

# Report of the 9<sup>th</sup> European Section Meeting of the IACS, Timișoara, Romania

**Danina M. Muntean and Adrian Sturza**

Department of Functional Sciences – Chair of Pathophysiology,  
Centre for Translational Research and Systems Medicine,  
"Victor Babeș" University of Medicine and Pharmacy of Timișoara, Romania  
E-mails: [daninamuntean@umft.ro](mailto:daninamuntean@umft.ro), [sturza.adrian@umft.ro](mailto:sturza.adrian@umft.ro)

The 9<sup>th</sup> European Section Meeting of the IACS was held in Timișoara, Romania, between October 4<sup>th</sup> – 7<sup>th</sup> 2023. The Meeting venue was "Victor Babeș" University of Medicine and Pharmacy, the largest medical university with international accreditation from Western Romania. The Conference was attended by a large number of leading cardiovascular researchers with 62 invited speakers from 16 countries: Bosnia and Herzegovina, Canada, Czech Republic, Denmark, Germany, Hungary, Italy, Poland, Romania, Serbia, Slovakia, Spain, The Netherlands, Turkey, the UK and the USA.

Dr. Danina M. Muntean served as Chair of the Meeting and Dr. Naranjan S. Dhalla was the Honorary Chair of the Meeting. The Rector of the university, Prof. Octavian Crețu was the President of the Meeting, while the Vice Rectors, Prof. Claudia Borza, Prof. Daniel Lighezan and Prof. Cristian Oancea served as main organizers. The International Organizing Committee consisted of reputed professors belonging to IACS leadership, Dr. Vladimir Jakovljevic (President of IACS-ES), Dr. Grant Pierce (President of IACS), Dr. András Varró (President-elect of IACS), Dr. Michael Czubyrt (President of IACS North-American Section) and Dr. István Baczkó (General Secretary of IACS-ES). The Local Organizing Committee was composed of the following tenured faculty members and collaborators of the Center for Translational Research and Systems Medicine (Advanced Research Center of the university): Prof. Ioana Mozoș, Prof. Sorin Ursoniu, Assoc.Prof. Oana M. Aburel, Lect. Maria Dănilă, Lect. Ana Lascu (members) and Profs. Cristina Dehelean and Dan Gaiță (collaborators). Assoc.Prof. Adrian Sturza served as Director of the Local Organizing Committee.

The Meeting comprised 16 sessions organized according the following scientific topics: *"Pathophysiology and Therapeutics of Heart Failure"*, *"Basic and Translational Approaches in Cardiac Arrhythmias"*, *"Myocardial Ischemia-Reperfusion Injury: Mechanisms and Cardioprotective Strategies"*, *"Cardiovascular Dysfunction and Adaptation to Stress"*, *"Pathomechanisms and Therapeutic Targets in Cardiometabolic Diseases"*, *"Cardiovascular Dysfunction Due to Toxicity"*, *"Natural Compounds, Ageing and Cardiovascular Risk"*, *"Comorbidities and Novel Therapeutic Strategies in Cardiovascular Diseases"*, *"Cardiac Regeneration and Response to Infection"*, *"Novel Targets and Therapies in Cardiovascular Diseases: What Animal Models Have Taught Us?"*, *"Novel Biomarkers, Therapeutic Targets and Unusual Cases: What Humans Have Taught Us?"*. In addition, two symposia, proposed by Prof. Belma Turan (Ankara, Turkey) and entitled *"Cardiometabolic Alterations and Regulation of the Associated Pathways in Mammalian Heart Function and Regeneration I and II"* were held in separate days.

The Conference included lectures of invited speakers and free oral communications selected from the submitted abstracts and served as a platform for the exchange of new ideas and concepts by offering a great educational opportunity for early and mid-career trainees and students who highly attended the event and allowing personal interactions for all the participants. As every year, the Meeting also provided the opportunity for several young

investigators to present their latest research results and compete in both oral and poster sessions. The particularity of this year Meeting was an impressive number of medical undergraduate students (more than 200) from the Romanian, English and French sections of the Faculty of Medicine who attended the sessions and also, volunteered in the organization under the umbrella of the Society of the Medical Students of Timișoara (SSMT).

The Conference began (October 4<sup>th</sup>) with the opening ceremony and welcoming messages from Dr. Danina M. Muntean (Timișoara, Romania, Chair of the Meeting, Vice President of IACS-ES), Dr. Vladimir Jakovljevic (Kragujevac, Serbia, President of IACS-ES), Dr. Naranjan Dhalla (Winnipeg, Canada, Honorary Life President of IACS), Dr. Grant Pierce (Winnipeg, Canada, President of IACS), Dr. András Varró (Szeged, Hungary, President-elect of IACS), and Dr. István Baczkó (Szeged, Hungary, Secretary General IACS-ES).

During the opening ceremony the following IACS recognitions were presented by Professors Grant Pierce, Vladimir Jakovljevic and András Varró: the **Lifetime Achievement Award** to the Rector of the university, Prof. Octavian Crețu, and two **Distinguished Leadership Awards** to Prof. Daniel Lighezan, Vice Rector for Education, and Prof. Claudia Borza, Vice Rector for International Affairs who strongly supported the organization of the Meeting.

The host university also wanted to recognize the exceptional commitment and excellence in scientific research of some of the outstanding guest speakers. Accordingly, the following awards were presented by Professors Danina M. Muntean, Daniel Lighezan and Claudia Borza: i) the **Lifetime Leadership in Cardiovascular Sciences Award** to Prof. Naranjan Dhalla (University of Manitoba, Canada, Founder and Honorary Life President of IACS), two **Excellence in Cardiovascular Research Awards** to Prof. Roberto Bolli (University of Louisville, USA, Past President of IACS) and Prof. Zoltán Papp (Vice-Dean for Scientific Affairs at the Faculty of Medicine, University of Debrecen, Hungary), respectively, and the **Visiting Professor Title** to Prof. Vladimir Jakovljevic (Dean of the Faculty of Medicine at the University of Kragujevac, Serbia).

The opening ceremony was followed by two Plenary Lectures sessions. The first one, was chaired by Prof. Vladimir Jakovljevic (Kragujevac, Serbia, President of IACS-ES) and Prof. Danina M. Muntean (Timișoara, Romania, Vice President of IACS-ES) and had two invited keynote speakers, Prof. Gerd Heusch (Essen, Germany, Chair of the Institute for Pathophysiology, Past President of the International Society for Heart Research - European Section and the German Cardiac Society) who gave the lecture entitled "*Remote Ischemic Conditioning and Its Translation*", followed by Prof. Rodolphe Fischmeister (Paris, France) who presented the lecture "*Enhancing Cardiac Phosphodiesterase Activity: A Therapeutic Strategy in Heart Failure?*". During this session the **Naranjan Dhalla Honorary Lecture Award** was presented to Prof. Gerd Heusch after the *Laudatio* read by Prof. Jakovljevic, the President of IACS-ES. The second session was chaired by Prof. István Baczkó (Szeged, Hungary, General Secretary of IACS-ES) and Prof. Andrei Motoc (Timișoara, Romania, Vice Rector for Postgraduate studies and Residency) and included other two plenary lectures presented by prestigious keynote lecturers, Prof. Michael Czubryt (Winnipeg, Canada, Executive Director of Research at St. Boniface University Hospital, President of IACS North-American Section) who spoke about "*Scleraxis: A Master Regulator of Wound Healing and Scarring*" and Prof. Devendra Agrawal (Pomona, USA, Director of the Department of Translational Research at the Western University of Health Sciences, Secretary General and Treasurer of IACS - North American Section) who spoke about "*Novel Therapeutic Targets to Prevent Atherosclerotic Plaque Burden and Rupture*". The awards for these three keynote speakers were given at the Gala Dinner (October 6<sup>th</sup>). The Opening ceremony was completed with an exquisite and extravagant Welcome reception held in the inner yard of the university.

The 2<sup>nd</sup> day of the Meeting (October 5<sup>th</sup>) comprised 7 parallel sessions and 1 symposium held in Aula Magna, Senate Hall and Iagnov Hall of the university, respectively.

Session 1 entitled “*Pathophysiology and Therapeutics of Heart Failure I*” was chaired by Profs. Zoltán Papp (Debrecen, Hungary) and Lucian Petrescu (Timișoara, Romania). The four invited speakers in this session were: Prof. David Eisner (Manchester, UK) who spoke on “*Calcium Entry Into the Ventricular Myocytes: Beyond the L-type Calcium Current*”; Dr. Zoltán Papp (Debrecen, Hungary) who presented a lecture entitled “*From Myosin Activation to Myosin Inhibition for the Treatment of Cardiac Diseases*”; Prof. Coert Zuurbier (Amsterdam, The Netherlands) who presented on vascular and myocardial effects of SGLT2 inhibitors, and Prof. Dan Gaiță (Timișoara, Romania) who discussed whether SGLT2 inhibition is the perfect pathway to heart failure prevention. Finally, in this session Dr. Dan-Alexandru Cozac (Târgu Mureș, Romania) spoke on the effects of chronic beta-blockers therapy on in-hospital outcomes in patients with ST-segment elevation myocardial infarction treated with primary percutaneous coronary intervention.

Session 2 entitled “*Basic and Translational Approaches in Cardiac Arrhythmias*” was chaired by Profs. José Jalife (Madrid, Spain) and Torsten Christ (Hamburg, Germany). The four invited speakers were: Prof. Torsten Christ (Hamburg, Germany) who spoke on engineered heart tissue based on human induced pluripotent stem cell derived atrial cardiomyocytes as a useful model to study human atrial electrophysiology; Prof. José Jalife (Madrid, Spain) presented on dysfunction of the Na<sub>v</sub>1.5-Kir2.1 channelosome and the mechanism of arrhythmias in inherited channelopathies; Prof. István Baczkó (Szeged, Hungary) gave a lecture on transgenic rabbit models of congenital long QT syndromes and Assoc. Prof. Norbert Nagy (Szeged, Hungary) on the assessment of cardiac alternans in a canine model of elite exercise. Dr. Băraru-Bojan Iris (Iași, Romania) ended this session on the genetic characteristics associated with the prothrombotic condition in individuals diagnosed with type 2 diabetes.

The topic of Session 3 was “*Myocardial Ischemia-Reperfusion Injury: Mechanisms and Cardioprotective Strategies*” and included five invited speakers. Prof. Naranjan S. Dhalla (Winnipeg, Canada) opened the session with the lecture entitled “*Mechanism Defects in Adrenergic Signal Transduction System in Ischemic Heart Disease*”; Prof. Peter Ferdinandy (Budapest, Hungary) gave an on-line talk on development of miRNA therapeutics for cardioprotection; Prof. Rakesh Kukreja (Virginia, USA), which was not able to attend due to the occurrence of last minute health problems was replaced by Assoc. Prof. Adrian Sturza who delivered a talk on MAO-related cardiovascular oxidative stress and the antidiabetic drugs; last but not least, Prof. Ranko Škrbić (Banja Luka, Bosnia & Herzegovina) presented on liraglutide, a GLP-1 receptor agonist, which attenuates isoprenaline-induced acute myocardial injury via the inhibition of the Wnt/B-catenin signaling pathway. Finally, Nevena Mihailovic-Stanojevic (Belgrade, Serbia) briefly spoke on caffeic acid improves antioxidant defense and attenuates oxidative stress in heart of spontaneously hypertensive rat.

Session 4 entitled “*Cardiovascular Dysfunction and Adaptation to Stress*” was chaired by Prof. Petr Ostadal (Prague, Czech Republic) and Dr. Inna-Rabinovich-Nikitin (Winnipeg, Canada) and gave the first two invited lectures on the role of extracorporeal membrane oxygenation in the therapy of cardiogenic shock and on how retinoic acid-related orphan receptors regulate autophagy and cell survival in cardiac myocytes during hypoxic stress, respectively. These talks were followed by presentations by other two reputed invited researchers, Dr. Saadeh Suleiman (Bristol, UK) on cardio-resilience due to chronic (atherosclerosis) or brief (conditioning) ischemia and Dr. Péter Bencsik (Szeged, Hungary) on immuno-cardiovascular disease as novel approach to reveal confounding factors between myocardial infarction and immunological diseases. Dr. Jovana Joksimovic-Jovic (Kragujevac,

Serbia) ended the session with an oral communication on the relationship between hypertensive-like traits in a rat model of polychistic ovary syndrome and oxidative stress.

A parallel symposium entitled “*Cardiometabolic Alterations and Regulation of the Associated Pathways in Mammalian Heart Function and Regeneration I*” was chaired by Profs. Belma Turan (Ankara, Turkey) and Suresh Tyagi (Louisville, USA). The six speakers of this symposium were: Dr. Belma Turan (Ankara, Turkey) who presented on comparisons of pleiotropic effects of SGLT2 inhibition and GLP-1 receptor agonism on cardiac glucose intolerance; Dr. Erkan Tuncay (Ankara, Turkey) on the relationship between cytosolic/mitochondrial labile zinc ratio and mitochondrial dynamics in cardiomyocytes: role of Znt6; Dr. Yusuf Olgar (Ankara, Turkey) on acute action of incretin-based therapeutics on ageing myocardium; Dr. Ceylan Verda Bitirim (Ankara, Turkey) on improving stem cell-based therapy in cardiac failure: the effect of estrogen on regenerative capacity of cardiac progenitor cells; Dr. Aysegul Durak (Ankara, Turkey) on the role of GLP-1 receptor agonist to attenuate the ageing-associated cardiac insufficiencies through recovery in mitochondria and, lastly Dr. Anica Petrovic (Kragujevac, Serbia) on the development and evaluation of *Pinus sibirica* essential oil based-topical gel for wound healing in diabetic rats.

The morning ended with organization of a group photo in front of the university and the lunch break with lunch-boxes being provided for the registered participants and volunteers. A work lunch was provided in the Petru Drăgan Hall for the Meeting of IACS-ES officials and their guests.

Session 5 entitled “*Pathomechanisms and Therapeutic Targets in Cardiometabolic Diseases*” was chaired by Profs. Denis Angoulvant (Tours, France) and Vesna Vucic (Belgrade, Serbia) and hosted four invited speakers. The session started with the presentation by Prof. Denis Angoulvant (Tours, France) on targeting inflammation in cardiovascular diseases and was followed by Vladimir Jakovljević (Kragujevac, Serbia) who spoke on how sacubitril/valsartan promotes white adipose tissue browning in rats with metabolic syndrome; Prof. Ramarosan Andriantsitohaina (Montpellier, France) presented on how NLRP3-inflammasome carried by extracellular vesicles validates the inflammatory hypothesis of atherosclerosis in metabolic syndrome patients and Prof. Vesna Vucic (Belgrade, Serbia) on osteosarcopenic adiposity - implications for cardiometabolic disorder. The short oral communication in this session was delivered by Dr. Avram Vlad-Florian (Timișoara, Romania) who spoke on improving mitochondrial respiration of human platelets with cell-permeable succinate in metabolic disease.

In parallel, Assoc. Profs. Monika Bartekova (Bratislava, Slovakia) and Adrian Sturza (Timișoara, Romania) chaired Session 6 entitled “*Natural Compounds, Ageing and Cardiovascular Risk*”. This session opened with a presentation by Dr. Monika Bartekova on the role of ageing and metabolic comorbidities in beneficial effects of quercetin in cardiovascular system and was followed by a talk by Dr. Isidora Milosavljevic (Kragujevac, Serbia) on *Melissa Officinalis* as cardioprotective tool in experimental autoimmune myocarditis. In continuation, Prof. Ioana Mozoș (Timișoara, Romania) presented on arterial stiffness and cardiovascular risk, while Prof. Simona Drăgan (Timișoara, Romania) spoke about the cardioprotective effects of polyphenols and future perspectives for functional foods. At the end Dr. Minodora Andor (Timișoara, Romania) presented preliminary data on the evaluation of black chokeberry bio juice effect on blood pressure levels and endothelial damage in patients under chronic antihypertensive treatment (and kindly provided samples of the investigated juice in the afternoon coffee break).

The last session of the first day (Session 7) was entitled “*Comorbidities and Novel Therapeutic Strategies in Cardiovascular Diseases*” and chaired by Drs. Ferenc Gallyas (Pecs, Hungary) and Patrycja Kaczara (Krakow, Poland) who also delivered the first two presentations: Dr. Ferenc Gallyas on the protective effect of Olaparib in experimental Crohn’s

disease and Dr. Patrycja Kaczara on the pharmacology of energy metabolism to regulate platelet activation, respectively. Session 7 ended with Dr. Ștefan Mihăicuță (Timișoara, Romania) who spoke on how obstructive sleep apnea and cardiovascular comorbidities might tailor different pathogenetic treatment strategies.

During the afternoon of the 2<sup>nd</sup> day, Petru Drăgan Hall hosted the meeting of Miss Aicha Hanna, Assistant Publisher at Springer Nature (Medicine and Life Sciences Journals) with the editors of Molecular and Cellular Biochemistry journal. Miss Hanna generously offered 3 Springer Book vouchers for 200 Euro each, which were awarded to the 3 winners of the Young Investigator Award Competition.

The 3<sup>rd</sup> day of the Meeting (October 6<sup>th</sup>) also comprised 7 parallel sessions and 1 symposium held in Aula Magna, Senate Hall and Iagnov Hall of the university, respectively. The day started with Sessions 8 and 9, which were held in parallel in Aula Magna and the Senate Hall and included 8 invited speakers. Session 8 entitled “*Identifying the Right Targets and Therapeutic Approaches: Uncharted Paths*” was chaired by Profs. Martin Morad (Charleston, USA) and András Varró (Szeged, Hungary). Dr. Morad opened the session with his talk on what we learned from gene editing of human Ryr2 about CPVT1 arrhythmia and cardiac excitation-contraction coupling, followed by the talk of Prof. Antonio Zaza (Milano, Italy) entitled “*SERCA2a Loss vs. Gain of Function: Which is Worse?*”. The following two presentations in this session were given by Drs. András Varró (Szeged, Hungary) on the electrophysiological effect of orange alkaloid hesperetin in dog cardiac ventricular preparations and Hector Martinez-Navarro (Oxford, UK) on the role of *in silico* trials for future diagnosis and treatment in ischemic heart disease. The session ended with the short oral talk by Muhammad Naveed (Szeged, Hungary) on arrhythmias triggered by medication, tackling the proarrhythmic risk associated with class 1 antiarrhythmics and cannabinoids.

Session 9 entitled “*Pathophysiology and Therapeutics of Heart Failure II*” was chaired by Drs. Katharine Dibb (Manchester, UK) and Dragoș Cozma (Timișoara, Romania). Dr. Dibb presented first on the mechanisms of atrial fibrillation in heart failure and ageing, which was followed by the lecture delivered by Prof. Suresh Tyagi (Louisville, USA) on interoceptive inhibition of ADAMTS1 and angiogenic strategy for the prevention of heart failure with reduced ejection fraction. These talks were followed by presentations by Dr. Ruxandra Christodorescu and Dragoș Cozma (Timișoara, Romania) entitled “*New Trends in the Management of Advanced Heart Failure*” and “*From Left Atrial Stretch to Heart Failure*”, respectively. The oral communication in this session was delivered by Dr. Niskala Alisha Annikki (Copenhagen, Denmark) on the role of colchicine on cardiac fibrosis in a porcine model of atrial fibrillation.

Session 10 entitled “*Cardiac Regeneration and Response to Infection*” was chaired by Profs. Roberto Bolli (Louisville, USA) and Grant Pierce (Winnipeg, Canada). Dr. Bolli spoke on reparative/regenerative cardiology: hype vs. reality, while Dr. Pierce (on bacterial infection and cardiovascular disease). The other two invited speakers in this session were Prof. Thomas Jespersen (Copenhagen, Denmark) who presented on *in vitro* reprogramming of fibroblasts from human cadavers to generate iPSC-cardiomyocytes and Prof. Sanjiv Dhingra (Winnipeg, Canada) on immuno-engineering approaches for cardiac regenerative medicine. Dr. Abhay Srivastava (Winnipeg, Canada) ended the session with a short talk on the development of iPSC-based clinical trial selection platform for patients with inherited metabolic and cardiovascular disorders.

Session 11 entitled “*Cardiometabolic Diseases – From Pathophysiology to Treatment*” was chaired by Profs. Olga Pechanova (Bratislava, Slovakia) and Luca Constantin (Timișoara, Romania). Dr. Pechanova opened this session with a lecture on the role of nitric oxide in metabolic syndrome. The other three invited speakers in this session were: Dr. Paramjit Tappia (Winnipeg, Canada) who spoke on high fructose diet-induced cardiovascular dysfunction, Prof.

Florinela Cătoi (Cluj-Napoca, Romania) who presented on obesity, metabolic/bariatric surgery and cardiovascular disease and Assoc. Prof. Cristian Mornoș (Timișoara, Romania), who tackled the role of epicardial adipose tissue thickness assessed by echocardiography as independent predictor in coronary artery disease.

In parallel, the Young Investigator Award Competition was held with Profs. Antonio Zaza (Italy), Suleiman Saadeh (UK) and Michael Czubryt (Canada) as chairs. There were 7 contestants in this competition: Jovana Bradic (Kragujevac, Serbia) who presented her work on *Gallium verum* extract as a novel cardioprotective agent against doxorubicin-induced cardiotoxicity in rats; Bogdan Halațiu (Târgu-Mureș, Romania) who talked about interleukin-8 inhibition as a possible pathway to reduce hemodynamic complications in post-coronary artery bypass grafting surgery patients; Leto Luana Riebel (Oxford, UK) on human *in silico* trials to evaluate the safety of regenerative cell therapy; Arnela Saljic (Copenhagen, Denmark) on her work on the atrial fat infiltration post myocardial infarction in a Göttingen minipig model of obesity; Mélodie Schneider (Copenhagen, Denmark) on how metformin reduces atrial fibrillation inducibility in horses; Leila Topal (Szeged, Hungary) on increased arrhythmia susceptibility associated with cardiac remodelling following vigorous endurance training in a canine athlete's heart model and Noemi Toth (Charleston, USA) on calcium signalling consequences of calcium release deficiency-associated Ryr2-S4938F and Ryr2-I4855M mutations expressed in HiPSC cardiomyocytes.

A work lunch was provided in the Petru Drăgan Hall for the Meeting of IACS World officials and their guests and lunch boxes for the participants.

The afternoon sessions began with Session 12 on “*Cardiovascular Dysfunction Due to Toxicity*”, which was chaired by Profs. Lorrie Kirshenbaum (Winnipeg, Canada) and Theodora Bejan-Angoulvant (Tours, France) and had three invited speakers. Dr. Kirshenbaum firstly spoke on the TRAF2-NF-κB signaling in doxorubicin cardiomyopathy, which was followed by a talk by Prof. Dinender K. Singla (Orlando, USA) on how exosomes ameliorated doxorubicin-induced cardiomyopathy, while Prof. Bejan-Angoulvant addressed the immune checkpoint inhibitors-related myocarditis. Dr. Stojanovic Aleksandra (Kragujevac, Serbia) ended the session with her oral communication on the increased expression of extracellular vesicles in patients with rheumatoid arthritis as novel potential biomarker for disease monitoring.

In parallel, the symposium “*Cardiometabolic Alterations and Regulation of the Associated Pathways in Mammalian Heart Function and Regeneration II*” was chaired by Profs. Belma Turan (Ankara, Turkey) and Dinender Singla (Orlando, USA). Prof. Ebru Arioglu-Inan (Ankara, Turkey) spoke on diabetic heart and the effects of antidiabetic drugs on cardiac function. This presentation was followed with the talks delivered by Drs. Gizem Kayki-Mutlu (Ankara, Turkey) on the metabolic roles of GRK2 in cardiac pathologies, Asena Gökçay Canpolat (Ankara, Turkey) on the glucose lowering therapies for cardiovascular risk reduction in diabetes mellitus and Firat Akat (Ankara, Turkey) on the roles of sirtuins and K-acetylation in metabolic syndrome associated heart remodeling.

In the afternoon, Session 13 “*Translational Approaches in Cardiac Arrhythmias*” and Session 14 “*Natural Compounds in Cardiovascular Protection*” were held in parallel. Prof. Belma Turan (Ankara, Turkey) opened Session 13 with the presentation entitled “*Electrotonic Modulation in Mixed-Mode Electrical Conduction Can Be a Novel Approach for SQT-Characterized Cardiac Remodelling*” and the session ended with a talk by Assoc.Prof. Viviana Ivan (Timișoara, Romania) on the antiarrhythmic effect of metabolic therapy and the role of late potentials in risk assessment. Session 14 was chaired by Profs. Jerzy Beltowski (Lublin, Poland) and Alina Pârvu (Cluj-Napoca, Romania). The talk of Prof. Miloš Stojiljković (Banja Luka, Bosnia & Herzegovina) on the results of *in vitro* and *in vivo* studies regarding the antioxidative capacity of pomegranate peel extracts was delivered by Prof. Ranko Škrbić and was followed by the ones of Prof. Beltowski on how green tea extract improved the vasodilating

effect of insulin on resistance arteries in rats with metabolic syndrome by converting H<sub>2</sub>S to polysulfides and of Prof. Pârvu on the cardioprotective effects of *Mahonia aquifolium* extracts.

Day 3 culminated with an outstanding Gala dinner and awards ceremony at a premier restaurant called Galla.

Two Poster Sessions were held in days 2 and 3 of the Meeting and 7 poster prizes were awarded during the Gala dinner.

The last day of the conference (October 7<sup>th</sup>) included the parallel Sessions 15 and 16. Session 15 entitled “*Novel Targets and Therapies in Cardiovascular Diseases: What Animal Models Have Taught Us?*” was chaired by Assoc. Profs. Ivan Srejovic (Kragujevac, Serbia) and Oana Aburel (Timișoara, Romania) and included four invited speakers. Dr. Melanie Hezzel (Bristol, UK) spoke first on the one health approach to cardiovascular research – what can dogs teach us about heart disease, which was followed by Dr. Slavica Mutavdzin Krneta (Belgrade, Serbia) presentation on the effects of vitamin B6 and folic acid on the cardiovascular system of rats with streptozotocin-induced diabetes mellitus. The other two lectures were delivered by Prof. Vladimir Zivkovic (Kragujevac, Serbia) on the effects of different exercise types on a rat model of myocardial ischemia/reperfusion injury and Assoc. Prof. Ivan Srejovic (Kragujevac, Serbia) on the effects of L-glutamate on heart function, morphology and redox balance in rats.

Session 16, last one of the conference, was chaired by Assoc. Profs. Isidora Milosavljevic (Kragujevac, Serbia) and Caius Streian (Timișoara, Romania) and had the topic “*Novel Biomarkers, Therapeutic Targets and Unusual Cases: What Humans Have Taught Us?*”. The lecture of Prof. Manuela Ciocoiu (Iași, Romania) on the molecular and cellular mechanisms in the development of aortic wall aneurysms was presented by Dr. Iris Băraru-Bojan and was followed by five oral communications, as follows: Dr. Adrian Apostol (Timișoara, Romania) spoke on RAS inhibition therapy in dialized patients and the effects on positive remodelling, Dr. Caius Streian on an unusual form of left ventricular tumor, Dr. Ana Lascu (Timișoara, Romania) on concurrent causes for acute severe right ventricular failure in an apparently healthy patient, Dr. Sonia Rațiu (Timișoara, Romania) on how vitamin D mitigated oxidative stress in varicose veins explants from obese and non-obese patients and finally, Dr. Răzvan Adrian Bertici (Timișoara, Romania) presented on the evolution and new etiological trends in patients with pulmonary arterial hypertension.

During the Gala Dinner, Dr. Dhalla presided over the presentation of the following IACS awards: the *Bohuslav Ostadal Award for Excellence in Cardiovascular Sciences* was presented to Dr. Rodolphe Fischmeister, Université Paris-Saclay, Orsay, France, the *Jan Slezak Award for Excellence in Cardiovascular Sciences* to Dr. Michael Czubryt, University of Manitoba, Winnipeg, Canada, and the *Andras Varro Award for Excellence in Cardiovascular Sciences* to Dr. Devendra Agrawal, Western University of Health Sciences, Pomona, USA.

In addition, the *IACS Lifetime Achievement Award* was presented to Dr. Danina M. Muntean, Conference Chair and the *IACS Distinguished Service Award* to Dr. Adrian Sturza, Director of the Local Organizing Committee,

Drs. Jakovljevic, Muntean and Baczkó presented 3 awards for the Young Investigator Award Competition and following 6 poster awards: 2 awards named after Dr. Attila Ziegelhöffer, 2 awards named after Dr. Karl Werdan and for the first time, 2 awards named after Dr. Milosav Kostić have been generously proposed by Prof. Vladimir Jakovljevic. In addition, a Best Poster Award was given for an excellent poster presentation.

The Meeting was closed by remarks and expressions of gratitude by the President of the IACS-ES Dr. Vladimir Jakovljevic, the President of IACS World, Dr. Grant Pierce, the General

Secretary of IACS-ES, Dr. István Baczkó, and the Chair of the Meeting, Dr. Danina M. Muntean who extended the acknowledgement for the valuable contributions and sponsorship of the conference by: “Victor Babeş” University of Medicine and Pharmacy from Timișoara, IACS, Hamilton, Volvo, Bayer, Boehringer-Ingelheim, Family Dental Clinic, AWR Lease Solutions, EuroCas, DiaLab Solutions, MC Fink, PKF Ekonometrica, Hotel President and Crama Aramic.

Timișoara is a multicultural and educational center known for its hospitality and beauty; the very soul of the city is a charming blend of provincial town and a big city, which makes you feel at home and welcome. It is one of the most dynamic cities in Romania and is also the place where the Revolution against communism started in 1989. In 2023 Timișoara has been one of three nominated European Capitals of Culture, having as slogan a vivid message: *”Shine Your Light!”*. The combination of internationally recognized speakers, cutting-edge themes, diversity of symposia and meeting venue offered a great scientific and educational experience and contributed to the success of the conference. We had all a wonderful opportunity to *”shine our light”* at this meeting while discussing the latest advances in experimental and clinical cardiovascular research, to renew old friendships and make new ones. Besides the productive exchanges, we share lasting impressions about the social program, in particular the elegant exhibitions of two famous sculptors, Constantin Brâncuși and Peter Jecza.



9<sup>th</sup> European Section Meeting of the  
International Academy of Cardiovascular Sciences

October 4 – 7, 2023 TIMIȘOARA, ROMANIA

*If we let our own light shine,  
we unconsciously give other people  
permission to do the same.*

*Nelson Mandela*

2023 I Support  
Timișoara 2