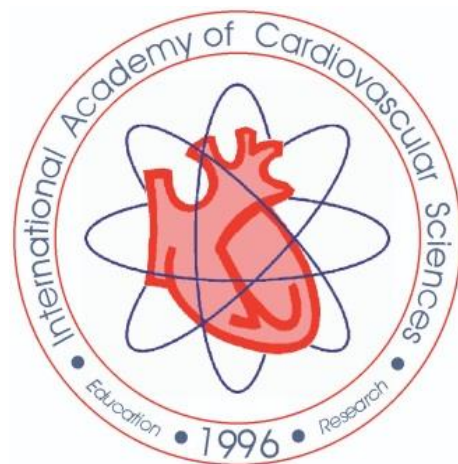


Promoting Cardiovascular Education, Research and Prevention

CV Network

THE OFFICIAL BULLETIN OF THE INTERNATIONAL ACADEMY OF CARDIOVASCULAR SCIENCES

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



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Dr. Dhalla Inducted to Canadian Medical Hall of Fame



Dr. Naranjan S. Dhalla

At a spectacular ceremony at the Centre Mont-Royal, in Montreal, Quebec on May 2, 2019, more than 460 guests were in attendance to celebrate the induction of six Canadian Medical Heroes into the Canadian Medical Hall of Fame (CMHF). Among them, Dr. Naranjan S. Dhalla, who is internationally recognized as a doyen of cardiovascular science in Canada.

The following is an excerpt of his acceptance speech.

Dr. Ian Bowmer-President Royal College of Medicine, Dr. Bryce Taylor-Chairman of the CMHF Board, Dr. Phil Gold, Chair of Laureate Induction Ceremony, Dr. Cindy Forbes, President, Canadian Medical Association, and Lissa Foster, Executive Director of CMHF. I feel humbled and truly honoured for this high distinction by the Canadian Medical Association. I am very proud of this organization as its members have made major contributions in promoting human health and improving patient care in this country. I am indeed grateful to the University of Manitoba and St. Boniface Hospital for

extraordinary facilities and particularly to Dr. Arnold Naimark and Dr. Henry Friesen for providing me inspiration to develop my professional career. My sincere thanks go to all students, fellows and associates in the experimental cardiology laboratory for their hard work in carrying out high quality research in the area of pathophysiology and pharmacology of heart disease. I have been fortunate to have several colleagues and friends like Dr. Grant Pierce, Dr. Allan Ronald, Dr. Lorrie Kirshenbaum and Dr. John Foerster who have given valuable advice and generous help for me to maintain a high-profile cardiovascular research and education program. It is very kind of several distinguished people including Drs. Hugh Scully, Balwant Tuana, Antoinette Blackman, Cheryl Rockman, and Peter Nickerson, who came all the way to celebrate this 25th Induction Ceremony. Last, but not least, I wish to express my gratitude to my family members including my wife Mrs. Ranjit Dhalla and my sons, Sonny, Vikram and Romel as well as my daughter Sonia and 12 grandchildren - two of them are here (Anika and Ashina), for their understanding and encouragement for me to serve the cardiovascular community, both nationally and internationally with great passion. From my own experience, I can tell you with certainty that if you wish to touch excellence and achieve something worthwhile, try to have great friends and develop strong relationships in your life. Ladies and Gentlemen, my journey over 51 past years in Province Manitoba and city of Winnipeg, Canada has been an experiment with truth and a highly rewarding experience and I thank people of this great country for their kindness.

The CMHF also produced a video to celebrate the induction of Dr. Dhalla into the CMHF. (CMHF -Dr. Naranjan S. Dhalla 2019 Laureate-
<https://www.youtube.com/embed/N3VOFB95kM0?rel=0>) Several distinguished scientists can be heard giving their testimonials:

Prof. Arnold Naimark, President-Emeritus, University of Manitoba, and who recruited Dr. Dhalla to Winnipeg- It became very clear, almost from the very beginning, that he was going to be a very successful scientist in our faculty. He attracted a lot of interesting young individuals who were students and Post-docs. I think Dr. Dhalla has become a very important figure in Canada and around the world.

Dr. Lorrie Kirshenbaum, Director, Institute of Cardiovascular Science, University of Manitoba- Very

little was understood back in early 1960-1970s that how individuals who have diabetes have cardiac dysfunction, cardiac failure and Dr. Dhalla was perhaps one of the early pioneer investigators to understand the related changes in intracellular calcium and this was actually a major achievement that led investigators down a path for drug discovery that ultimately helped individuals with diabetes. In our community, the science world, we don't have a lot of heroes and I look up to Dr. Dhalla and I see him literally as a rock star.

Dr. Grant Pierce, Executive Director of Research, St. Boniface Hospital- *He was leading the world in looking at ion movements, calcium, sodium and hydrogen across the outer membrane of the heart cell. That's why when I was a student I came here to Manitoba to study with him and he stimulated me to keep going in science and follow this area. From an institutional point, Dr. Dhalla is the one who really created the Institute of Cardiovascular Sciences here at St. Boniface Hospital. A seminal person who created the International Society for Heart Research, and then later, the International Academy of Cardiovascular Sciences. Naranjan Dhalla was without a doubt, for the last 30-40 years, the face of Cardiovascular Sciences in Canada. There is not a single cardiovascular clinician or a basic scientist who does not know Naranjan Dhalla.*

Dr. Henry Friesen CMHF Laureate (2001), Former President, Medical Research Council of Canada- *His focus has been continuously on heart research in collaboration with some 160 trainees that he recruited from all over the world during more than 50 years of research, which under his inspired leadership and enthusiastic devotion grew into one of the most outstanding authoritative voices in heart research in the world. And he founded two major journals read worldwide*

Dr. Elizabeth (Tish) Murphy, President, International Society for Heart Research- *Dr. Dhalla was one of the founders of ISHR. He served as First Secretary General from 1972 to 1989. Thanks to Dr. Dhalla's work and vision the ISHR today has seven International societies with 3,000 international members.*

Also in the video, Dr. Dhalla can be heard reflecting on his beginnings, recognizing the foundation for his work and the importance of family- *I am born in Ghanieke Banger, a village in Punjab. I had two sisters and four brothers and my parents were well to do people. They were very compassionate. At that time, mortality due to cardiovascular disease was about 62% and there were no adequate cardiovascular drugs available. So, I was fascinated to pursue my career in cardiovascular research. I was first to provide the evidence that how*

intracellular calcium overload is critical in producing cellular problems. Family has been a great strength for me- all members of my family. I would not have been able to achieve it without their full strength and support.



Dr. Naranjan Dhalla and his wife, Mrs. Ranjit Dhalla

Dr. Naranjan Dhalla is a Distinguished Professor, Max Rady College of Medicine, University of Manitoba. He served for 19 years as Founding Director of the Institute of Cardiovascular Sciences at the St. Boniface Hospital, Winnipeg, Canada. He has been working in the field of Experimental Cardiology with a focus on pathophysiology, biochemistry and pharmacology of cardiac dysfunction. He was one of the first investigators to identify membrane defects during the development of heart disease. He has published 821 full length research papers and review articles, which are cited more than 27,330 times with an h-index of 76 in addition to editing 57 books, and training 163 fellows and graduate students in biochemical and molecular medicine. As Secretary General and then President during 1972-1996, he developed the International Society for Heart Research for promoting cardiovascular research. He has been the Executive Director of the International Academy of Cardiovascular Sciences, which he founded in 1996 for promoting the cardiovascular education and prevention of heart disease; he was elected as Honorary Life President in 2016 of this organization. For the past 32 years, he has been Editor-in-Chief of an international journal "Molecular and Cellular Biochemistry."

Dr. Dhalla has received 201 honors and awards, including six Honorary Doctorate Degrees and four Honoris Causa Professorships from different Institutions. He has been invited to give 524 talks at various conferences and institutions around the globe. He is Fellow of the Royal Society of Canada, Member of the Order of Canada, Member of the Order of Manitoba and Inductee into the Winnipeg Citizens Hall of Fame.

In Memoriam: Senator Wilbert Keon- A Pillar of Canadian Cardiovascular Medicine

Editor's note: The following article includes the media release by the University of Ottawa Heart Institute and is reproduced with permission (<https://www.ottawaheart.ca/media-release/university-ottawa-heart-institute-family-mourns-loss-true-visionary-pioneer-and-leader>).

It is with great sadness that we wish to report the passing away of senator Wilbert J. Keon. This is a great loss to the cardiovascular community not only in Canada but also to world at large. He was highly committed for promoting of cardiovascular activities as well as the quality of healthcare. He was the recipient of the medal of Merit-the highest honor by the International Academy of Cardiovascular Sciences.

It is with profound regrets that we say goodbye to Dr. Wilbert Keon, founder of the University of Ottawa Heart Institute who passed away peacefully on April 7, 2019 surrounded by his loved ones. It was in May 1976, after many years of tireless dedication and hard work that the Heart Institute opened its doors.

Dr. Keon dreamed of an institute that would provide the highest standard of cardiac care to the Ottawa community and beyond. His vision resulted in the world class Ottawa Heart Institute, which is recognized internationally as a centre of excellence combining cutting edge cardiac care, research, and education. We have continued to honour this vision as we opened our new tower at the Heart Institute last year.

"Together with the Heart Institute staff including those who worked alongside him for decades, I pledge that we will live up to his legacy, and his dream to continue building and growing his beloved Institute," said Dr. Thierry Mesana, President and CEO. "This is a colossal task as he has touched so many of our lives as a surgeon, as a mentor, as a community leader, and as a friend."

Dr. Keon will be sorely missed by all. He was true to his dream, and we will remain true to his legacy and spirit. Dr. Keon's love for, and pride in, his Heart Institute were surpassed only by his love for, and pride in, his family. Anne, his wife of 59 years, was a partner in everything he achieved. Their daughter Claudia and her husband Mark Field live in England and are parents to Jack (20), Chris (15), Ethan (14) and Sean (8). Their son Neil and his wife Debbie Loeb live in Dallas and are parents to Sam (9) and Rosie (3). Their son Ryan and his wife Cindy Tomlinson live here in Ottawa and are parents to William (19) and Emily (17).

On behalf of the Board of Directors of the Ottawa Heart Institute, the Ottawa Heart Institute Foundation, and the Heart Institute family, we offer them all our deepest condolences.



Senator Wilbert Keon

Dr. Keon was born and raised in Sheenboro, Quebec received his primary and secondary education locally and his M.D. from the University of Ottawa. His post-graduate education was from McGill, Toronto and Harvard Universities. After his medical and scientific training, Dr. Keon moved to Ottawa in 1969 to found the

University of Ottawa Heart Institute. Dr. Keon was the Chief Executive Officer until April 2004, and his vision and leadership built the University of Ottawa Heart Institute into an international centre of excellence for cardiac care, research and education, an enterprise budget exceeding \$190 million per year.

During his tenure at the University of Ottawa Heart Institute, Dr. Keon established international standards in clinical program delivery, cardiac facilities design, public and professional education programs and research and technology development. A passionate spokesman for the rights of Canadians to quality cardiac care, and to the local community benefits of leading-edge research, he communicated his message as a relentless fundraiser to garner millions of dollars for the Ottawa Heart Institute.

Innovation has been a hallmark of Dr. Keon's career, having drawn research grants totaling \$66 million during his career. His clinical innovations are numerous, but most notable include the pioneering of surgical reperfusion in acute heart attacks during the early 1970s, the first cardiac transplant in Ottawa in 1983, the first use of Jarvik 7-70 artificial heart in Canada in 1986, and in 1989, the first Canadian infant heart transplant.

Dr. Keon's academic leadership is evidenced by over 475 presentations, over 200 publications including authorship or contributions to 22 books, and 16 visiting professorships. He was a member of 72 national and international societies. He developed Canada's largest research and clinical artificial heart development program that spun-out into the World Heart Corporation in 1996. He led early demonstration projects and advocated for telehealth. These innovations also required new approaches to industrial collaboration, while maintaining scientific leadership through peer-reviewed grants.

Dr. Keon has received numerous medical scientific awards as well as many civic awards, including the Order of Ontario, the Order of Canada, membership in the Order of St. Gregory the Great, from Pope John Paul II, and appointment to the Senate of Canada in 1990. In this latter capacity, he has participated in numerous major health and science related reports.

Dr. Keon remained active in health and economic policy through participation on Scientific and Clinical Advisory Boards, membership on several Boards of Directors and as a consultant to public and private sector clients.

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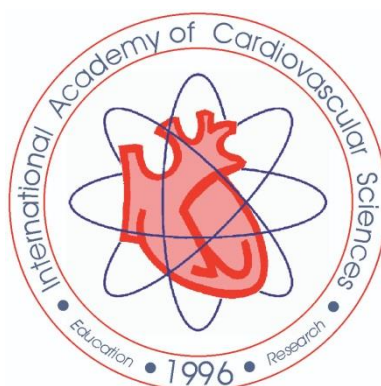
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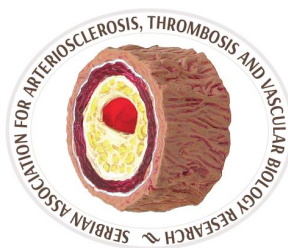
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Second Announcement of the Joint Meeting of IACS-North American and European Sections, Serbia

6th Meeting of European Section and 7th Meeting of North American Section of the International Academy of Cardiovascular Sciences (IACS)

"CARDIOMETABOLIC DISEASES: HOW NEW RESEARCH MAY LEAD TO NEW CARDIOPROTECTIVE THERAPY"



Organized by the

*International Academy of Cardiovascular Sciences - European and North American Sections
Serbian Association for Arteriosclerosis, Thrombosis and Vascular Biology Research*



SECOND ANNOUNCEMENT WITH AWARDS COMPETITION NOTICE

Venue for Main Meeting: Hotel Fontana, Vrnjacka Banja, Serbia (Date: September 11th – 14th, 2019)

Venue for Pre-Meeting: Hotel Sumarice, Kragujevac, Serbia (Date: September 10th, 2019)

(CME in progress to be accredited by the Health Council of Serbia)

<http://www.physiology.org.rs>, <https://iacsna.com/>, <http://www.iacs.sav.sk/meetings/iacs-es.html>

CONFIRMED LECTURES

Roberto Bolli (Louisville, USA): Presidential address

NARANJAN DHALLA HONORARY LECTURE

Grant Pierce (Winnipeg, Canada): A journey from basic research to clinical trials on the effects of dietary flaxseed on cardiovascular health

KEY NOTE SPEAKER

Gary Lopaschuk (Edmonton, Canada): Stimulating

cardiac ketone oxidation as an approach to treat heart failure

KEY NOTE SPEAKER

Andras Varro (Szeged, Hungary): Sudden death of top athletes: Possible mechanisms based on cellular electrophysiological considerations

SYMPOSIUM TITLE: STRUCTURE–FUNCTION CONSEQUENCES OF CARDIAC RYANODINE RECEPTORS MUTATIONS AND IMPLICATION TO ARRHYTHMOGENESIS (Joint Symposium of the European Section and North American Section of the International Academy of Cardiovascular Sciences)

Andrew Marks (New York, USA): Structure and function of ryanodine receptor in disease of heart and skeletal muscle

Martin Morad (Charleston, USA): Interaction between calcium and caffeine binding sites of cardiomyocytes: evidence from hiPS-CMs CRISPR/Cas9 RyR2 gene-edited mutations

Ana Marie Gomez (Paris, France): Are HiPSC-CM from RyR2-R420Q patients a good model for studying CPVT1 mechanisms

Hector Valdivia (Madison, USA): RyR2 Mutations outside the canonical CPVT domains: arrhythmias involving a structural substrate

SYMPOSIUM TITLE: TRANSCRIPTION, TRANSLATION AND EPIGENETICS IN HEART FAILURE

Thomas Vondriska (Los Angeles, USA): Remodeling chromatin architecture in heart failure

Johannes Backs (Heidelberg, Germany): HDAC4 in cardiometabolic disease

Timothy McKinsey (Denver, USA): HDAC11 promotes cardiometabolic disease through transcriptional and non-genomic mechanisms

Michael Czubryt (Winnipeg, Canada): Transcriptional control of cardiac fibrosis

SYMPOSIUM TITLE: TRANSLATING BASIC DISCOVERIES INTO CLINICAL APPLICATIONS

Don Maurice (Kingston, Canada): Importance of compartmented signaling in the development of novel therapeutics

Ross Feldman (Winnipeg, Canada): Heart disease in women. You've come a long way....?

Balwant Tuana (Ottawa, Canada): Cardiac specific CRE in cardiomyopathy: it's in the control

LIST OF CONFIRMED INTERNATIONAL SPEAKERS

Naranjan Dhallal (Winnipeg, Canada): Role of lysophosphatidic acid in the development of hypertension

Pawan Singal (Winnipeg, Canada): Toll-like receptors and cytokines in heart failure

Jan Slezak (Bratislava, Slovakia): New approach for prevention and treatment of cardiovascular disorders: molecular hydrogen significantly reduces the effects of oxidative stress

Bohuslav Ostadal (Prague, Czech Republic): Age and sex dependent cardiac tolerance to ischemia/reperfusion injury; the role of mitochondria

Daniel Wilson (Pomona, USA): Depression, biological rhythm and chronic cardiovascular diseases

Devendra Agrawal (Omaha, USA): Matrix regeneration proteins in the exosomes of shoulder tenocytes and mesenchymal stem cells

Peter Ferdinandy (Budapest, Hungary): Paradigm changes in cardiac safety testing: hidden cardiotoxicity of rofecoxib can be revealed in preclinical testing

Zoltán Papp (Debrecen, Hungary): Oxidative modifications of cardiomyocyte passive stiffness

Danina Muntean (Timisoara, Romania): The role of monoamine oxidase in cardiometabolic diseases: a coming-of-age story

Pavel Hamet (Montreal, Canada): Gene x environmental interactions in context of personalized medicine

Jay Mehta (Little Rock, USA): Cardioprotection by MSC exosomes

Suresh Tyagi (Louisville, USA): Dysbiotic 1-carbon metabolism in cardiac and skeletal muscle remodeling

Dinender Singla (Orlando, USA): Exosomes containing cock-tail of anti-inflammatory cytokines inhibit inflammatory cell death in chemotherapeutic drug induced toxicity

Rakesh Kukreja (Richmond, USA): PDE5 inhibition in cardioprotection: from bench to bedside

Lorrie Kirshenbaum (Winnipeg, Canada): Molecular regulation of cardiac cell death

Ghassan Bkailey (Sherbrooke, Canada): Heart failure in Duchenne and Baker Muscular Dystrophies: where we are and where we are going

Madhu Anand-Srivastava (Montréal, Canada): Sirtuin-1 and regulation of angiotensin-II-induced expression of G-proteins and vascular remodeling

Ashok Srivastava (Montréal, Canada): Role of protein kinase B /AKT in histone deacetylase 5 phosphorylation and nuclear export in vascular smooth muscle cells

Nilanjana Maulik (Farmington, USA): Engineering exosomes in disease models

Paramjit Tappia (Winnipeg, Canada): Cardioprotective effects of dietary sulphur-containing amino acids in diabetes

Ganesh Halade (Birmingham, USA): Resolving and non-resolving inflammation in heart failure

Ramasamy Ravichandran (New York, USA): The receptor for advanced glycation end products (RAGE) and DIAPH1: unique mechanisms and healing the ischemic heart

Wolf Schunck (Berlin, Germany): Therapeutic potential of omega-3 epoxyeicosanoids in cardiovascular and inflammatory diseases

John Seubert (Edmonton, Canada): Does targeting soluble epoxide hydrolase preserve cardiac and mitochondrial function in aged females

John Ussher (Edmonton, Canada): Myocardial mitochondrial alterations and energy metabolism in a mouse model of Barth Syndrome

John Ussher (Edmonton, Canada): Improvements in diabetic cardiomyopathy following FoxO1 antagonism require activation of pyruvate dehydrogenase

Sanjiv Dhingra (Winnipeg, Canada): Immunological fences to allogeneic stem cell therapy for cardiac regeneration

James Gilchrist (Winnipeg, Canada): Luminal calcium ion regulation of sarcoplasmic reticulum membrane calcium release

Moni Nader (Riyadh, Saudi Arabia): The SLMAP/STRN complex is down regulated in human failing hearts and it regulates cardiomyocyte response to adrenergic stimuli

Ricardo Gelpi (Buenos Aires, Argentina): Mechanisms involved in remote ischemic preconditioning

Arunabha Ray (New Delhi, India): The pharmacology of the brain-heart axis: possible regulation by nitric oxide (NO)

Gulati Kavita (Delhi, India): Evaluation of methylxanthine induced cardiotoxicity: a translational approach

Makino Naoki (Beppu, Japan): Telomere biology in cardiovascular disease

Leyva Rodriguez Delfin (Holguin, Cuba): Update on wearables devices in cardiology

Ricardo Gelpi (Buenos Aires, Argentina): Mechanisms involved in remote ischemic preconditioning

Henrique Furtado (Palmas, Brazil): Heart valve disease – update surgical treatment

Antoinette Blackman (Belo Horizonte, Brazil): QT interval, QT dispersion and heart rate variability in patients with grade I diastolic dysfunction

Marek Michalak (Edmonton, Canada): ER stress coping strategies in the heart

Harpal Buttar (Ottawa, Canada): Dietary interventions and functional foods prevent cardiovascular diseases through diverse mechanisms

Monika Bartekova (Bratislava, Slovakia): Quercetin as potential cardioprotective agent in I/R injury: role of selected comorbidities and comedications

Petr Ostadal (Prague, Czech Republic): Extracorporeal membrane oxygenation (ECMO) in cardiogenic shock and cardiac arrest

Ekaterina Lopatina (St. Petersburg, Russia): The modulation of the non pumping function of the Na,K-ATPase: physiological role of the adrenoreceptors

Vladimir Kulchitsky (Minsk, Belarus): Perineural migration of stem cells in the model of damaged heart nodes

Chaldakov George (Varna, Bulgaria): Cardiometabolic adipobiology: a translational perspective

Jerzy Beltowski (Lublin, Poland): Hydrogen sulfide and polysulfide signaling in the adipose tissue: implications for cardiovascular diseases

Istvan Baczko (Szeged, Hungary): Hidden cardiotoxic effects of drugs: a paradigm change in cardiac safety testing

Judit Barta (Debrecen, Hungary): Autonomic dysregulation in heart failure patients

Igor Efimov (Washington DC, USA): Mechanisms of sudden death in heart failure

Thomas Jespersen (Copenhagen, Denmark): Anti-AF effects of SK channel inhibition - from rat to human to horse

Dobromir Dobrev (Essen, Germany): Role of inflammatory signaling in atrial fibrillation

LIST OF CONFIRMED SPEAKERS FROM SERBIA

Dragan Djuric (Belgrade): Folic acid and cardiovascular health: non-homocysteine dependent effects in cardiometabolic models

Vladimir Jakovljevic (Kragujevac): Polyphenols: from basic to applied investigations

Nina Japundzic Zigon (Belgrade): Doxorubicin-induced cardiomyopathy: is there more than one phenotype?

Tatjana Simic (Belgrade): Mechanisms of impaired vascular redox homeostasis in uremia

Bato Korac (Belgrade): Redox-dependent molecular basis of human heart preconditioning

Zoran Miloradovic (Belgrade): Synergistic NADPH blockade and AT2 receptor stimulation enhance

postischemic kidney recovery in hypertensive rats

Nevena Mihailovic Stanojevic (Belgrade): The effects of natural and synthetic antioxidants on the progression of focal segmental glomerulosclerosis in hypertensive rats

Irena Krga (Belgrade): Dietary polyphenols in the prevention of atherosclerosis development-mechanisms of action

Kristina Gopcevic (Belgrade): Biomarkers in cardiovascular medicine: matrix metalloproteinases potential

Zvezdana Kojic (Belgrade): Ramipril improves rabbit heart mitochondrial bioenergetics function during the course of experimental hypercholesterolemia

SYMPOSIUM TITLE: NEW HORIZONS IN CARDIOLOGY (organized by the 34th Consortium Chapter of the American College of Cardiology of Serbia and Republic of Srpska)

Chairs: Milan Nedeljković, Duško Vulić, Branko Beleslin (Belgrade/Banja Luka)

Milan Nedeljkovic (Belgrade): Transcatheter aortic valve implantation - new trends and indications

mechanical circulatory support in the treatment of acute cardiogenic shock

Branko Beleslin (Belgrade): Perspectives of functional evaluation of coronary stenosis

Vladimir Mitov (Zajecar): Syncope - diagnostic-therapeutic algorithm

Milovan Petrovic (Sremska Kamenica): The role of the

SYMPOSIUM TITLE: INTEGRATED MULTIDISCIPLINARY APPROACH IN CARDIOVASCULAR PREVENTION-FROM BASEMENT TO THE ROOF (organized by the Hypertension, Infarction, Stroke and Prevention Association/HISPA)

Chairs: Marina Deljanin Ilic, Nebojsa Tasic (Nis/Belgrade)

Marina Deljanin Ilic (Nis): Blood pressure variability – New target in hypertension treatment

Rade Babic (Belgrade): Personalized approach to medical treatment of coronary patients following percutaneous coronary interventions

Nebojsa Tasic (Belgrade): Personalized and multidisciplinary approach in blood vessel aging prevention

SYMPOSIUM TITLE: CARDIOVASCULAR AND METABOLIC ASPECTS OF EXPERIMENTAL HYPERBARIC MEDICINE

Chairs: Vladimir Jakovljevic, Milan Ivanov (Kragujevac/Belgrade)

Milan Ivanov (Belgrade): Hyperbaric oxygen preconditioning decreases kidney injury molecule-1 expression in the kidney of hypertensive rats subjected to renal ischemia

Vladimir Zivkovic (Kragujevac): Hyperbaric oxygen and calcium channel modulators as preconditioning tools in rat model of global ischemia

Predrag Brkic (Belgrade): The influence of hyperbaric oxygen therapy on regenerative processes following experimental brain injury

Ivan Srejovic (Kragujevac): The effects of hyperbaric oxygenation on redox status in diabetic patients



Announcement for Award Competitions at the Joint Meeting of IACS-North American and European Sections in Banja, Vrnjacka, Serbia (September 11-14, 2019)

I. Students and Young Investigator Awards:

Graduate Students, Postdoctoral Fellows (PhD or MD) and Young Investigators (Within 10 years of post-graduate degree) are encouraged to submit Abstracts for Poster or Oral Presentation by July 15, 2019 to Dr. Dragan Djuric (Email: drdjuric@eunet.rs or dr_djuric@yahoo.com).

Abstracts must be accompanied by a registration fee (100€ for students and 150€ for others) registration fee includes a reception, three lunches, two dinners, coffee breaks and local transport. Accepted abstracts will be printed in the program book and the authors will be notified for poster or oral presentations.

A. Poster Award Competitions: All posters will be evaluated by four different committees (three judges in each committee) for the following 12 Poster Awards:

1. Morris Karmazyn Poster Awards – 4
2. Margaret Moffat Poster Awards – 4
3. Karl Werdan Poster Awards – 2
4. Keld Kjeldsen Poster Awards – 2

(Each Awardee will receive a certificate and 350€)

B. Gary Lopaschuk Student Award Competition:

Nominations or applications from Graduate Students are invited for the Gary Lopaschuk Awards Competition. Each Student should submit one-page CV along with a copy of the Abstract for the meeting to Dr. András Varró in Szeged: (a.varro@phcol.szote.u-szeged.hu) by July 15, 2019. Four students will be selected for the competition and will be notified for oral presentations instead of poster presentations. Each selected students will be given 550€ to reimburse the cost of their registration and accommodation. Each presentation (15 min talk & 5 min discussion) will be evaluated by a panel of three judges and the winner will be given 500€ award and a certificate at the awards ceremony.

C. Roberto Bolli Young Investigator Award Competition:

Nominations or applications from Postdoctoral Fellows (PhD or MD) and Young Investigators are invited for the Roberto Bolli Awards Competition. Each individual should submit a brief CV along with a copy of the abstract for the meeting to Gary Lopaschuk in Edmonton (glopasch@ualberta.ca) by July 15, 2019. Four candidates will be selected for the competition and will be notified for oral presentations instead of

poster presentations. Each selected individual for the competition will be given 550€ to reimburse the cost of their registration and accommodation. Each presentation (15 min talk & 5 min discussion) will be evaluated by a panel of 3 judges and the winner will be given a 500€ award and a certificate at the awards ceremony.

D. Canadian Journal of Physiology and Pharmacology Young Investigator Award Competition:

Nomination or applications from Graduate Students and Postdoctoral Fellows are invited for the Canadian Journal of Physiology and Pharmacology Award. Each applicant should submit a one-page CV along with a copy of their abstract for the meeting to Dr. Bohuslav Ostadal in Prague (ostadal@biomed.cas.cz) by July 15, 2019. Four candidates will be selected for the competition and notified for oral presentations instead of poster presentations. Each selected applicant will be given 550€ to reimburse the cost of their registration and accommodation. Each presentation (15 min talk & 5 min discussion) will be evaluated by a panel of three judges and the winner will be given 500€ award and a certificate at the awards ceremony.

E. St. Boniface Hospital Albrechtsen Research Centre Travel Awards:

Travel awards in the amount of 320€ each, are available to ten Graduate Students from North America for participating in the 2019 Serbia Meeting. Applications with a one-page CV and a copy of their abstract for presentation in the poster competition may be sent to Dr. Michael Czubyrt, in Winnipeg (MCzubyrt@sbr.ca) by July 15, 2019. Each applicant will be notified and the award and a certificate can be collected at the registration desk.

F. Reviews in Cardiovascular Medicine Travel Awards:

Travel awards in the amount of 300€ each, are available to 10 Graduate Students and Postdoctoral Fellows from Europe for participating in the Serbia Meeting. Applications with a one-page CV and a copy of their abstract for presentation in the poster competition may be sent to Dr. Istvan Baczko in Szeged (baczko.istvan@med.u-szeged.hu) by July 15, 2019. Each applicant will be notified and the award and a certificate can be collected at the registration desk.

Appointment of Judges:

Four panels of judges (three in each panel) for poster award competitions will be appointed by Prof. Vladimir L. Jakovljevic and three panels of judges (three in each panels) will be appointed by Prof. Dragan Djuric for evaluation of oral presentations. One person in each panel

will serve as a chair and will be responsible for notifying the names of poster awards winners to Prof. Vladimir L. Jakovljevic and the names of the oral competition award winners to Prof. Dragan Djuric soon after completion of their assessments. These names will be kept confidential and will be announced at the awards ceremony.

II. Honours and Awards for Established Investigators:

While the IACS-European Section will organize one high profile investigator with the Naranjan Dhalla Honorary Lecture Medal at the opening ceremony of the conference, the Academy will bestow 11 honors and awards upon senior scientists at the awards ceremony. These recognitions include Bohuslav Ostadal Award, Jan Slezak Award, Howard Morgan Award, Norman Alpert Award, James Willerson Award, Grant Pierce Award, Dennis McNamara Award, Life-time Achievement Award, Distinguished Leadership Award and Distinguished Service Award. The individuals receiving these Academy recognitions will be selected from the invited speakers at this conference by the members of the Executive Council of the Academy

CALL FOR ABSTRACTS

The Program Committee is welcoming the submission of original contributions for oral and poster presentations at the meeting.

ONLINE ABSTRACT SUBMISSION

Online submission of abstracts is encouraged by the Program Committee. Scientific contributions should be according to the topics of the meeting. Abstract must be written in English. Please, note that abstracts with poor quality English language will be rejected. PLEASE INDICATE THE PREFERRED METHOD PRESENTATION (oral or poster). Accepted abstracts will be scheduled for the type of presentations by the authority of the Program Committee.

IMPORTANT NOTICE – THE DEADLINE FOR ABSTRACT SUBMISSION IS JULY 15th 2019.

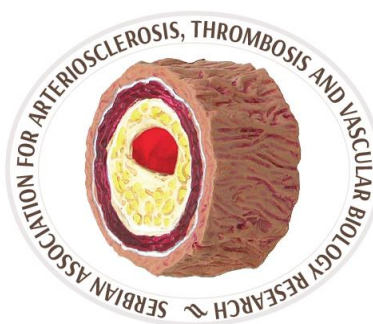
ABSTRACTS TO BE SENT ONLY TO THE E-MAIL ADDRESSES OF THE PROGRAM/ORGANIZING COMMITTEE drdjuric@eunet.rs or drvladakgbg@yahoo.com

THE NUMBER OF ABSTRACTS IS NOT LIMITED.

Only abstracts accompanied by the full payment of the registration fee will be considered for inclusion in the final program and publication in abstract book. The transmission of the abstracts via fax, floppy discs, CD or USB by standard mail will not be accepted. Late abstracts will **NOT** be accepted.

INSTRUCTIONS FOR AUTHORS

- 1) Abstracts should contain short TITLE; a list of AUTHOR(S); the INSTITUTION(S) (*Italic*) where the investigation was performed and the TEXT.
- 2) The title should be written in CAPITAL and BOLD letters. UNDERLINE the presenting author.
- 3) Abstracts should state the study objective, briefly describe the MATERIALS and METHODS used, summarize the RESULTS obtained and state the CONCLUSIONS.
- 4) The recommended font is **Times New Roman** and size **12**. ALL SUBMISSION MUST BE IN ENGLISH.
- 5) Type the entire abstract single-spaced, WITHOUT margins at the top or sides.
- 6) Abstracts should contain **NO MORE THAN 250 WORDS**. Abstracts received after the deadline and abstracts not in compliance to the instructions will not be accepted.



ABSTRACT SUBMISSION EXAMPLE:

THE EFFECTS OF NITRIC OXIDE SYNTHASE- OR LIPOXYGENASE INHIBITION ON CORONARY FLOW AND NITRITE OUTFLOW IN ISOLATED RAT HEART

Jakovljević V¹, Djurić D²

¹*Department of Physiology, Faculty of Medical Sciences, University of Kragujevac, Kragujevac,*

²*Institute of Medical Physiology "Richard Burian", Faculty of Medicine, University of Belgrade, Belgrade, Serbia*

The aim of this study was to assess the changes of coronary flow and nitrite outflow under inhibition of nitric oxide synthase by L-NAME or lipoxygenase induced by nordihydroguaiaretic (NDGA, LOX-inhibition) acid in an isolated rat heart. The hearts of male Wistar albino rats (n=18, age 8 weeks, body mass 180-200g) were retrograde perfused according to the Langendorff technique at gradually increased constant perfusion pressure conditions (CPP, 40-120 cm H₂O) which induced flow-dependent NO release (nitrite outflow).....(250 Words)

NOTIFICATION OF ACCEPTANCE

Authors will be informed of their abstract acceptance (or rejection) no later than **August 5th 2019**. For this notification, the correct mailing address, including email address, phone and fax numbers, is essential. Please carefully provide the email address used when sending the abstracts. The registered author is responsible for informing all authors of the status of the abstract.

OFFICIAL LANGUAGE

The official language of the meeting will be English, however for the accredited CME three day-courses for health practitioners, the Serbian language may be used as well. No simultaneous translation will be provided. All accepted abstracts will be published in English.

ORAL PRESENTATION

Keynote speakers are allocated 30 minutes for their

talks. All other speakers are allocated 20 minutes for their presentation with a discussion time according to the final program.

POSTER PRESENTATION

Interactive poster session will be held during the meeting. Authors are requested to mount their posters from 09:00 to 19:00 on the day of the poster presentation (posters to be presented for the entirety of the meeting). Poster size should be 120 cm (height) x 80 cm (width). Poster figures should be designed to be viewed from a distance and the authors should use clear, visible graphics and large text fonts. Material for mounting posters will be provided in the poster area. Authors are requested to be present by their posters during the poster session for which their poster has been scheduled.

Future Meetings of the Academy

The following meetings for the North American Section of the Academy are confirmed:

1. 8th Meeting of the IACS-North America will be organized in Montreal, during the summer of 2020 by Drs. Madhu Anand-Srivastava and Ashok Srivastava.
2. 9th Meeting of the IACS-North America will be organized in Winnipeg, during the summer of 2021 by Dr. Lorrie Kirshenbaum.
3. 10th Meeting of the IACS-North America will be organized in Tampa, Florida during the summer of 2022 by Dr. Srinivas Tipparaju.

My Impression During a Visit to India for Participation in a Heart Conference

Asher Kimchi, M.D., FACC, FACP, FAHA, FIACS
Cedars-Sinai Medical Center, Los Angeles, USA
Email: klimedco@g.ucla.edu

I was fortunate to participate in Bangalore, India at a most stimulating, high scientific level and well-organized, International Conference on Translational Research in Cardiovascular Sciences of the International Academy of Cardiovascular Sciences (IACS) - India, planned and directed by Drs. S.R. Kalpana, C.N. Manjunath and C.C. Kartha. I found the scientific level of the congress to be very high. The lectures presented were of great clinical importance and very contemporary. The invited faculty were first class teachers and very knowledgeable. I enjoyed every session that I attended, and personally, learnt a lot at this meeting. I thank, Dr. S.K. Gupta, as well as Drs. Dhalla, Kartha, Kalpana, Goyal and C.N. Manjunath, for the great honor of bestowing upon me, the 2019 Lifetime Achievement Award of the IACS. This is a moment I will never forget and I am truly honored and humbled by this award.

According to the tour arrangements that were coordinated by Drs. Gupta and Dhalla and operated by the capable and professional hands of Ms. Anupama Sethi, we continued from Bangalore to Mumbai, Delhi, Agra, Jaipur and back to Delhi. The trip was first class in every aspect. It was full of pleasant surprises and very enjoyable. All the hotels that we stayed in were beautiful and luxurious. The tour guides in each city were very pleasant and extremely knowledgeable. The drivers were excellent and very professional. They were all outstanding.

In Mumbai, the fascinating museums, bazaars, synagogue, laundry at the dhobi ghats, the central train station, the Gateway of India, the boat trip to the captivating Elephant Caves and of course the Taj Mahal hotel where we stayed was memorable. For decades, I hoped to visit the Taj Mahal. Standing in front of it was way above and beyond what I ever dreamed of. It is the most beautiful building I have ever seen. The visits to Agra Red Fort, the old city of Jaipur, Jaipur Palace and Amber Palace are unforgettable.

Back in Delhi, we were deeply touched by Dr. Gupta's and Dr. Goyal's generous invitation to attend, an elaborated dinner reception as special guests, in honor of Dr. Dhalla, my wife Becky and me, on February 24, 2019. This was a unique opportunity to spend a lovely time and

meet a wonderful group of colleagues: warm, humble, hospitable and brilliant scientists.

The following day was exceptional as well. The visit at the Delhi Pharmaceutical Sciences & Research University, on February 25th, was very exciting. I cannot thank Drs. Goyal and S.K. Gupta enough for honoring me as a special guest at the All India Physiotherapy Seminar on Anti-Doping and following this meeting, giving me the honor of Chairing the Distinguished Guest Lecture given by Dr. Dhalla.

I was impressed by Dr. Goyal, his positive energy, inspiration and dedication to enrich students and bringing top scientists and gifted teachers to the university. My interaction in these seminars with students as well as Pre- and Post-doctoral Fellows was truly enlightening. I realized that the future of science is in the most capable hands. The lunch following the seminars was delicious and I was privileged to learn about plans for International meetings of the IACS-India. As I told Dr. Gupta during the meeting in Delhi, if a decision is made to organize another International Conference, I would do my best to help to promote it globally and hopefully be in attendance.



Dr. Asher Kimchi

Asher Kimchi, MD, is the co-medical director of the Preventive and Consultative Heart Center of Excellence at the Cedars-Sinai Heart Institute. He is the immediate past clinical chief of the Cedars-Sinai Division of Cardiology. He also holds the academic title of clinical professor of medicine. He is also a past president of the Greater Los Angeles Affiliate of the American Heart Association. Dr.

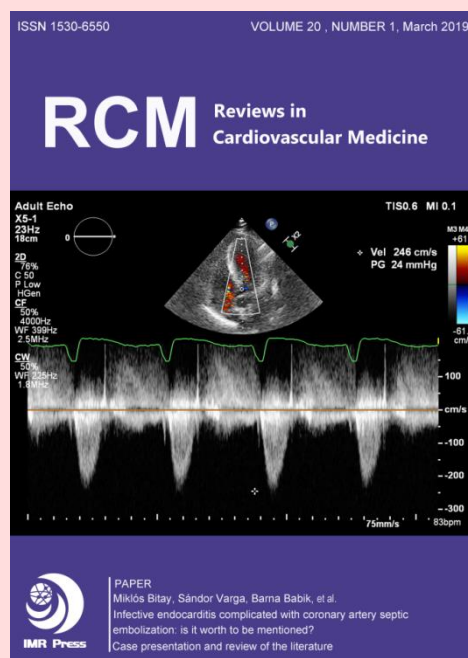
Kimchi, a former flight surgeon in the Israeli Air Force, is the founder and chair of the International Academy of Cardiology. He founded the World Congress on Heart disease and has served as its chair for 28 years. Through

the organization, he has directed 25 international congresses on heart failure and heart disease. He is an editor or co-editor of 12 book, and his scientific articles on the diagnosis and treatment of coronary artery disease and heart failure have appeared in prestigious peer-reviewed journals, including (*Circulation*, the *Journal of the American College of Cardiology*, *JAMA Internal Medicine* and the *American Heart Journal*). He has presented his scientific work at numerous national and international conferences. He serves on the editorial board of the journal, *Cardiology*. Dr. Kimchi is the recipient of multiple awards and recognitions, including the Passion of the Heart Award from the American Heart Association in 2006, HeartView Global Foundation Award in 2013,

and Lifetime Achievement Award in Cardiovascular Science, Medicine and Surgery from the International Academy of Cardiovascular Sciences in 2019. Over the past several years, Dr. Kimchi's research has focused on the management of patients hospitalized with decompensated heart failure. The research involves designing and evaluating interventions to improve the care during transition from hospital to home, to reduce readmissions, and potentially improve morbidity and mortality. In clinical practice, Dr. Kimchi provides comprehensive cardiology care with emphasis on the prevention of heart disease.

New Partnering Journal of the IACS

We are most pleased to announce that the Academy has established a formal relationship with IMR Press and has accepted *Reviews in Cardiovascular Medicine* as an official Journal. It is pointed out that the *Reviews in Cardiovascular Medicine*, an open-access journal, was started by Med Reviews in 2000 and has published 18 volumes with a varied impact factor ranging from 0.2 to 2.75 because it was designed to provide information on diagnosis and treatment for practicing cardiologists. This Journal is abstracted and indexed in Science Citation Index Expanded, MEDLINE, BIOSIS Previews, Current Contents/Clinical Medicine, Embase, and Scopus. Furthermore, effective Volume 19, the Journal was acquired by IMR Press Ltd who wishes to expand its present scope to include the interests of Investigative Cardiologists and Experimental Cardiologists. It will have reviews as well as research papers in the field of cardiovascular sciences and translational medicine to promote the scientific basis for the practice of cardiology. It is noteworthy that Prof. Andras Varro (President, IACS – Europe) has accepted to serve as Editor-in-Chief of this Journal. He is now in a process of appointing about 50 members of the Editorial Board in consultation with the Academy and IMR Press. We believe it is a real challenge for the Members of the Academy to further promote and develop this Journal with particular emphasis on the prevention of heart disease. The International Cardiovascular Community is therefore urged to submit both reviews and research articles to *Reviews in Cardiovascular Medicine* (<https://rcm.imrpress.org/EN/2153-8174/home.shtml>).



Announcement of the Officers of the IACS India Section

The updated list of the Officers of the IACS-India Section is shown below:

Officers of the India Section of the IACS



CC Kartha, *President*



SK Gupta, *Immediate Past President*



Surya Ramachandran,
Secretary General



Ramesh Goyal, *Vice President*



Ajit Mullassari, *Vice President*



Tejal Gandhi, *Vice President*



Praveen Kerala Varma, *Vice President*



Srinivas Gopala, *Finance Secretary*



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

Welcome to the World of Cardiovascular Sciences

International Academy of Cardiovascular Sciences (IACS) and The International Society for Heart Research (ISHR), The academy was founded in 1996, with its headquartered in Winnipeg, Canada by renowned cardiovascular scientists, surgeons and cardiologists, The Academy has provided a platform for the sharing of research and education information in the field of heart health. The most important mission of the IACS is to promote cardiovascular education of professionals and laypeople and to recognize major cardiovascular achievements throughout the world. It has been encouraging young investigators with numerous awards and prizes, in addition to recognition of senior scientists with awards and orations. The Academy has established five sections: India, Japan, Europe, South and North America which operate independently, but in a coordinated fashion. Similarly, the ISHR has a mission to promote the discovery and dissemination of knowledge in the cardiovascular sciences on a world-wide basis. The society brings together clinical cardiologists and cardiovascular scientists in India, in an effort to develop better collaborative research and healthcare deliveries for cardiovascular diseases, especially for those which are more prevalent in India and to foster International collaboration. The ISHR-Indian section is also committed to achieve affordable diagnostic, preventive and therapeutic measures at an indigenous level.

Delhi Pharmaceutical Sciences and Research University (DPSRU), the First Pharmacy University of India, with its constituent college Delhi Institute of Pharmaceutical Sciences and Research (DIPSAR) has a privilege of organizing not only several conferences on cardiovascular sciences in the past, but also to have a Nobel Laureate as the participant is pleased to invite the scientists, clinicians and young investigators to attend the mega event in February 2020. The university is known for having a strong legacy for cardiovascular research, clinical trials and herbal formulation development. It offers various graduate programs in various disciplines of pharmacy and allied sciences including clinical research, physiotherapy, hospital management and public health.

All India Institute of Medical Sciences (AIIMS), is the premier medical Institute of the country, known internationally for quality health care delivery and research at the highest quality. DPSRU with AIIMS is organizing this conference to promote the research in cardiovascular sciences. This conference will have eminent speakers from various parts of India and other countries with the participation of clinicians, basic scientists and young investigators who will have good opportunity to interact with each other.

Society for Promotion and Research in Cardiovascular Sciences (SPARCS) & Academy of Cardiovascular Sciences (ACS) are the societies being promoted by IACS.

Local Organizing Committee

Scientific Program & Call for Abstracts

We are in the process of preparing a rich scientific feast through eminent speakers with scintillating research-based presentations. Some of the unique symposia planned are as follows:

- Vascular Injury Management in Battle Field to Translational Research
- Advances in Biomedical Engineering in Cardiac Failure
- Genomic Diagnostic in Cardiovascular Disease
- Regulations on medical devices and NPPA
- Riya and Paul Ganguly Symposium on Diabetes

ISHR & IACS will have six Orations and Award Lectures by Eminent speakers:

ISHR Orations:

- Prof. Wahi Oration
- Prof. Manjeet Singh Oration
- Oration Torrent Award Lecture

IACS Orations:

- Prof. Kukreja Oration
- Prof. Suresh K. Gupta Oration
- Prof. Ramesh Goyal Oration
- Prof. Harpal Buttar Oration

In addition, there will be several Keynote lectures by eminent clinicians and scientists

To encourage young investigators and students there will be awards of over Rs. 100,000. Abstracts are encouraged to be sent from students and young faculty to participate in various scientific sessions:

Young Faculty Oral Presentation Award Competitions. Selected participants may get Rs 3000/- to 5000/- as a cash prize/grant:

- Prof. N.K. Ganguly Award (Clinical)
- Prof. Naranjan S. Dhalla Award (Basic Science)
- Prof. C.C. Kartha Travel Awards (Eight Prize for student/faculty)
- Prof. Suresh Tyagi Young Faculty Award Competition
- Prof. Devendra Agrawal Prizes to Young investigators in Translational Sciences

Naranjan Dhalla Poster Presentation Award Competitions (Four Prizes)

Oral/Poster papers presentations

(More Prized may be announced)

Young Investigator Interaction with Luminaries

Abstract should be submitted with following headings - Title of the Paper, Name of Presenting Author, Co-author(s), Affiliation(s), Postal Address Presenting Author with phone numbers and email ID. Total word count of abstract should not exceed 300.

Registration Packages

BASIC REGISTRATION

	From India	Abroad
Students	Rs. 2000.00	\$ 50
Others	Rs. 3000.00	\$ 70

Registration (with Dinner & Accommodation for Foreign Delegates)

Type A: (4* Hotel)	NA	\$ 700
Type B: (3* Hotel)	NA	\$ 500
Type C: (Guest House type)	NA	\$ 350

Special Interactive Meeting with Scientist with Snacks/Meals will also be arranged on request and with or without nominal Fee:

NEFT Details: Account No: SBI Saket, New Delhi
SBI Collect: DPSRU, Conference Fee

Note: Registration Fee includes Registration Kit, Participation in Symposia, Refreshments and Lunch. Dinner will also be included for 1-2 days

Accompanying person also need to be registered @ of 75% Registration fee.

For Foreign delegates registration, in addition to above, Airport Pick-up and drop to Hotel, Free Hotel Accommodation for 3 nights and transport to the venue and back will be provided

Important Dates

Last Date of Receipt of Abstracts:
November 15, 2019

Confirmation of Acceptance of Abstract:
January 1, 2019

Cut-off Date of Registration:
January 1, 2020

After the Cutoff Date it will be considered as Spot Registration for which one has to pay 25% Extra of the Fee

A rebate for Early Registration:
20 % Before August 15, 2019
10% Before September 30, 2019

Local Organizing Committee

Patrons

- Prof. Naranjan S. Dhalla
- Prof. Balaram Bhargav
- Prof. Nirmal K. Gaungly
- Prof. Suresh K. Gupta
- Prof. C.C. Kartha
- Prof. K.K. Talwar

Chairpersons, LOC:

- Prof. Ramesh K. Goyal
- Prof. Bhel

Co-coordinators: LOC:

- Dr. Madhu Gupta
- Dr. Geeta Agrawal

Scientific Advisory Committee

Chairpersons:

- Prof. S. Dwivedi
- Prof. S.K. Maulik
- Prof. Arunabha Roy
- Prof. S. Ramchandran
- Prof. Sandeep Seth
- Prof. S. Ramakrishnan
- Prof. S.S. Agrawal

Organizing Secretary

- Prof. Harvinder Popli
- Joint Organizing Secretaries
- Dr. Mukesh Nandave
- Dr. Rajni Mathur
- Dr. Ajit Kumar Thakur
- Dr. H.N. Yadav

Chairpersons & Subcommittee

Scientific & Abstract Submission:

- Dr. Mukesh Nandave
E-mail: mukeshnandave@gmail.com
- Dr. Rajni Mathur
E-mail: mathurajani@gmail.com

Registration:

- Dr. Rajiv Kumar Tonk
E-mail: rajiv.tonk@gmail.com
- Dr. Ajit Kumar Thakur
E-mail: ajit.thakur@dpsru.edu.in

Accommodation & Transportation:

- Dr. Swaminathan
E-mail : swamilingam@gmail.com

Printing/Souvenir:

- Dr. Mahaveer Dhobi
E-mail: mahaveer.pharma@gmail.com

Public Awareness Program: Dr. Rakhi Ahuja
Young Faculty Program: Dr. Shilpa Jain



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)

Registration Form

Prof./Dr./Mr./Ms.: _____

Designation: _____

Organization: _____

Highest Qualification: _____

Address for Correspondence:

_____ City: _____

State/Country: _____ Pin Code: _____

Phone with STD Code: _____ Mobile: _____

Email ID: _____ Presenting Paper: Yes _____ No _____

Invited Speaker/Guest/Resource Person/Official of Society: _____

Accompanying Person(s): _____

Payment Details: Registration Fee

Amount INR/\$ _____ In words: _____

SBI Collect Reference No. _____ Dated: _____

Attachments/Enclosures: Scan copy of registration form forwarded through head of the organization, registration fee payments details, proof of student registration from the Head of the Institute.

Report from FFC's 26th International Conference and 14th International Symposium of the Academic Society for Functional Foods and Bioactive Compounds (ASFFBC)

Dragan Djuric, MD, PhD
*Institute of Physiology "Richard Burian", Faculty of Medicine
University of Belgrade, Belgrade, Serbia
Email: dr_djuric@yahoo.com*



Dr. Grant Pierce giving his talk and Dr. Dragan Djuric as chair of the session

The 26th International Conference and Expo on "Functional Foods, Bioactive Compounds and Nutraceuticals in Health and Disease" was organized by the Functional Food Center (FFC)/Functional Food Institute, Dallas, TX, USA. The conference was held at the San Diego Convention Center on May 9-10, 2019.

This conference consisted of over 90 participants from 14 countries around the world, including Japan, Turkey, Brazil, Serbia, China, Canada, Israel, Germany, United Kingdom, Cameroon, Czech Republic, Australia, Russia, and the United States.

The 26th International Conference of Functional Food Center brought experts together from all over the world in fields of medicine, biology, and the food and nutrition research and industry to discuss the functional foods with bioactive compounds as dietary interventions for chronic diseases, as well as for health promotion. The members of the Organizing Committee were: Danik Martirosyan (Conference Co-Chairman), Functional Food Center/Functional Food Institute, Dallas, TX, USA; Garth Nicolson (Conference Co-Chairman), The Institute for Molecular Medicine, S. Laguna Beach, CA, USA (earlier Nobel Prize Nominee); Kanakaraju Kaliannan, Harvard

Medical School and Massachusetts General Hospital, Boston, MA, USA; Dragan M. Djuric, Institute of Medical Physiology "Richard Burian"; Faculty of Medicine, University of Belgrade, Belgrade, Serbia; Nathan S. Bryan, PhD, Department of Molecular and Human Genetics, Baylor College of Medicine-Houston, TX, USA; and Gabriela Riscuta, Nutritional Science Research Group, Division of Cancer Prevention, National Cancer Institute, NIH, Bethesda, MD, USA.

The Scientific program consisted of the following sessions: 1. Opening and Keynote Session; 2. Dietary Nitrite and Nitrate; 3. Vitamins, Nutrients and Nutritional Supplements in Cardiovascular Health and Dysfunction; 4. Functional Foods with Bioactive Compound(s): Prevention and Management of Non-communicable



From L to R: Drs. Grant Pierce, Devendra Agrawal, Naranjan Dhalla and Dragan Djuric

Diseases; 5. Functional Foods and Chronic Diseases; 6. Food Bioactive Compounds and Functional Foods: Promising Concept for Chronic Disease and Healthy Aging; 7. Current Research and Development of New Functional Food Products) with total 28 interesting lectures, and with two interactive poster sessions.

The International Academy of Cardiovascular Sciences supported the organization of the special session entitled "Vitamins, Nutrients and Nutritional Supplements in Cardiovascular Health and Dysfunction" where session organizer and Chair was Dragan M. Djuric, Belgrade, Serbia. In this session with their talks the following speakers participated: Naranjan S. Dhalla, Winnipeg, Canada "Modification of catecholamine-induced cardiac arrhythmias by treatment with some vitamins"; Grant Pierce, Winnipeg, Canada, "Supplementation of the diet with flaxseed - its effects on cardiovascular health"; Devendra K. Agrawal, Omaha, USA "Vitamin D deficiency accelerates intimal hyperplasia and restenosis following coronary intervention"; Bram Ramjiawan, Winnipeg, Canada, "Facts and Controversies Associated with the Assessment and Use of Vitamin D", and Dragan Djuric, Belgrade, Serbia, "Sulfur amino acids homocysteine and methionine: overview of the cardiovascular effects in rats". For organization of this scientific session Prof. Dragan Djuric was announced as the best session organizer and received the certificate.



Dr. Naranjan Dhalla with Dr. Anureet K. Shah (Co-chair session 5 - Functional Foods and Chronic Diseases – from California State University, Los Angeles

During the conference, a city tour of San Diego and social networking at the incredible UNESCO World Heritage Balboa Park was organized by the Functional Food Center.

Furthermore, Functional Food Center is pleased to announce its 27th International Conference, "Functional

Foods and Bioactive Molecules: Their role in disease management and health promotion." The conference will be held at the Joseph B. Martin Conference Center at Harvard Medical School, Boston, on September 20-21, 2019. This conference will bring together experts in medicine, biology, and the food industry to discuss the functional foods with bioactive compounds as dietary interventions for chronic diseases. The conference will be organized by the FFC and Nutrition/Metabolism Laboratory at Department of Surgery, Beth Israel Deaconess Medical Center / Harvard Teaching Hospital.



Dr. Danik Martirosyan

Dr. Danik Martirosyan is a founder of the Functional Food Center, the Academic Society for Functional Foods and Bioactive Compounds, and Editor-In-Chief of the Journal of Functional Foods in Health and Disease. Recognized by the US Government as an extraordinary scientist and one of the top scientists in the field of functional foods since 1998, Dr. Martirosyan has over 20 years of expertise in researching non-traditional plants and created more than 60 functional food products. Dr. Martirosyan has successfully formulated and tested the efficacy of multiple nutritional components in animal models and patient studies with positive results. Dr. Martirosyan is also the author of the new Functional Food Definition. During the last 10 years while working at Texas Woman's University (Denton, TX, USA), at the University of Texas, (Dallas, Texas) and Functional Food Institute (Dallas, TX), Dr. Martirosyan has focused his research on *Amarantus cruentus* and *Rosa canina*, on pharmacological properties and the effect of each plants' bioactive compounds on different chronic diseases. Dr. Danik Martirosyan has published over 70 articles and 25 books. Furthermore, he has actively organized 22 International Functional Food conferences. In doing so, has created a global network of scientists, medical doctors, and food industry experts for modern functional food research and collaboration.



Dr. Singla Appointed as Florida Hospital Foundation Endowed Chair in Cardiovascular Research



Dr. Dinender Singla

The Burnett School of Biomedical Sciences, University of Central Florida (UCF), appointed Dr. Dinender Singla as the Endowed Professor in Cardiovascular Research funded by the Florida

Hospital. In this position, Dr. Singla will serve as a critical resource for the University and the College of Medicine and the school to continue development of a program of excellence in cardiovascular research. In addition, he will serve as a bridge to connect cardiovascular research at the University, Donor, and other medical basic sciences and research institutions, as well as the catalyst in developing joint UCF-Florida Hospital grant proposals to the National Institute of Health and other agencies.

Dr. Dinender Singla received his B.Sc. and M.Sc. degrees from Punjabi University, Patiala, India and his Ph.D. from the Post Graduate Institute of Medical Education and Research, Chandigarh, India. He held post-doctoral fellowship positions at different Universities in Canada. He joined as a tenure track Assistant Professor of Medicine at the University of Vermont in 2004. His current position at the University of Central Florida is as a Professor of Medicine. His major area of research is related to stem cells, heart failure, diabetes, inflammation and cardiac regeneration. He continuously serves to review the grants for various NIH, AHA, Ministry of Italian Health, and Hong Kong study sections. He is an Academic Editor for PLoS One, Associate Editor for the Canadian Journal of Physiology and Pharmacology as well an Editorial Board Member for different journals such as the American Journal of Physiology: Heart and Circulatory. He is Chair of the TPIG Committee, American Physiology Society and is also currently Secretary of the North American section of the IACS. He is a Fellow of the IACS. He is a reviewer for multiple journals. He has served as Chair for various scientific sessions throughout the world. Dr. Singla has also organized a scientific conference and has authored or co-authored more than 70 peer reviewed papers.

Metabolic Profiling of Risk for Cardiovascular Disease

Erin M. Goldberg¹ and Michel Aliani^{1,2}

¹*Department of Food and Human Nutritional Sciences, University of Manitoba and*

²*Canadian Centre for Agri-Food Research in Health and Medicine, Winnipeg, Canada*

Email: Michel.Aliani@umanitoba.ca

Introduction:

Atherosclerotic cardiovascular disease (CVD) persists as the most common cause of death among adults, according to the American Heart Association (Benjamin 2017). Extensive research has been undertaken over the years to determine biomarkers for CVD and other heart-related conditions. Beyond lipoproteins, it has been difficult to pinpoint one or multiple biomarkers that are robust enough to be used in a clinical setting. Metabolomics offers a progressive, in-depth preventative and diagnostic tool to determine differences among patients suffering from such conditions, and to compare them to their healthy counterparts by further understanding the human

metabolome. Therefore, the literature was searched to determine commonalities among metabolomics studies to determine if better targets could be studied.

Methods:

In this viewpoint article/review, we searched PubMed for papers with the key words “metabolomics and cardiovascular disease” published within the last 10 years. We arrived at 946 papers that matched these criteria, and selected 30 papers based on the following factors: largest sample size, use of a variety of methodology (ie. GC, NMR etc.) and analysis of a mix of biological fluids (ie. plasma, urine etc.). We excluded papers that involved pharmaceutical interventions.

Table 1: Summary of Selected Papers Involving Metabolomics and Heart-Related Conditions

Author	Sample size	Sample	Method	Result
Lawler 2017	9423	Plasma	1H-NMR	Pharmacological reduction in small, cholesterol-enriched, triglyceride-depleted VLDL was associated with reduction in atherosclerotic cardiovascular disease (ASCVD) events risk.
Delles 2018	7330	Plasma	1H-NMR	Phenylalanine identified as a novel predictor of incident, heart failure hospitalisation, although prediction gains are low.
Yu 2016	1887	Serum	LC/MS	Mannose and glycocholate associated with cardiovascular mortality ($P < 1.23 \times 10^{-4}$), but predictive ability was not improved beyond the traditional risk factors.
Paynter 2018	472	Plasma	LC-MS/MS	Strong associations with CHD observed for glutamine, glutamate, cytidine monophosphate, and 5 oxidized lipids that had not previously been associated with incident CHD in humans (2 species of hydroxy-PCs (C34:2 and C36:4) and 3 oxidized derivatives from arachidonic acid (15-HETE, 5-HETE, and 11-HETE)).
Ahmad 2016	453	Plasma	Tandem flow injection MS	In chronic heart failure patients, circulating long-chain acylcarnitine metabolite levels were independently associated with adverse clinical outcomes and decreased after long-term mechanical circulatory support.
Wolak-Dinsmore 2018	443	Plasma	1H-NMR	Elevated valine, leucine and isoleucine may be associated with carotid intima media thickness (a proxy of subclinical atherosclerosis).
Zhong 2019	302	Plasma	LC-MS/MS	Trimethylamine oxide (TMAO), choline, creatinine, and carnitine were significantly higher in CHD patients.
Guasch-Ferré 2016	229	Plasma	LC-MS/MS	Elevated short-chain acylcarnitines associated with CVD.
Guasch-Ferré 2016	229	Plasma	LC-MS/MS	The multivariable hazard ratios (95% confidence intervals) per 1-SD increase in choline and α -glycerophosphocholine metabolites were 1.24 (1.05-1.46) and 1.24 (1.03-1.50), respectively. The baseline betaine/choline ratio was inversely associated with CVD. The baseline choline metabolite score was associated with a 2.21-fold higher risk of CVD across extreme quartiles (95% confidence interval, 1.36-3.59; $P < 0.001$ for trend) and a 2.27-fold higher risk of stroke (95% confidence interval, 1.24-4.16; $P < 0.001$ for trend).
Jung 2018	182	Plasma	LC-QTOF-MS	Elevated SFA and reduced PUFA in atrial fibrillation (AF) patients may be associated with enhanced inflammation and FFA levels may play a role in the development and progression of AF.
Loo 2018	158	Urine	1H-NMR	Blood pressure associated with 6 metabolites (proline-betaine (inverse), carnitine (direct)), gut microbial co-metabolites [hippurate (direct), 4-cresyl sulfate (inverse), phenylacetylglutamine (inverse)], and tryptophan metabolism [N-methyl-2-pyridone-5-carboxamide (inverse)].
Lu 2018	102	Serum	LC/MS	Amino acids and phosphatidylethanolamine (PE) in the CHD group were much higher than those in healthy control group, and levels of unsaturated fatty acids, sphingosine, Lyso, phosphatidylcholine (PC) were lower ($P < 0.01$).
Yao 2017	101	Serum	1H-NMR	Concentrations of Lac, m-I, lipid, VLDL, 3-HB, and LDL were higher in the unstable angina pectoris group whereas the concentrations of Thr, Cr, Cho, PC/GPC, Glu, Gln, Lys, HDL, Ile, Leu, and Val were lower.
Hasokawa 2012	86	Serum	GC-MS	Isobutylamine, sarcosine, homoserine, ribulose, taurine, glutamine, glucose, and tryptophan - in the major restenosis group were significantly different from those in the minor restenosis group.
Zhao 2018	75	Urine	LC-QTOF-MS	Melatonin, cortolone, L-methionine, 3,4-dihydroxyphenylglycol, butyric acid, 5-hydroxyindoleacetic acid, o-tyrosine, 11-hydroxyandrosterone, 5-hydroxyhexanoic acid and 2-aminooctanoic acid were closely related to essential hypertension.
Guo 2019	66	Plasma	LC-MS/MS	9-cis-Retinal, DL-Indole-3-Lactic Acid, Methyl Ricinoleate, (2S)-OMPT, 2-Methyl-1-Pyrroline, D-Pipecolinic Acid, 7,7-Dimethyl-5,8-Eicosadienoic Acid, PC(15:0/0:0)[U], DL-Dihydrosphingosine, Bufexamic Acid, 10-Hydroxy-2-Decenoic Acid and L-Thyroxine considered biomarkers for ischemic stroke in hypertensive patients.
Cui 2018	53	Faecal + Plasma	LC/MS	Faecalibacterium prausnitzii decrease and Ruminococcus gnavus increase were the essential characteristics in CHF patients' gut microbiota. An imbalance of gut microbes involved in the metabolism of protective metabolites such as butyrate and harmful metabolites such as trimethylamine N-oxide in CHF patients was observed.

Ali 2016	45	Serum	GC/MS, SPME-GC/MS +1H-NMR	19 metabolites, including elevated hydrogen sulfide in ST-elevation myocardial infarction patients.
Tovar 2017	44	Plasma	LC-QTOF-MS	Acylcarnitines, furan fatty acids (inc), phospholipids (plasmalogens, phosphatidylcholines, phosphatidylethanolamines), and various low-molecular weight products from the bioactivity of gut microbiota changed after consumption of a Multifunctional Diet.
Alexander 2010	39	Plasma	LC/MS + GC/MS	Steroid metabolites, glutamine, threonine and histidine were reduced while levels of citric acid cycle intermediates and lipid β -oxidation products were increased in patients with primary dilated cardiomyopathy (DCM).
Wang 2018	36	Urine	LC-QTOF-MS	Among 20 biomarkers that functioned in 9 metabolic pathways, 9 biomarkers were found up-regulated significantly, including isobutyryl-l-carnitine, 3-methylglutaryl carnitine, cinnavalinate, l-tryptophan, 3-methyldioxyindole, palmitic acid, N4-acetylaminobutanol, 3-sulfinol-alanine and S-adenosyl-l-homocysteine. The other 11 biomarkers were down-regulated, including: l-lactic acid, trigonelline, nicotinuric acid, l-alanine, d-alanyl-d-alanine, creatine, N4-acetylaminobutanoate, glutathionyl spermidine, 5-methoxytryptamine, kynurenic acid and xanthurenic acid.
Deidda 2017	21	Plasma	1H-NMR	Absence of stenosis (microvascular disease; "Micro") group patients showed a higher content of 2-hydroxybutyrate, alanine, leucine, isoleucine, and N-acetyl groups and lower levels of creatine/phosphocreatine, creatinine, and glucose, whereas stenotic-disease (SD) group patients showed higher levels of 3-hydroxybutyrate and acetate and a lower content of 2-hydroxybutyrate. Moreover, relative to SD patients, Micro patients showed higher levels of 2-hydroxybutyrate, alanine, leucine, and N-acetyl groups and lower levels of 3-hydroxybutyrate and acetate.
Zordoky 2015	24	Serum	1H-NMR	Heart failure (HF) with preserved ejection fraction (HFpEF) patients demonstrated higher serum concentrations of acylcarnitines, carnitine, creatinine, betaine, and amino acids; and lower levels of phosphatidylcholines, lysophosphatidylcholines, and sphingomyelins compared to non-HF patients. Medium and long-chain acylcarnitines and ketone bodies were higher in HFpEF than HF with reduced ejection fraction (HFrEF) patients.
Diercks 2012	24	Urine	GC/MS	Taurine, sulfuric acid and talose associated with worsening renal function.
Auguet 2018	20	Plasma	LC/MS	Only 20-HETE found to be related to carotid plaque.
Basak 2015	18	Plasma	LC-MS	Lyso PC (18:0), Cortisol, Lyso PC (P-17:0), and glycerophosphocholine were among the top discriminators for coronary artery disease which implies involvement of phosphatidylcholine pathway in the pathogenesis of atherosclerosis
Jung 2018	18	Aortic tissue	LC/MS	Metabolites in the purine and glutathione pathways showed dysregulation of oxidative stress in plaques, and levels of glucosylceramide, tryptophan, and kynurenine (related to inflammation), were also altered. Increased level of quinic acid was observed in plaques ($p < 0.000$), and an inhibitory effect of quinic acid on inflammatory activation and oxidative stress in macrophages.
Kang 2011	15	Urine	1H-NMR	HF patients had higher levels of metabolites for acetate ($p < 0.05$) and acetone ($p < 0.01$) compared to healthy controls. There was a perturbation in methylmalonate metabolism as shown by increased urinary levels of methylmalonic acid ($p < 0.001$) in the HF patients. HF patients also had increased urinary levels of cytosine ($p < 0.01$) and phenylacetyl glycine ($p < 0.01$) and decreased l-methylnicotinamide ($p < 0.05$) compared to healthy controls.
Bakker 2016	12	Plasma	1H-NMR	Impaired HDL functionality in South Asians may contribute to elevated CVD risk.
Teul 2009	9	Plasma	GC/MS + 1H-NMR	39 metabolites, with the top 3 upregulated in stable carotid atherosclerosis patients compared to control include glucose, creatinine and acetoacetate; downregulated include isocitrate, glycerate and fructose.

Results & Discussion:

Table 1 summarizes the results from selected papers from our research. Some of the papers used a targeted approach, meaning that the authors searched for and quantified known metabolites that have been shown previously to associate with CVD in some way. Others used a non-targeted approach to generate hypotheses and understand relationships between certain metabolites and CVD. Both methods are important to use in conjunction with one another to explain the whole picture. Typically, blood analysis is the most common biological fluid measured for this type of work, but urinalysis offers a less invasive alternative. Results from the studies depict a wide array of upregulated and downregulated metabolites depending on the specific condition assessed. Among these included amino acids, lipids, sugars, hormones, vitamins, among others. Associations between CVD and various carnitines and acylcarnitines did arise across seven papers. Carnitines have long been associated with cardiac diseases, and have a number of effects endogenously, including transport of long-chain fatty acids and carbohydrate metabolism.

Conclusions:

Given the complementary nature of NMR, GC, LC, QTOF and MS, it seems obvious that deploying more than one technique is likely to result in a more comprehensive set of metabolic data than using one alone. Despite this, the challenge in metabolomics is that varying any parameter will significantly alter the results, and therein the conclusions that can be derived from them.

Attempting to understand human metabolism and its relationship with development and progression is akin to seeing a whole picture that is composed of thousands of pixels, when you are only provided with a handful of pixels. Based on these findings, and the complexity of CVD, metabolomics might be of greater use if researchers shift their focus away from finding the "magic biomarker", and rather use it in a personalized approach to assess individuals at baseline and monitor their response to various dietary, pharmaceutical and surgical interventions.

References:

1. Ahmad, T., Kelly, J. P., McGarrah, R. W., Hellkamp, A. S., Fiuzat, M., Testani, J. M., ... & Ilkayeva, O. R. (2016). Prognostic implications of long-chain acylcarnitines in heart failure and reversibility with mechanical circulatory support. *J Am Coll Cardiol*, 67(3), 291-299.
2. Alexander, D., Lombardi, R., Rodriguez, G., Mitchell, M. M., & Marian, A. J. (2011). Metabolomic distinction and insights into the pathogenesis of human primary dilated cardiomyopathy. *Eur J Clin Invest*, 41(5), 527-538.
3. Ali, S. E., Farag, M. A., Holvoet, P., Hanafi, R. S., & Gad, M. Z. (2016). A comparative metabolomics approach reveals early biomarkers for metabolic response to acute myocardial infarction. *Sci Rep*, 6, 36359.
4. Auguet, T., Aragonès, G., Colom, M., Aguilar, C., Martín-Paredero, V., Canela, N., ... & Richart, C. (2018). Targeted metabolomic approach in men with carotid plaque. *PLoS One*, 13(7), e0200547.
5. Bakker, L. E. H., Boon, M. R., Annema, W., Dijkers, A., van Eyk, H. J., Verhoeven, A., ... & van Dijk, K. W. (2016). HDL functionality in South Asians as compared to white Caucasians. *Nutr Metab Cardiovasc Dis*, 26(8), 697-705.
6. Basak, T., Varshney, S., Hamid, Z., Ghosh, S., Seth, S., & Sengupta, S. (2015). Identification of metabolic markers in coronary artery disease using an untargeted LC-MS based metabolomic approach. *J Proteomics*, 127, 169-177.
7. Benjamin, E. J., Blaha, M. J., Chiuve, S. E., Cushman, M., Das, S. R., Deo, R., ... & Jiménez, M. C. (2017). Heart disease and stroke statistics-2017 update: a report from the American Heart Association. *Circulation*, 135(10), e146-e603.
8. Cui, X., Ye, L., Li, J., Jin, L., Wang, W., Li, S., ... & Zhou, X. (2018). Metagenomic and metabolomic analyses unveil dysbiosis of gut microbiota in chronic heart failure patients. *Sci Rep*, 8(1), 635.
9. Deidda, M., Piras, C., Dessalvi, C. C., Congia, D., Locci, E., Ascedu, F., ... & Atzori, L. (2017). Blood metabolomic fingerprint is distinct in healthy coronary and in stenosing or microvascular ischemic heart disease. *J Transl Med*, 15(1), 112.
10. Delles, C., Rankin, N. J., Boachie, C., McConnachie, A., Ford, I., Kangas, A., ... & Zannad, F. (2018). Nuclear magnetic resonance-based metabolomics identifies phenylalanine as a novel predictor of incident heart failure hospitalisation: results from PROSPER and FINRISK 1997. *Eur J Heart Fail*, 20(4), 663-673.
11. Diercks, D. B., Owen, K., Tolstikov, V., & Sutter, M. (2012). Urinary metabolomic analysis for the identification of renal injury in patients with acute heart failure. *Acad Emerg Med*, 19(1), 18-23.
12. Guasch-Ferré, M., Zheng, Y., Ruiz-Canela, M., Hruby, A., Martínez-González, M. A., Clish, C. B., ... & Dennis, C. (2016). Plasma acylcarnitines and risk of cardiovascular disease: effect of Mediterranean diet interventions. *American J Clin Nutr*, 103(6), 1408-1416.
13. Guasch-Ferré, M., Hu, F. B., Ruiz-Canela, M., Bulló, M., Toledo, E., Wang, D. D., ... & Lapetra, J. (2017). Plasma metabolites from choline pathway and risk of cardiovascular disease in the

- PREDIMED (Prevention With Mediterranean Diet) Study. *JAMA*, 6(11), e006524.
14. Guo, X., Li, Z., Zhou, Y., Yu, S., Yang, H., Zheng, L., ... & Sun, Y. (2019). Metabolic Profile for Prediction of Ischemic Stroke in Chinese Hypertensive Population. *J Stroke Cerebrovasc Dis*.
 15. Hasokawa, M., Shinohara, M., Tsugawa, H., Bamba, T., Fukusaki, E., Nishiumi, S., ... & Hirata, K. I. (2012). Identification of biomarkers of stent restenosis with serum metabolomic profiling using gas chromatography/mass spectrometry. *Circ J*, CJ-11.
 16. Jung, S., Song, S. W., Lee, S., Kim, S. H., Ann, S. J., Cheon, E. J., ... & Lee, S. H. (2018). Metabolic phenotyping of human atherosclerotic plaques: Metabolic alterations and their biological relevance in plaque-containing aorta. *Atherosclerosis*, 269, 21-28.
 17. Jung, Y., Cho, Y., Kim, N., Oh, I. Y., Kang, S. W., Choi, E. K., & Hwang, G. S. (2018). Lipidomic profiling reveals free fatty acid alterations in plasma from patients with atrial fibrillation. *PLoS One*, 13(5), e0196709.
 18. Kang, S. M., Park, J. C., Shin, M. J., Lee, H., Oh, J., Hwang, G. S., & Chung, J. H. (2011). ¹H nuclear magnetic resonance based metabolic urinary profiling of patients with ischemic heart failure. *Clin Biochem*, 44(4), 293-299.
 19. Lawler, P. R., Akinkuolie, A. O., Harada, P., Glynn, R. J., Chasman, D. I., Ridker, P. M., & Mora, S. (2017). Residual Risk of Atherosclerotic Cardiovascular Events in Relation to Reductions in Very-Low-Density Lipoproteins. *J Am Heart Assoc*, 6(12), e007402.
 20. Loo, R. L., Zou, X., Appel, L. J., Nicholson, J. K., & Holmes, E. (2018). Characterization of metabolic responses to healthy diets and association with blood pressure: application to the Optimal Macronutrient Intake Trial for Heart Health (OmniHeart), a randomized controlled study. *Am J Clin Nutr*, 107(3), 323-334.
 21. Lu, X. Y., Xu, H., Zhao, T., & Li, G. (2018). Study of Serum Metabonomics and Formula-Pattern Correspondence in Coronary Heart Disease Patients Diagnosed as Phlegm or Blood Stasis Pattern Based on Ultra Performance Liquid Chromatography Mass Spectrometry. *Chin J Integr Med*, 24(12), 905-911.
 22. Paynter, N. P., Balasubramanian, R., Giulianini, F., Wang, D. D., Tinker, L. F., Gopal, S., ... & Martínez-González, M. A. (2018). Metabolic predictors of incident coronary heart disease in women. *Circulation*, 137(8), 841-853.
 23. Teul, J., Rupérez, F. J., Garcia, A., Vaysse, J., Balayssac, S., Gilard, V., ... & Egido, J. (2009). Improving metabolite knowledge in stable atherosclerosis patients by association and correlation of GC-MS and ¹H NMR fingerprints. *J Proteome Res*, 8(12), 5580-5589.
 24. Tovar, J., de Mello, V. D., Nilsson, A., Johansson, M., Paananen, J., Lehtonen, M., ... & Björck, I. (2017). Reduction in cardiometabolic risk factors by a multifunctional diet is mediated via several branches of metabolism as evidenced by nontargeted metabolite profiling approach. *Mol Nutr Food Res*, 61(2), 1600552.
 25. Wang, Y., Sun, W., Zheng, J., Xu, C., Wang, X., Li, T., ... & Li, Z. (2018). Urinary metabonomic study of patients with acute coronary syndrome using UPLC-QTOF/MS. *J Chromatogr B*, 1100, 122-130.
 26. Wolak-Dinsmore, J., Gruppen, E. G., Shalaurova, I., Matyus, S. P., Grant, R. P., Gegen, R., ... & Dullaart, R. P. (2018). A novel NMR-based assay to measure circulating concentrations of branched-chain amino acids: Elevation in subjects with type 2 diabetes mellitus and association with carotid intima media thickness. *Clin Biochem*, 54, 92-99.
 27. Yao, W., Gao, Y., & Wan, Z. (2017). Serum metabolomics profiling to identify biomarkers for unstable angina. *BioMed Research International*, 2017.
 28. Yu, B., Heiss, G., Alexander, D., Grams, M. E., & Boerwinkle, E. (2016). Associations between the serum metabolome and all-cause mortality among African Americans in the Atherosclerosis Risk in Communities (ARIC) study. *Am J Epidemiol*, 183(7), 650-656.
 29. Zhao, H., Liu, Y., Li, Z., Song, Y., Cai, X., Liu, Y., ... & Li, Y. (2018). Identification of essential hypertension biomarkers in human urine by non-targeted metabolomics based on UPLC-Q-TOF/MS. *Clinica Chimica Acta*, 486, 192-198.
 30. Zhong, Z., Liu, J., Zhang, Q., Zhong, W., Li, B., Li, C., ... & Zhao, P. (2019). Targeted metabolomic analysis of plasma metabolites in patients with coronary heart disease in southern China. *Medicine*, 98(7).
 31. Zordoky, B. N., Sung, M. M., Ezekowitz, J., Mandal, R., Han, B., Björndahl, T. C., ... & Dyck, J. R. (2015). Metabolomic fingerprint of heart failure with preserved ejection fraction. *PLoS One*, 10(5), e0124844.



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