in Chief of the Journal. In order to make it a premier Journal, over the next 3 years, the Academy is seeking your help in submitting your best articles in the field of Translational Medicine for improving the clinical practice of cardiology for publication. Please consult website: <https://rcm.imrpress.org>

Your cooperation will be highly appreciated.

Naranjan S. Dhalla, IACS Executive Director



VOLUME 20 , NUMBER 2, June 2019



PAPER

Monika Bartekova, Marek Jelemensky and Naranjan S Dhalla

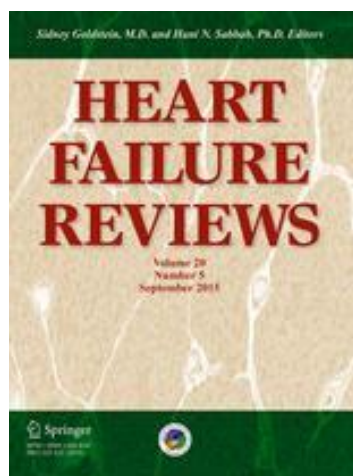
Emerging role of non-coding RNAs and extracellular vesicles in cardioprotection by remote ischemic conditioning of the heart

Official Partnering Journals of the International Academy of Cardiovascular Sciences



Editors:
Dr. Ghassan Bkaily
Dr. Pedro D'Orléans-Juste

Editorial Office:
Canadian Journal of Physiology and Pharmacology
NRC Research Press
65 Auriga Drive, Suite 203
Ottawa, ON K2E 7W6 Canada
Email: cjpp@nrcresearchpress.com



Editors:
Dr. Sidney Goldstein
Dr. Hani N. Sabbah

Editorial Office:
Heart Failure Reviews
233 Spring Street
New York, NY 10013-1578 USA
Email: Marjorei.Paran@springer.com



Editor:
Dr. Amitabh Prakash

Editorial Office:
American Journal of Cardiovascular Drugs
Adis, Springer Healthcare
5 The Warehouse Way, Northcote
Auckland, 0627, New Zealand
Email: amitabh.prakash@springer.com

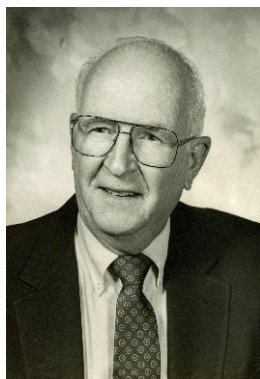
IACS partnering journals:

1. *Canadian Journal of Physiology and Pharmacology*
2. *Heart Failure Reviews*
3. *American Journal of Cardiovascular Drugs*

Readers are encouraged to submit original research articles and reviews to these partnering journals.

A Tribute to Dr. Glenn A. Langer: Cardiovascular Scholar, Inspirational Mentor, Humanitarian

*James N. Weiss, M.D.
Kawata Professor of Medicine & Physiology
Los Angeles, CA 90095-1760
Email: jweiss@mednet.ucla.edu*



*Dr. Glenn A. Langer
(1928-2019)*

Dr. Glenn A. Langer, a prolific cardiovascular researcher and long-time faculty member at the David Geffen School of Medicine at UCLA who after retiring went on to establish a college-readiness program for underprivileged youth, passed away in San Jose, California, on June 16, 2019. He was 91.

A graduate of Colgate University (BS, 1950) and Columbia University College of Physicians and Surgeons (M.D., 1954), he completed his

internship and an internal medicine residency at Massachusetts General Hospital in Boston, after which he accepted his first faculty position at Columbia University College of Physicians and Surgeons as Assistant Professor of Medicine and Physiology. Shortly thereafter, he was recruited to UCLA in 1960 to join the recently-established Los Angeles County American Heart Association Cardiovascular Research Laboratories, where he joined Alan J. Brady, Ph.D. as the second basic cardiac physiologist at UCLA and spent the remainder of his academic career until his retirement in 1997.

At UCLA, Langer rapidly established himself as a pioneer in elucidating the role of Ca and other ions in cardiac excitation-contraction coupling, originally using radioisotopic flux techniques pre-dating the development of cardiac voltage clamp and myocyte isolation techniques. Together with Alan Brady focusing on cardiac mechanics, they established the Cardiovascular Research Laboratory as an internationally preeminent research center at the cutting edge of cardiovascular science. Langer published over 200 scientific articles and co-authored several influential books elucidating the mechanisms by which the electrical activity of the heart regulates its contraction under normal and diseased conditions. He served as the inaugural holder of the Castera Endowed Chair in Cardiology, Director of the

Cardiovascular Research Laboratories, Vice-Chair of the Department of Physiology and the Associate Dean for Research in the School of Medicine. He received numerous academic and humanitarian awards, notably from the American Heart Association.

Throughout his career, Dr. Langer was a legendary and inspirational mentor, whose self-described mantra was "I get paid for my hobby." He created a welcoming environment for trainees and investigators at all levels, promoting close interactions between PhD's and MD's to unravel the mysteries of cardiac physiology under normal and diseased conditions emphasizing team science approaches. He maintained an open door policy for trainees and colleagues alike to stop by his office spontaneously for scientific or personal advice. Many of these UCLA "Heart Lab" alumni subsequently went on to become prominent leaders in academic medicine and cardiovascular science, both at UCLA and other major universities, including Kenneth Shine, Martin Morad, Joy Frank, Ken Philipson, Don Bers, John Bridge, Don Hilgemann, James Weiss, Ken Roos, Grant Pierce, Janis Burt, Larry Hryshko, Josh Goldhaber and others.

After retiring in 1997, Langer devoted himself to supporting economically and culturally disadvantaged youth, motivated by his gratitude to philanthropists who provided scholarships that allowed him to pursue both his undergraduate and medical education. The mission of the Partnership Scholars Program is to "provide six years of educational and cultural experiences to academically motivated but economically disadvantaged students, starting in the 7th grade, to promote college access and a lifetime of success." With the slogan 'closing the educational gap, one student at a time,' it now operates in seven California school districts. More than 700 students have received support, and more than 500 have graduated from universities and colleges across the country.

Langer is survived by his wife Renate Schlidt Langer, his daughter Andrea Wakeman, four grandchildren and three step-grandchildren.

A Tribute to Dr. Michael Hess: Cardiovascular Leader and Visionary

Editor's Note: Reproduced from obituary notice (Woody Funeral Home Huguenot Chapel, Midlothion, VA)
<https://www.dignitymemorial.com/en-ca/obituaries/midlothian-va/michael-hess-8248068>



*Dr. Michael Hess
(1942-2019)*

Michael Lee Hess M.D. was born in Philipsburg, Pennsylvania to Russell Hess and Leona Johnson Hess on August 10, 1942. He lost his 9 year battle with cancer at age 76 on April 13, 2019 in Richmond, VA. He is survived by his wife of 50 years, Andrea Hastillo (M.D.) Hess; their only child Samantha (Mandy) Hastillo Hess Hudson M.D. and her husband Mark Hudson and his granddaughters Sophie Hastillo Hudson & Ziva

Chaharyn Hudson all of Richmond, VA; his brother Joseph Hess and his wife Janet of Cheswick, PA; his niece Maria Lynn (Hess) Collins and her husband Jon and their 4 children of Furlong, PA; and his nephew Jason Hess, his wife Meghann, and their daughter of Pittsburg, PA.

Dr. Hess obtained his undergraduate degree in 1964 at St. Francis University in Loretto, PA. He earned his Medical Degree in 1968 from the University of Pittsburg, staying there for his Residency and Chief Residency. He earned a Young Investigators Award from the American College of Cardiology in 1972. He pursued additional medical training in Cardiology at St. Bartholomew's Hospital in London and through the US Navy. He served his country as a Cardiologist at Portsmouth Naval Hospital from July 1973 to July 1975, attaining the rank of Lt. Commander and earning a Fleet Commendation in Medical Education.

Dr. Hess moved to Richmond, VA and joined the Medical College of Virginia (MCV) in 1971 in the Department of Physiology, and upon discharge from the Navy, additionally joined the Department of Internal Medicine in 1975. He was appointed to Professor of Medicine in Cardiology in 1980. From 1981 to 1982, he served as the first President of the International Society of Heart and Lung Transplantation, an organization he co-founded. From 1982 to 1991, and then 1999 to 2002, he was the Director of the Heart Failure Transplantation Program. Dr. Hess would serve as Acting Chairman for the VCU Division of Cardiology from July 1988 to 1989, and as

Chairman of the Division of Cardiology's Laboratories and Research. Starting in 2002, he was the Director of the Advanced Heart Failure Program during which time VCU began utilizing the Total Artificial Heart. In 2013, influenced by his cancer experiences, he established VCU's Cardio-Oncology Program and acted as its director until his retirement in 2018. In these roles he published over 200 research papers, served as an editor for nearly 40 publications, and authored or edited 3 full length books. Upon his death, he was writing the history of MCV from its founding through today, including its name change to Virginia Commonwealth University (VCU) Health System.

Beyond his MCV/VCU work, highlights from his extensive CV include multiple projects with the National Institutes of Health, the Department of Veterans Affairs, international collaborations with the Canadian Heart Foundation, and space based research with NASA.

He was involved in numerous societies including the American Physiological Society, both the Southern and American Society for Clinical Investigation, and as a Fellow of the American College of Cardiology and American Heart Association. Already a member of Alpha Omega Alpha (AOA), the medical honor society, he was most proud upon the induction of both his wife and daughter to AOA in 2007.

Dr. Hess was fiercely devoted to teaching and patient care, being a passionate clinician. However, he was equally engaged with his students including cardiology fellows, Ph.D. students, postdoctoral trainees, medical students and other healthcare professionals. From this, he earned many awards. From his peers and patients he was voted into the Top Doctors in Richmond, Best Doctors in Virginia, and Best Doctors in America. From his medical students he was awarded the Outstanding Teacher Award 7 times, the Outstanding Teacher for Advanced Cardiovascular Physiology 4 times, and was awarded the Distinguished Clinical Care Award from the Department of Internal Medicine.

He earned 3 major university-wide honors including VCU's Distinguished Scholarship Award in 1989, the Distinguished Clinician Award from the VCU Health

System in 2003, and the University Award of Excellence in 2011.

Dr. Hess worked 364 days a year, only staying home that one day where there was too much ice on the road for even a Pennsylvanian native to drive. In what free time he had, he devoured novels of historical fiction and political thrillers and was an avid student of history. He made a spectacular beef stroganoff and taught both his daughter

and oldest granddaughter the secrets of his recipe. He loved setting up luminaries every Christmas Eve and handing out poppies on Veteran's Day, reminding everyone of the importance of respecting those who have served. He and his wife shared a love of the Pittsburgh Steelers and their five rescue cats. He loved his family dearly and amongst his final directives were "Family First".

Report of Activity Conducted by Anand Pharmacy College under the Aegis of IACS - India Section

Surya Ramachandran Ph.D.
Rajiv Gandhi Center for Biotechnology, Trivandrum, India
Email: suryaramachandran@rgcb.res.in

Anand Pharmacy College has been committed to Heart health along with Academy of Cardiovascular Sciences, India Section and its program, PROC. In continuation of the same, on the morning of 24th July, the Research Team of Pharmacology Department, led by Dr. Tejal R. Gandhi, Principal, Anand Pharmacy College, and Vice President (Community Programs), Academy of Cardiovascular Sciences, India Section of International Academy of Cardiovascular Sciences, was excited for the one day awareness camp of Heart Awareness under the aegis of Academy of Cardiovascular Sciences, India Section. Six interns of Anand Homeopathy College, under the supervision of Dr. Ansul were also joining the research team in the camp. The Principal and faculty of Shardamandir school, were ready to welcome the team.

About 170 students of IXth standard were addressed in the two batches about heart, its function, symptoms and

controllable risk factors and their remedies. Also, an emphasis was laid on nutrition and the various common healthy foods that should be in the diet of everyone. Besides that, the importance of physical exercise was laid and the youth was asked to be active as much as possible. World Heart Day was also remembered in the speech to amplify the need of awareness of heart health. After the end of the session, a questionnaire was given to the participants and was filled by them, and their queries were resolved.

Blood Pressure, heart rate, BMI and Pulse of the younger generation were also measured during the camp. All these activities were coordinated by Mr. Milap Purohit and Mrs. Janki P Patel of the research team at Anand Pharmacy College. They thank the doctors and Principal of the school for their cooperation during the event.



Intermittent Fasting: Hacking Heart-Health

Swati Kundu, Ph.D.

*Department of Biochemistry University of Delhi
(South Campus) Benito Juarez Road,
Dhaura Kuan, New Delhi - 110021, India.
Email: swati.swatikundu@gmail.com*

Editor's Note: The following article is reproduced with permission from "Matters of the Heart". Editors: C. C Kartha Associate Editor: Surya Ramachandran, Vol. 3; No. 2, July 2019.

A publication by Academy of Cardiovascular Sciences (IACS)-India Section

Intermittent fasting (IF) - the concept will not be unfamiliar to anyone who is au courant with the latest health and fitness trends. Typically, IF entails dividing a day into a large window of fasting (no food at all) and a short window of 'feasting' (normal eating). In addition, it includes other models where fasting and feasting windows are in units of days in a week rather than hours in a day. Amongst the popular protocols defining the fasting and non-fasting windows are 16/8 (16 hours fasting and 8 hours non-fasting in a day), Alternate Days Fasting (24 hours fasting followed by 24 hours non-fasting), 2:5 (two days fasting and five days non-fasting in a week), and so forth. Although the concept of fasting has existed across the globe in different forms under religious and cultural practices, it is fairly recent when IF started gaining traction amongst health enthusiasts.

One may ask how is IF different from the good old 'calorie restriction' (CR) when it comes to diet plan? While CR focuses on how much to eat (aiming to restrict the calories intake), IF specifies when to eat allowing normal calories intake in the non-fasting window. Of course, conscious eating--avoiding junk and processed food--is common to both. Several recent studies have evinced the beneficial impacts of fasting on cardiovascular and metabolic biomarkers. Putting on my glasses of a cardiovascular researcher, I decided to dig deeper.

According to a 2008 study (1) published in The American Journal of Cardiology observed that fasting is associated with a dramatic reduction in risk of heart diseases. The major mechanism through which fasting appears to be lowering the cardiovascular disease risk alludes to the improved insulin sensitivity. One of insulin's main functions is to stimulate uptake of glucose from blood by cells that eventually gets used as fuel. With decreased insulin-sensitivity (insulin resistance), cells require larger quantities of insulin as signals and even then cannot use up all the glucose from blood, causing high blood-sugar levels. There are a number of studies establishing a strong

association of insulin resistance with heart diseases. Fasting, by giving a break to the system, reduces glucose and thereby insulin in blood; thus eliminating (temporarily) exposure to stimulus and hence resetting the sensitivity.

Another possible metabolic mechanism leading to better cardiovascular health as a result of fasting is enhanced autophagy. Autophagy is a cellular level housekeeping process in which damaged cell components are destroyed and reused. A very recent study (2) elucidates a potential role of autophagy induction in combating the age-associated decline in cardiovascular health. Several other studies done on rodents and fruit-flies have demonstrated that IF induced autophagy dampens cardiac aging by attenuating (via deactivating mTOR and activating AMPK) myocardial collagen deposition, oxidative stress, inflammatory markers etc.

Summing up, IF, by means of increasing insulin-sensitivity and autophagy, seems to be a promising dietary intervention in not only cardiovascular but also other chronic diseases like obesity which are associated with insulin-resistance and aging. However, the research literature backing the claims of health benefits of IF is still far from being conclusive and more investigations are required. Nevertheless, it looks like IF presents a better alternative to conventional 'dieting' (effectively, CR) as it mimics the biochemical benefits of CR without the associated risks like decreased immunity and low libido. Besides, IF is more viable as it doesn't rely on 'superfoods' with exorbitant prices and the fasting window includes the sleeping hours: an early dinner and a late brunch is all it would take to implement IF in daily routine. I sure am going to try out IF to see for myself whether it is just a fad or indeed a potential key to better health and better heart.

References:

1. Horne BD, May HT, et al. Usefulness of routine periodic fasting to lower risk of coronary artery

disease in patients undergoing coronary angiography.
Am J Cardiol. 2008;102(7):814–819.
doi:10.1016/j.amjcard.2008.05.021

2. Abdellatif M, Sedej LS, et al. Autophagy in
Cardiovascular Aging. Circulation Research.
2018;123(7):803–824. doi:
10.1161/CIRCRESAHA.118.312208

Center of Experimental Medicine of the Slovak Academy of Sciences in Bratislava

Olga Pechanova RNDr., Ph.D, D.Sc. and Jan Slezak, M.D., Ph.D.
Institute for Heart Research,
Slovak Academy of Sciences, Bratislava, Slovakia
Email: Olga.Pechanova@savba.sk; jan.slezak@savba.sk

The Institute for Heart Research (IHR) of the Slovak Academy of Sciences in Bratislava, Slovakia received 3 years ago new premises in the newly built Pavilion of Medical Sciences (see picture), where in one of three buildings occupies 3 floors. They managed also significantly modernize scientific equipment in laboratories.

The Institute has been working closely with the Institute of Cardiovascular Research in Winnipeg since the early 1990s. Since the founding of IACS, in its framework, the IHR organized in the Congress Center of the Slovak Academy of Sciences Smolenice 12 IACS conferences. Last year, with the aim of more efficient research and management, together with two other similarly focused scientific institutes, the Center of Experimental Medicine of the Slovak Academy of Science was created.

The Centre for Experimental Medicine (CEM) of the Slovak Academy of Sciences (SAS) was established on January 1st, 2018 by merging of the Institute of Experimental Pharmacology and Toxicology, the Institute of Normal and Pathological Physiology and the Institute for Heart Research into one Centre.

CEM is focused on the integrated research of causes, mechanisms of development and possibilities of prevention, diagnosis and treatment of societally important diseases with the emphasis on cardiovascular diseases. Emphasis is placed on myocardial ischemia, myocardial infarction and heart failure, hypoxia, hypertension, diabetes mellitus and radiation caused heart injury. The primary objective is the study of protective mechanisms and adaptation of cardiovascular system to acute and chronic pathological impulses. Within their scope, mechanisms of ischemic preconditioning and intracellular signaling, properties and function of membrane transport systems, the role of connexin

channels during heart arrhythmias and new mechanisms of selected cardioprotective drugs are studied.

CEM is also oriented on the research of nervous system and mental disorders, metabolic disorders as well as diseases originating in the prenatal and early postnatal developmental periods. It's focus is mainly research of brain mechanisms of mental processes, behavior and movement. The subject of study is neurobiological mechanisms of perception, cognitive functions, emotions and motor skills, their role in mental health and disturbance in mental disorders and neuropsychiatric diseases. Another focus is the processes of maintaining the balance of upright attitude and gait of man and their violation in neurodegenerative diseases. Subsequently, CEM deals with metabolic diseases that are commonly accompanied by neurological and psychiatric diseases, including depression and schizophrenia. It aims to elucidate the interaction of metabolic factors and neurogenic signaling in the pathophysiology of depression and schizophrenia.

CEM is also oriented on the targeted therapy research, which consists in the preparation, analysis and monitoring of active antihypertensive agents and substances affecting the lipid metabolism bound to polymeric and/or magnetic nanoparticles.



The research in CEM is carried out on *in silico*, *in vitro*, *ex vivo* and *in vivo* models with the aim to transfer the acquired knowledge to clinical practice. Therefore, CEM has a rich cooperation with the clinical sphere and with many foreign institutes focused on scientific as well as clinical research. CEM has many national and foreign

multilateral projects covering mentioned research topics. In an effort to further internationalize research, CEM educates also foreign PhD students from different countries. CEM is the founder of several scientific societies, publishes two scientific journals, and its researchers belong to the leading scientists in Slovakia.

CV Network Editorial Board

EDITOR: Paramjit S. Tappia

ASSISTANT EDITOR: Sukhi Bhullar

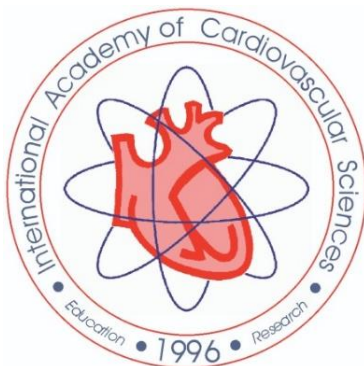
EDITORIAL ASSISTANTS

Simaran Kaur (Canada)
Teri Moffatt (Canada)
Andrea Edel (Canada)

EDITORIAL BOARDss

Adriana Adameova (Slovakia)
István Baczkó (Hungary)
Muthuswamy Balasubramanyam (India)
Judit Barta (Hungary)
Monika Bartekova (Slovakia)
Harpal Buttar (Canada)
Budhadeb Dawn (USA)
Larry Fliegel (Canada)

Elaine Maria Freitas (Brazil)
Sanjay Ganapathi (India)
Paul K. Ganguly (KSA)
Vladimir Jakovljevic (Serbia)
Chandrasekharan Kartha (India)
Madhu Khullar (India)
Naoki Makino (Japan)
Rizwan Manji (Canada)
Paras Mishra (USA)
Ursula Muller-Werdan (Germany)
Danina Muntean (Romania)
Petr Ostadal (Czech Republic)
Tatiana Ravingerova (Slovakia)
Taylor Salinardi (USA)
Anureet Kaur Shah (USA)
Raja B. Singh (Canada)
Ram B. Singh (India)
Dinender Singla (USA)
Belma Turan (Turkey)
Shelley Zieroth (Canada)





INTERNATIONAL CONFERENCE OF CARDIOVASCULAR SCIENCES-2020 (ICCS-2020)

Incorporating Annual Conferences of International Academy of
Cardiovascular Sciences (IACS)-India Section &
International Society of Heart Research (ISHR)-India Section
(February 21–23, 2020)

THEME

Convergence of Clinicians and Scientists for Cardiovascular Health

CO-SPONSORS

All India Institute of Medical Sciences (AIIMS), New Delhi, India
Society for Promotion and Research in Cardiovascular Sciences (SPARCS),
Academy of Cardiovascular Sciences (ACS)

ORGANIZING SECRETARY
Prof. Harvinder Popli
Dean & Registrar, DPSRU

ORGANIZING SECRETARY
Prof. Nitish Naik
Department of Cardiology, AIIMS

CHAIRPERSON, LOC
Prof. Ramesh K. Goyal
Vice Chancellor, DPSRU

CHAIRPERSON, LOC
Prof. Vinay Kumar Bahl
Dean, AIIMS

SECRETARIAT

DELHI PHARMACEUTICAL SCIENCES AND RESEARCH UNIVERSITY

M.B. Road, Pushp Vihar Sector-III, Opp. Sainik Farm, New Delhi – 110 017, India

E-mail: iccsdelhi2020@gmail.com



8th Annual Meeting of the IACS: North American Section

Dear Colleagues,

This is our great pleasure to invite you to join and participate at the **8th Annual Meeting of the International Academy of Cardiovascular Sciences (IACS): North American Section** to be held in Montreal during September 3-5, 2020.

The main theme of the conference is to **Promote Young Investigators and Centers of Excellence in Cardiovascular Sciences**. This international meeting will be attended by National and International Scientists (basic and clinicians), professors, students, post-docs, research associates, and young investigators in the field of cardiovascular and metabolic sciences to exchange scientific ideas, generate collaborations and discover new ways to advance scientific research to enhance the quality of human health.

We look forward to see you in Montreal, a truly European city in North America.

Sincerely yours,

Madhu B. Anand-Srivastava, Ph.D. (Chair)

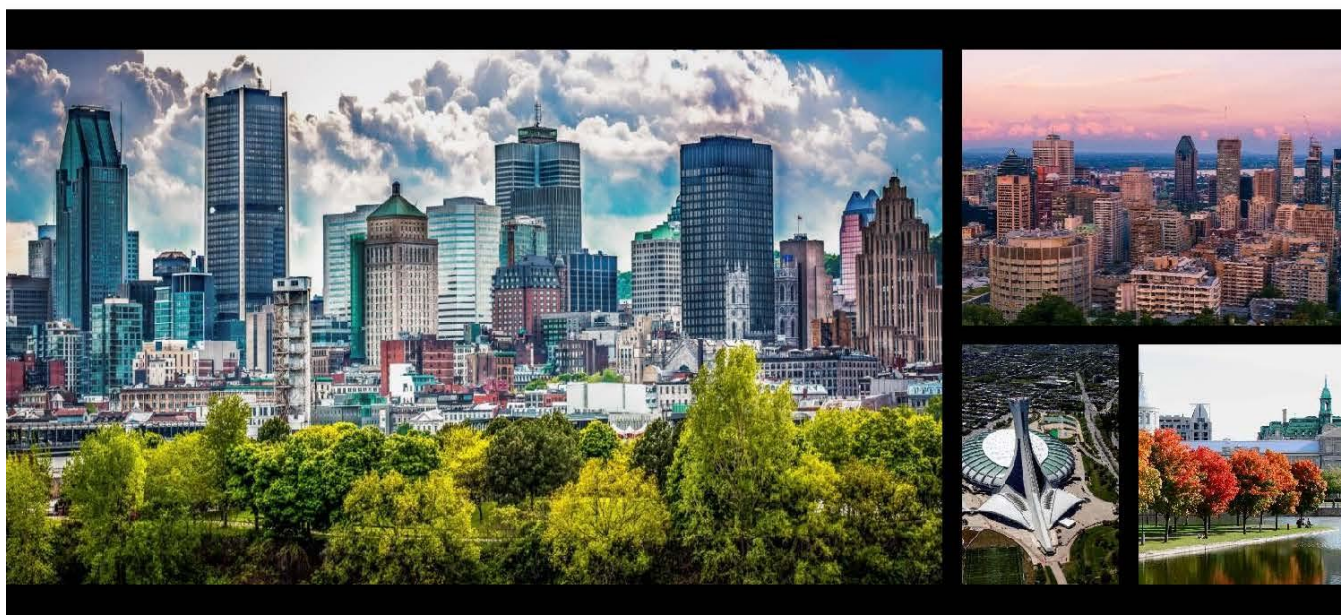
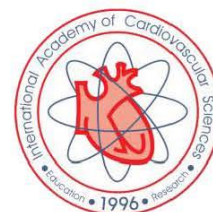
Department of Pharmacology and Physiology
University of Montreal
Montreal, Quebec, Canada
madhu.anand-srivastava@umontreal.ca

Ashok K. Srivastava, Ph.D. (Co-chair)

Department of Medicine
University of Montreal
CRCHUM
Montreal, Quebec, Canada
ashok.srivastava@umontreal.ca

8th Annual Meeting of the International Academy of Cardiovascular Sciences **North American Section**

September 3-5, 2020
Montreal, Quebec, Canada



Dr. Madhu B. Anand-Srivastava, Chair
Department of Pharmacology and Physiology, University of Montreal

Dr. Ashok Srivastava, Co-chair
Department of Medicine, University of Montreal, CRCHUM

Please visit our website for detailed information: <http://www.fourwav.es/IACS2020>

7th Meeting of European Section of the International Academy of Cardiovascular Sciences

September 23-25, 2020

Banja Luka, The Republic of Srpska,
Bosnia & Herzegovina



Welcome to Banja Luka

MEETING CHAIR: Prof. Ranko Skrbic M.D., Ph.D.
ranko.skrbic@med.unibl.org

MEETING CO-CHAIR: Prof. Milos Stojiljkovic M.D., Ph.D.
milos.stojiljkovic@med.unibl.org