

## Scientific Programme

### THURSDAY 10 OCTOBER 2019

07.45 Registration

08.15 - **Satellite Symposium I**

10.20 **Transcontinental Expert Meeting on Arterial Function**

Chairs: P Boutouyrie, T Weber

11.00 Welcome address

Professor Pierre Boutouyrie, President, ARTErY

Dr Bela Benczur, Chair, Local Organising Committee, ARTErY 19

11.15 Opening Lecture

**Arterial stiffness and PAD**

Professor Mariella Catalano, *University of Milan, L. Sacco Hospital, Italy*

11.45 Special Guest Lecture

**Chronic kidney disease: A model of impaired vascular remodelling**

Professor Antonio Bellasi, *ASST Papa Giovanni XXIII, Italy*

12.15 **Oral Session I: Epidemiology and Special Populations**

**1.1 Differential changes in peripheral and central blood pressure from adolescence to adulthood**

Park, Chloe; Rapala, Alicja; Jones, Siana; Williams, Suzanne; Chaturvedi, Nish;

Hughes, Alun

*University College London, London, UK*

**1.2 Chronological versus vascular age: predictive value for cardiovascular events and identification of patients with SUPERNormal Vascular Aging (SUPERNOVA)**

Bruno, Rosa Maria<sup>1,2</sup>; Nilsson, Peter<sup>3</sup>; Ensgrtom, Gunnar<sup>3</sup>; Wadstrom, Benjamin<sup>3</sup>;

Empana, Jean-Philippe<sup>2</sup>; Boutouyrie, Pierre<sup>4</sup>; Laurent, Stephane<sup>4</sup>

<sup>1</sup>*University of Pisa, Pisa, Italy*, <sup>2</sup>*INSERM, U970, Paris Cardiovascular Research Center –PARCC,*

*Paris, France*, <sup>3</sup>*Lund University, Skane University Hospital, Malmo, Sweden*, <sup>4</sup>*APHP, Hôpital*

*Européen Georges Pompidou, Paris, France*

**1.3 Abstract withdrawn by author**

**1.4 Prognostic relevance of augmentation index in prevalent cardiovascular disease and total mortality: data from the general population**

Arnold, Natalie<sup>1</sup>; Gori, Tommaso<sup>1</sup>; Gündling, Anika<sup>1</sup>; Schulz, Andreas<sup>1</sup>; Prochaska, Jürgen H.<sup>1</sup>;

Panova-Noeva, Marina<sup>1</sup>; Schmidtman, M. Irene<sup>1</sup>; Pfeiffer, Norbert<sup>1</sup>; Beutel, Manfred<sup>1</sup>;

Lackner, Karl J.<sup>2</sup>; Münzel, Thomas<sup>2</sup>; Wild, Philipp S<sup>1</sup>

<sup>1</sup>*University Medical Center of the Johannes Gutenberg-University Mainz, Mainz, Germany,*

<sup>2</sup>*Institute for Clinical Chemistry and Laboratory Medicine of the Johannes Gutenberg-University Mainz, Mainz, Germany*

**1.5 Age and sex differences in the association of brachial and central blood pressure variability with arterial stiffness**

Yu, Shikai; Connolly, Kathleen; Kulkarni, Spoorthy; Selvarajah, Viknesh; Woodcock-Smith, Jean; Wilkinson, Ian; McEniery, Carmel  
*University of Cambridge, Cambridge, UK*

**1.6 Individual and neighborhood deprivation and carotid stiffness: The Paris Prospective III study**

Climie, Rachel<sup>1</sup>; Boutouyrie, Pierre<sup>2</sup>; Perier, Marie-Cecile<sup>1</sup>; Guibout, Catherine<sup>1</sup>; van Sloten, Thomas<sup>1</sup>; Thomas, Frederique<sup>3</sup>; Danchin, Nicolas<sup>3</sup>; Sharman, James<sup>4</sup>; Laurent, Stephane<sup>1</sup>; Jouven, Xavier<sup>1</sup>; Empana, Jean-Philippe<sup>1</sup>  
<sup>1</sup>Inserm U970, <sup>2</sup>INSERM, U970, APHP, <sup>3</sup>Investigations Préventives et cliniques, <sup>4</sup>Menzies Institute for Medical Research

13.15 Lunch, Poster and Exhibition viewing

14.30 Special Guest Lecture

**Novel imaging technics of arteries**

Professor Richard Lopata, *Eindhoven University of Technology, The Netherlands*

15.00 Career Development Lectures

**Accurate measurement of blood pressure**

Dr Dean Picone, *Menzies University of Tasmania, Australia*

**Quantification of pulse wave reflections: bridging theory and practice**

Dr Bernhard Hametner, *AIT Austrian Institute of Technology, Austria*

**Hemodynamics and pulse wave velocity by 4D-flow in ascending aorta aneurysm: a cross-sectional study in patients with bicuspid aortic valve, Marfan syndrome and degenerative aneurysms**

Dr Andrea Guala, *Vall d'Hebron Institute of Research, Spain*

16.00 Refreshments, Poster and Exhibition viewing – Bolero Room/Foyer & The Restaurant

16.00 **ARTERY Young Investigator Business Meeting**

16.30 **Joint Session with LATAM Artery, North American Artery, Pulse of Asia**

Chairs: P Boutouyrie, P Forcada, G Pierce, A Avolio

**Transactivation domain of Krüppel-like factor 15 negatively regulates vascular remodelling in hypertension**

Xiao-Dong Li, *Shanghai Jiaotong University School of Medicine, China*

**Passive heat therapy lowers systolic blood pressure and improves vascular endothelial function and oxidative stress in older adults: role of circulating factors**

Vienna Brunt, *University of Colorado Boulder, USA*

**Relationship between PWV and cardiovascular biomarkers in patients with risk factors**

Weimar Kunz Sebba Barroso, *Federal University of Goias, Brazil*

17.30 Invited Lecture

**The role of e-health in 24-hour monitoring of central hemodynamics and vascular function**

Professor Stefano Omboni, *Sechenov First Moscow State Medical University, Russia*

18.00 **Poster Session I and Welcome Networking Reception** – Bolero Room/Foyer & The Restaurant

Poster Session I: Basic (P1 – P14)

Poster Session I: Clinical Aspects I (P15 – P26)

Poster Session I: Epidemiology (P27 – P35)

Poster Session I: Hypertension I (P36 – P47)

Poster Session I: Interventions (P48 – P56)

Poster Session I: Models, Methodologies and Imaging Technologies I (P57 – P70)

Poster Session I: Special Populations I (P71 – P82)

20.00 Welcome Networking Reception ends

21.00 - **ARTERY Young Investigator networking evening**

late Arena Corner Pub - Bartok Bela ut 76, Budapest 1114, Hungary

## FRIDAY 11 OCTOBER 2019

07.00 **ARTERY 19 Run**

Meeting point: Danubius Hotel Flamenco (main entrance)

08.00 Refreshments, Poster and Exhibition viewing

08.15 **Oral Session II: Models, Methodologies, Basic Science and Interventions**

**2.1 Derivation of central aortic pressure using the radial pulse waveform acquired by millimetre-wave radar**

Qasem, Ahmad<sup>1,2</sup>; Shay, Oliver<sup>3</sup>; Liao, Catherine<sup>3</sup>; Butlin, Mark<sup>1</sup>; Avolio, Alberto<sup>1</sup>

<sup>1</sup>Macquarie University, Sydney, AUSTRALIA, <sup>2</sup>AtCor/Cardiex Ltd, Sydney Australia, <sup>3</sup>Blumio Inc, San Francisco, CA, USA

**2.2 Modest region-specific, sex-independent aortic remodeling when hypertension is superimposed on aging**

Spronck, Bart<sup>1,2</sup>; Ferruzzi, Jacopo<sup>1</sup>; Caulk, Alexander W.<sup>1</sup>; Murtada, Sae-Il<sup>1</sup>; Humphrey, Jay D.<sup>1,3</sup>

<sup>1</sup>Yale University, New Haven, CT, USA, <sup>2</sup>Maastricht University, Maastricht, The Netherlands, <sup>3</sup>Yale School of Medicine, New Haven, CT, USA

**2.3 Exosomes Derived from Endothelial Progenitor Cells Modulate Flow-Induced Remodeling and Increase Vasculogenesis in Mesenteric Arteries of Mice**

Bobi, Joaquim<sup>1</sup>; Vessieres, Emilie<sup>2</sup>; Grimaud, Linda<sup>2</sup>; Sabate, Manel<sup>1</sup>; Henrion, Daniel<sup>2</sup>; Dantas, Ana Paula<sup>1</sup>

<sup>1</sup>IDIBAPS, Barcelona, Spain, <sup>2</sup>Mitovasc Institute, INSERM, Angers, France

**2.4 Aortofemoral Plethysmographic Volume Wave Velocity obtained during the Routine 12 Channel ECG corresponds in its Determinants to tonometrically derived carotid-femoral Pulse Wave Velocity**

Skrabal, Falko; Weber, Thomas; Skrabal, Katharina

Falko Skrabal Institute of Cardiovascular and Metabolic Medicine, Graz, Austria

## **2.5 Differential association of central and peripheral arterial compliance with resting and recruitable endothelial function in healthy human subjects**

Badhwar, Smriti; Chandran, Dinu; Jaryal, Ashok; Narang, Rajiv; Patel, Chetan; Deepak, Kishore Kumar

*All India Institute of Medical Sciences, New Delhi, India*

## **2.6 Validation of the measurement of aortic stiffness by the CARDIS Laser Doppler Vibrometer**

Marais, Louise<sup>1</sup>; Khettab, Hakim<sup>1</sup>; Li, Yanlu<sup>2</sup>; Segers, Patrick<sup>3</sup>; Baets, Roel<sup>2</sup>; Reesink, Koen<sup>4</sup>; Aasmul, Soren<sup>5</sup>; De Melis, Mirko<sup>5</sup>; Boutouyrie, Pierre<sup>1</sup>

<sup>1</sup>Inserm U970 - PARCC, Paris, France, <sup>2</sup>Ghent University, Ghent, Belgium, <sup>3</sup>bioMMeda - Institute Biomedical Technology, Ghent University, Ghent, Belgium, <sup>4</sup>CARIM, Maastricht University Medical Center, Maastricht, The Netherlands, <sup>5</sup>Medtronic Bakken Research Center, Maastricht, The Netherlands

## **2.7 Machine Learning on Central Hemodynamic Quantities Using Noninvasive Measurements: How Far Can We Go?**

Bikia, Vasiliki; Pagoulatou, Stamatia; Stergiopoulos, Nikolaos

*Swiss Federal Institute of Technology (EPFL), Lausanne, Switzerland*

## **2.8 Unique patterns of elastin degradation in ascending aortic aneurysms in bicuspid aortic valve patients**

Chim, Ya Hua<sup>1</sup>; Davies, Hannah<sup>1</sup>; Nawaytou, Omar<sup>2</sup>; Field, Mark<sup>2</sup>; Madine, Jillian<sup>1</sup>; Akhtar, Riaz<sup>1</sup>

<sup>1</sup>University of Liverpool, Liverpool, UK, <sup>2</sup>Liverpool Heart and Chest Hospital, Liverpool, UK

09.45 Focus Update

### **Waves (and anti-waves) in the circulatory system**

#### **Challenging the understanding of arterial stiffness**

Professor Benjamin Gavish, *Yazamon Ltd, Israel*

#### **Pulsatility and diameter in microvessels**

Professor Akos Koller, *University of Physical Education, Hungary*

10.15 Refreshments, Poster and Exhibition viewing – Bolero Room/Foyer & The Restaurant

10.45 **Oral Session III – Young Investigator Award**

### **3.1 Why flow mediated dilation fails to assess true endothelial cell function?**

#### **A computational based investigation**

Jin, Weiwei; Alastruey, Jordi; Chowienzyk, Phil

*King's College London, UK*

### **3.2 First genome-wide association study of cardiovascular magnetic resonance derived aortic distensibility reveals 7 loci**

Fung, Kenneth<sup>1</sup>; Biasioli, Luca<sup>2</sup>; Hann, Evan<sup>2</sup>; Ramirez, Julia<sup>1</sup>; Lukaschuk, Elena<sup>2</sup>; Aung, Nay<sup>1</sup>; Paiva, Jose<sup>1</sup>; Werys, Konrad<sup>2</sup>; Sanghvi, Mihir<sup>1</sup>; Thomson, Ross<sup>1</sup>; Rayner, Jennifer<sup>2</sup>; Puchta, Henrike<sup>2</sup>; Moon, Niall<sup>2</sup>; Thomas, Katharine<sup>2</sup>; Lee, Aaron<sup>1</sup>; Piechnik, Stefan<sup>2</sup>; Neubauer, Stefan<sup>2</sup>; Petersen, Steffen<sup>1</sup>; Munroe, Patricia<sup>1</sup>

<sup>1</sup>Queen Mary University of London, London, UK, <sup>2</sup>University of Oxford, Oxford, UK

### **3.3 Age- and sex-specific reference intervals for brachial artery flow-mediated dilation in healthy individuals and the relation with cardiovascular risk factors**

Holder, Sophie<sup>1</sup>; Bruno, Rosa Maria<sup>2</sup>; Shkredova, Daria<sup>3</sup>; Thompson, Andrew<sup>4</sup>; Dawson, Ellen<sup>1</sup>; Jones, Helen<sup>1</sup>; Hopkins, Nicola<sup>1</sup>; Hopman, Maria<sup>5</sup>; Bailey, Tom<sup>6</sup>; Coombes, Jeff<sup>7</sup>; Askew, Christopher<sup>8</sup>; Naylor, Louise<sup>9</sup>; Maiorana, Andrew<sup>10</sup>; Ghiadoni, Lorenzo<sup>2</sup>; Green, Daniel<sup>9</sup>; Thijssen, Dick<sup>1,5</sup>

<sup>1</sup>Liverpool John Moores University, Liverpool, United Kingdom, <sup>2</sup>University of Pisa, Pisa, Italy, <sup>3</sup>University of British Columbia, Kelowna, Canada, <sup>4</sup>University of Liverpool, Liverpool, United Kingdom, <sup>5</sup>Radboud University Medical Center, Nijmegen, the Netherlands, <sup>6</sup>The University of Queensland, Brisbane, Australia; University of the Sunshine Coast, Sippy Downs, Australia, <sup>7</sup>The University of Queensland, Brisbane, Australia, <sup>8</sup>University of the Sunshine Coast, Birtinya, Australia., <sup>9</sup>The University of Western Australia, Crawley, Australia, <sup>10</sup>Curtin University, Perth, Australia; Fiona Stanley Hospital, Perth, Australia

### **3.4 Micro- and macro-vascular remodeling and cognitive function in hypertension**

Gallo, Antonio<sup>1,2</sup>; Charpentier, Etienne<sup>2</sup>; Diertenbeck, Thomas<sup>2</sup>; Dufay, Antoine<sup>1</sup>; Redheuil, Alban<sup>3,4</sup>; Chupin, Marie<sup>2</sup>; Hanon, Olivier<sup>7</sup>; Girerd, Xavier<sup>1</sup>; Kachenoura, Nadja<sup>2</sup>

<sup>1</sup>University Hospital Pitié-Salpêtrière, Paris, France, <sup>2</sup>Sorbonne Universités, Paris, France, Paris, France, <sup>3</sup>Institute of Cardiometabolism and Nutrition (ICAN), Paris, France, <sup>4</sup>Pôle Imagerie-Groupe Hospitalier Pitié-Salpêtrière, Assistance Publique-Hôpitaux de Paris, Paris, France, <sup>5</sup>AP-HP, Hôpital Broca, Service de Gériatrie, Paris, France

### **3.5 Arterial stiffness partly explains sex differences in associations between left ventricular structure and mortality: the Southall and Brent revisited (SABRE) study**

Al Saikhan, Lamia<sup>1</sup>; Park, Chloe<sup>1</sup>; Tillin, Therese<sup>1</sup>; Mayet, Jamil<sup>2</sup>; Chaturvedi, Nish<sup>1</sup>; Hughes, Alun<sup>1</sup>

<sup>1</sup>University College London (UCL), London, UK, <sup>2</sup>Imperial College London and Imperial College Healthcare NHS Trust

### **3.6 Fitness, fatness and exercise blood pressure in adolescence**

Huang, Zhengzheng<sup>1,2</sup>; Park, Chloe<sup>3</sup>; Chaturvedi, Nishi<sup>4</sup>; Howe, Laura<sup>4</sup>; Sharman, James<sup>2</sup>; Hughes, Alun<sup>3</sup>; Schultz, Martin<sup>2</sup>

<sup>1</sup>Menzies Institute for Medical Research, Tasmania, Australia, <sup>2</sup>University of Tasmania, Hobart, Australia, <sup>3</sup>University College London, London, UK., <sup>4</sup>University of Bristol, Bristol, UK

### **3.7 Exercise Systolic Blood Pressure Response And Incident Depressive Symptoms – The Maastricht Study**

Zhou, Tan Lai<sup>1,2</sup>; Kroon, Abraham<sup>1,2</sup>; Henry, Ronald<sup>1,2</sup>; Koster, Annemarie<sup>3,4</sup>; Dagnelie, Pieter<sup>1,2</sup>; Bosma, Hans<sup>3,4</sup>; van Greevenbroek, Marleen<sup>4,2</sup>; van der Kallen, Carla<sup>4,2</sup>; Schalkwijk, Casper<sup>4,2</sup>; Wesselius, Anke<sup>4</sup>; Reesink, Koen<sup>2,4</sup>; Köhler, Sebastian<sup>5,6</sup>; Schram, Miranda<sup>1,2</sup>; Stehouwer, Coen<sup>1,2</sup>; van Sloten, Thomas<sup>1,2,7,8</sup>

<sup>1</sup>Maastricht University Medical Centre+, Maastricht, The Netherlands, <sup>2</sup>CARIM School for Cardiovascular Diseases, Maastricht, The Netherlands, <sup>3</sup>CAPHRI Care and Public Health Research Institute, Maastricht, the Netherlands, <sup>4</sup>Maastricht University, Maastricht, the Netherlands, <sup>5</sup>Alzheimer Centre Limburg, Maastricht University Medical Centre+, Maastricht, the Netherlands, <sup>6</sup>MHeNs School for Mental Health and Neuroscience, Maastricht, the Netherlands, <sup>7</sup>Université Paris Descartes, Paris, France, <sup>8</sup>INSERM Paris Cardiovascular Research Centre, Paris, France

**3.8 The importance of micro-and macrocirculation indices implementation for the amelioration of cardiovascular risk classification**

Areti Triantafyllou, Konstantina Dipla, Nikolaos Koletsos, Eugenia Gkaliagkousi, Antonios Lazaridis, Andreas Zafeiridis, Stella Douma  
*Aristotle University of Thessaloniki, Greece*

**12.15 Young Investigator Session**

Chairs: B Hametner, D Terentes-Printzios

**Research Exchange Grant Winner 2018: Outcomes of collaborative project with host lab**

Dr Giacomo Pucci, *Università degli Studi di Perugia, Italy*

**When industry comes to science: technology transfer for better knowledge in cardiovascular research**

**The academia perspective**

Dr Nikolaos Stergiopoulos, *Swiss Federal Institute of Technology, Switzerland*

**The start-up perspective**

Dr Louise Marais, *WiThings, France*

**The EU-COST Action VascAgeNet**

Dr Christopher Mayer, *AIT, Austria*

**13.15 Poster Session II, Lunch and Exhibition viewing**

Poster Session II: Clinical Aspects II (P83 – P94)

Poster Session II: Epidemiology, Brain and Other (P96 – P108)

Poster Session II: Hypertension II (P109 – P121)

Poster Session II: Models, Methodologies and Imaging Technologies II (P122 – P130 & P152 – P153)

Poster Session II: Pathophysiology (P131 – 138 & P154)

Poster Session II: Special Populations II (P139 – P151)

**14.45 Symposium organised in collaboration with Servier**

**Arterial stiffness and central hemodynamics: which use in clinical practice?**

Chairs: RM Bruno, C Rajkumar

**Children, adolescents and young adults**

Dr Carmel McEniery, *University of Cambridge, UK*

**Clinical role in the elderly**

Professor Athanasios Benetos, *Hôpital de Brabois, France*

**Guide for therapy in hypertension**

Professor Kennedy Cruickshank, *King's College London, UK*

**15.45 Oral Session IV: Clinical Aspects, Hypertension and Diabetes**

**4.1 Hypertension is associated with adverse cardiovascular outcomes only when both brachial and central blood pressures are elevated**

Goupil, Remi<sup>1</sup>; Lamarche, Florence<sup>1</sup>; Agharazii, Mohsen<sup>2</sup>; Madore, François<sup>1</sup>

<sup>1</sup>Hôpital du Sacré-Coeur de Montréal, Montreal, Canada, <sup>2</sup>Hôtel-Dieu de Québec, Quebec City, Canada

#### **4.2 Biological and vascular contributors to cerebral pulsatility and pulsatile damping**

Lefferts, Wesley<sup>1</sup>; DeBlois, Jacob<sup>2</sup>; Augustine, Jacqueline<sup>3</sup>; Keller, Allison<sup>2</sup>; Heffernan, Kevin<sup>2</sup>

<sup>1</sup>University of Illinois at Chicago, USA, <sup>2</sup>Syracuse University, New York, USA <sup>3</sup>SUNY Cortland, New York, USA

#### **4.3 Aortic pulse wave velocity measured by occlusive, suprasystolic, oscillometric method (Arteriograph) independently predicts all cause mortality**

Illyes, Miklos

*Heart Institute, Faculty of Medicine, University of Pécs, Pécs Hungary*

#### **4.4 Arterial stiffness can be modulated by pressure-independent mechanisms in hypertension**

Faconti, Luca; farukh, Bushra<sup>1</sup>; McNally, Ryan<sup>1</sup>; Webb, Andrew<sup>1</sup>; Chowienczyk, Phil<sup>1</sup>

<sup>1</sup>King's College London, UK

#### **4.5 Increased central pulse pressure in children results from increased early ejection velocity and increased aortic pulse wave velocity**

Li, Ye<sup>1</sup>; Gu, Haotian<sup>1</sup>; Sinha, Manish<sup>1,2</sup>; Chowienczyk, Phil<sup>1</sup>

<sup>1</sup>King's College London, UK, <sup>2</sup>Evelina London Children's Hospital, London, UK

#### **4.6 Effects of combined therapy of empagliflozin and linagliptin versus metformin and insulin glargine on blood pressure and vascular function in patients with type 2 diabetes**

Ott, Christian<sup>1,2</sup>; Jung, Susanne<sup>1</sup>; Bosch, Agnes<sup>1</sup>; Kannenkeril, Dennis<sup>1</sup>; Striepe, Kristina<sup>1</sup>; Schmieder, Roland<sup>1</sup>

<sup>1</sup>Friedrich-Alexander-University Erlangen-Nuremberg, Erlangen, Germany, <sup>2</sup>Paracelsus Medical School Nuremberg, Nuremberg, Germany

#### **4.7 Prediabetes and type 2 diabetes are associated with wider retina arterioles and venules**

Li, Wenjie<sup>1</sup>; Schram, Miranda<sup>1</sup>; Berendschot, Tos<sup>1</sup>; Webers, Carroll<sup>1</sup>; Kroon, Abraham<sup>1</sup>; van der Kallen, Carla<sup>1</sup>; Henry, Ronald<sup>1</sup>; Koster, Annemarie<sup>1</sup>; Dagnelie, Pieter<sup>1</sup>; Schaper, Nicolaas<sup>1</sup>; Huang, Fan<sup>2</sup>; Dashtbozorg, Behdad<sup>2</sup>; Tan, Tao<sup>2</sup>; Zhang, Jiong<sup>2</sup>; Abbasi-Sureshjani, Samaneh<sup>2</sup>; ter Haar Romeny, Bart<sup>2</sup>; Stehouwer, Coen<sup>1</sup>; Houben, Alfons<sup>1</sup>

<sup>1</sup>Maastricht University Medical Center+, Maastricht, The Netherlands, <sup>2</sup>Eindhoven University of Technology, Eindhoven, The Netherlands

#### **4.8 Reference values for submaximal exercise blood pressure: the EXERcise stress Test collaboratiON (EXERTION)**

Schultz, Martin<sup>1</sup>; Kovacevic, Ann-Marie<sup>1</sup>; Roberts-Thomson, Philip<sup>2</sup>; Stanton, Tony<sup>3</sup>; Hamilton-Craig, Christian<sup>4</sup>; Wahi, Sudir<sup>5</sup>; Hare, James<sup>6</sup>; Selvanayagam, Joseph<sup>7</sup>; Maiorana, Andrew<sup>8</sup>; Venn, Alison<sup>1</sup>; Sharman, James<sup>2</sup>

<sup>1</sup>Menzies Institute for Medical Research, University of Tasmania, <sup>2</sup>Royal Hobart Hospital, Hobart, Australia, <sup>3</sup>Sunshine Coast University Hospital, Birtinya, Australia., <sup>4</sup>The Prince Charles Hospital, Brisbane, Australia., <sup>5</sup>Princess Alexandra Hospital, Brisbane, Australia., <sup>6</sup>The Alfred Hospital, Melbourne, Australia., <sup>7</sup>Flinders University, Adelaide, Australia., <sup>8</sup>Curtin University & Allied Health Department, Fiona Stanley Hospital, Perth, Australia.

17.15 Refreshments, Poster and Exhibition viewing - Bolero Room/Foyer & The Restaurant

17.45 Invited Lecture

#### **Early life influences of arterial function and cardiovascular risk**

Professor Peter Nilsson, *Lund University, Sweden*

18.15 **ARTERY Annual Business Meeting**

19.30 - **ARTERY Conference Dinner**

22.30 Europe Ship - Szilágyi Dezső Square 1st Dock, Budapest, Hungary

*Coaches will be available to transport guests to and from the dinner venue*

## **SATURDAY 12 OCTOBER 2019**

08.30 Refreshments, Poster and Exhibition viewing

09.00 Debate

### **What is the best way to assess vascular damage in hypertensive patients in order to use it in general practice?**

Professor Stephane Laurent, *Hôpital Européen Georges Pompidou, France*

Professor Gianfranco Parati, *University of Milano-Bicocca*

09.50 Focus Update

10.20 Refreshments, Poster

### **COPD and PAD in everyday clinical practice**

#### **Chronic obstructive pulmonary disease and its vascular complications**

Professor Csaba Farsang, *Hungarian Society of Hypertension, Hungary*

#### **The "ÉRV-programme" - the results of a Hungarian nationwide screening programme in PAD and hypertension**

Professor Zoltan Jari, *Hungarian Society of Hypertension, Hungary*

Poster and Exhibition viewing - Bolero Room/Foyer & The Restaurant

10.50 **Oral Session V: Brain, Exercise and Blood Pressure**

#### **5.1 The role of blood pressure, aortic stiffness, and haemodynamics in brain health in older people with type 2 diabetes mellitus**

Karayannis, Christopher<sup>1</sup>; Moran, Chris<sup>1</sup>; Beare, Richard<sup>1</sup>; Sharman, James<sup>2</sup>; Phan, Thanh<sup>3</sup>; Thrift, Amanda<sup>3</sup>; Wang, Wei<sup>1</sup>; Srikanth, Velandai<sup>1</sup>

<sup>1</sup>Peninsula Health, Melbourne, Australia, <sup>2</sup>University of Tasmania, Tasmania, Australia,

<sup>3</sup>Monash University, Melbourne, Australia

#### **5.2 Arterial stiffness and periodontitis: a systematic review and meta-analysis.**

Darnaud, Christelle<sup>1,2</sup>; Courtet, Alexandre<sup>2</sup>; Schmitt, Audrey<sup>2</sup>; Carra, Clotilde<sup>2</sup>; Boutouyrie, Pierre<sup>1</sup>; Bouchard, Philippe<sup>2</sup>

<sup>1</sup>Paris Cardiovascular Research Center, UMR-S970, Department of Epidemiology, Paris, France, <sup>2</sup>Rothschild Hospital, AP-HP, Paris 7/Denis Diderot University, Paris, France

#### **5.3 Sex differences in blood pressure in young adults: Is it all about body size?**

Yu, Shikai<sup>1</sup>; McDonnell, Barry<sup>2</sup>; Maki-Petaja, Kaisa<sup>1</sup>; Cockcroft, John<sup>2</sup>; Wilkinson, Ian<sup>1</sup>; McEniery, Carmel<sup>1</sup>

<sup>1</sup>University of Cambridge, Cambridge, UK, <sup>2</sup>Cardiff Metropolitan University, Cardiff, UK

#### **5.4 Acute effects of indapamide treatment on haemodynamics and glycosaminoglycan-mediated non-osmotic skin sodium storage in healthy humans**

Connolly, Kathleen; Selvarajah, Viknesh; McEniery, Carmel; Wilkinson, Ian  
*University of Cambridge, Cambridge, UK*



### **5.5 A femoral ‘stealing’ effect: Presence of collateral retrograde blood flow redistribution in the femoral bifurcation during reactive hyperemia**

Au, Jason<sup>1,2</sup>; Amelard, Robert<sup>2</sup>; Yiu, Billy<sup>1,2</sup>; Nahas, Hassan<sup>1,2</sup>; Hughson, Richard<sup>2</sup>; Yu, Alfred<sup>1,2</sup>

<sup>1</sup>University of Waterloo, Waterloo, Canada, <sup>2</sup>Schlegel-University of Waterloo Research Institute for Aging, Waterloo, Canada

### **5.6 Aortic pressure behind flow disorganization in aneurismal aorta: a magnetic resonance imaging study**

Bouaou, Kevin<sup>1</sup>; Dietenbeck, Thomas<sup>1</sup>; Soulat, Gilles<sup>2</sup>; Houriez--Gombaudo-Saintonge, Sophia<sup>1</sup>; Bargiotas, Ioannis<sup>3</sup>; De Cesare, Alain<sup>1</sup>; Gencer, Umit<sup>2</sup>; Giron, Alain<sup>1</sup>; Redheuil, Alban<sup>1</sup>; Bollache, Emilie<sup>1</sup>; Lucor, Didier<sup>4</sup>; Mousseaux, Elie<sup>2</sup>, Kachenoura Nadjia<sup>1</sup>

<sup>1</sup>Sorbonne Université, INSERM, CNRS, Laboratoire d’Imagerie Biomédicale, Paris, France,

<sup>2</sup>Hôpital Européen Georges Pompidou, INSERM 970, Paris, France, <sup>3</sup>CMLA, ENS Cachan, CNRS, Université Paris-Saclay, 94235 Cachan, France, <sup>4</sup>LIMSI, CNRS, Université Paris-Saclay, Orsay, France

#### **11.50 McDonald Lecture**

Chairs: P Boutouyrie, B Benczur

Professor Maria Lorenza Muiesan, *Università di Brescia, Italy*

#### **12.20 Lifetime Achievement Award**

Chairs: P Boutouyrie, B Benczur

Professor John Cockcroft, *Cardiff Metropolitan University, UK*

12.40 Concluding remarks and close of conference

13.00 Light lunch

#### **14.00 Satellite Symposium II**

**The EU-COST Action VascAgeNet: update and discussion**

Chairs: C Mayer, RM Bruno

#### **15.30 ARTERY 19 Open Golf Tournament**

Budapest Highland Golf Club - 1224 Budapest, Dózsa György út 99-103

## Posters

*\* All posters will be moderated*

### POSTER SESSION I – BASIC

#### **P1 Biomechanical properties of the aortic dissection flap in chronic aortic dissection**

Panpho, Phakakorn<sup>1</sup>; Davies, Hannah<sup>1</sup>; Field, Mark<sup>2</sup>; Madine, Jillian<sup>1</sup>; Yang, Ying<sup>3</sup>; Akhtar, Riaz<sup>1</sup>  
<sup>1</sup>University of Liverpool, Liverpool, United Kingdom, <sup>2</sup>Liverpool Heart and Chest Hospital, Liverpool, United Kingdom, <sup>3</sup>Keele University, Keele, United Kingdom

#### **P2 Calcium induced intramitochondrial cAMP Signalling enhances Aldosterone secretion**

Szanda, Gergő; Wisniewski, Éva; Rajki, Anikó; Spät, András  
Semmelweis University, Budapest, Hungary

#### **P3 Factor influencing endothelial function in type 2 diabetes mellitus with newly diagnosed hypertension**

Srivastava, Prachi  
All India Institute of Medical Sciences, New Delhi, India

#### **P4 Aldosterone-induced vascular dysfunction by decreasing nuclear factor erythroid 2–related factor 2 activity and increasing reactive oxygen species generation**

Rodrigues, Daniel; Januário da Costa, Tiago; Menezes da Costa, Rafael; Aleixo Tostes Passaglia, Rita de Cássia  
University of Sao Paulo – Ribeirao Preto, Brazil

#### **P5 Aortic volume wave velocity (VWV) in chronic heart failure (CHF) measured during the 12 channel routine ECG by impedance plethysmography relates negatively to appendicular muscle mass (AppMM)**

Skrabal, Falko; Boyer, Johannes; Ehsas, Hasib; Skrabal, Katharina  
Institute of Cardiovascular & Metabolic Medicine, Austria

#### **P6 CFD Modelling of Arterialized Venous Flap**

Andreia Serrano<sup>1</sup>, Diogo Casal<sup>2,3,4</sup>, João Goyri O’Neill<sup>1,3</sup> and Valentina Vassilenko<sup>1</sup>  
<sup>1</sup>Laboratory of Instrumentation, Biomedical Engineering and Radiation Physics (LIBPHYS), NOVA School of Science and Technology - NOVA University Lisbon, Portugal, <sup>2</sup>Plastic and Reconstructive Surgery Dept. and Burn Unit; Centro Hospitalar de Lisboa Central, Lisbon, Portugal, <sup>3</sup>Anatomy Department, Nova Medical School, NOVA University of Lisbon, Lisboa, Portugal, <sup>4</sup>Centre for Chronic Diseases (CEDOC); NOVA Medical School, Lisbon, Portugal

#### **P7 Assessing vascular age from peripheral pulse waves: a study of existing indices, and directions for future research**

Charlton, Peter<sup>1</sup>; Aresu, Maria<sup>2</sup>; Spear, Jeanette<sup>2</sup>; Chowienczyk, Phil<sup>1</sup>; Alastruey, Jordi<sup>1</sup>  
<sup>1</sup>King's College London, King's Health Partners, London, UK, <sup>2</sup>Imperial College London, London, UK

#### **P8 O-GlcNAcylation increases constriction in common carotid artery of senescent-accelerated female mice**

Costa, Tiago J.<sup>1</sup>; Silva, Josiane F.<sup>1</sup>; da Silva, Renée de Nazaré O.<sup>2</sup>; Barros, Paula R.<sup>2</sup>; Bolsoni, Juliana<sup>1</sup>; Rodrigues, Daniel<sup>1</sup>; Akamine, Eliana H.<sup>2</sup>; Tostes, Rita<sup>1</sup>  
<sup>1</sup>Department of Pharmacology, Ribeirao Preto Medical School, University of Sao Paulo, Brazil., <sup>2</sup>Department of Pharmacology, Institute of Biomedical Sciences, University of Sao Paulo, Brazil

**P9 Repeatability and predictors of a potentially blood pressure-independent parameter of arterial stiffness**

Butlin, Mark<sup>1</sup>; Cox, James<sup>1</sup>; Spronck, Bart<sup>2</sup>; Tan, Isabella<sup>1</sup>; Avolio, Alberto<sup>3</sup>

<sup>1</sup>*Department of Biomedical Sciences, Faculty of Medicine and Health Sciences, Macquarie University, Sydney, Australia,* <sup>2</sup>*School of Engineering and Applied Science, Yale University, New Haven, CT, USA.,*

<sup>3</sup>*Macquarie University, Sydney, Australia*

**P10 Oscillatory flow patterns in peripheral conduit artery are related to central arterial stiffness in healthy subjects**

Badhwar, Smriti; Chandran, Dinu; Jaryal, Ashok; Narang, Rajiv; Patel, Chetan; Deepak, Kishore Kumar  
*All India Institute of Medical Sciences, New Delhi, India*

**P11 The role of smooth muscle integrin alpha v and TGF-beta pathways in vascular fibrosis.**

Raoul, Alexandre<sup>1</sup>; Belozertseva, Ekaterina<sup>2</sup>; Louis, Huguette<sup>2</sup>; Li, Zhenlin<sup>3</sup>; Regnault, Veronique<sup>2</sup>; Lacolley, Patrick<sup>2</sup>

<sup>1</sup>*Université de Lorraine, Nancy, France,* <sup>2</sup>*Inserm U1116, Nancy, France,* <sup>3</sup>*Inserm ERL 1164, Paris, France*

**P12 Proliferation and procoagulant activity of vascular smooth muscle cells from thoracic and abdominal aortic aneurysms**

Didelot, Melusine<sup>1</sup>; LAGRANGE, Jeremy<sup>1</sup>; Michel, Jean-Baptiste<sup>2</sup>; LACOLLEY, Patrick<sup>1</sup>; REGNAULT, Veronique<sup>1</sup>

<sup>1</sup>*Inserm U1116, Nancy, FRANCE,* <sup>2</sup>*Inserm U1148, Paris, FRANCE*

**P13 Role of adipose tissue and skeletal muscle in peripheral arterial disease**

Ferreira, Joana<sup>1</sup>; Cunha, Pedro<sup>2</sup>; Carneiro, Alexandre<sup>3</sup>; Cunha, Cristina<sup>2</sup>; Silva, Cristina<sup>2</sup>; Vila, Isabel<sup>2</sup>; Mesquita, Amílcar<sup>4</sup>; Cotter, Jorge<sup>4</sup>

<sup>1</sup>*Hospital da Senhora da Oliveira- Guimaraes,* <sup>2</sup>*Hospital da Senhora da Oliveira,* <sup>3</sup>*Centro Hospitalar de Trás-os-Montes e Alto Douro,* <sup>4</sup>*Hospital da Senhora da Oliveira, Guimarães, Portugal*

**P14 The C3a-induced vasoconstriction is mediated by thromboxane A2 in mouse thoracic aorta**

Kerkovits, Nóra Melinda<sup>1</sup>; Órfi, Erik<sup>2</sup>; Ruisanchez, Éva<sup>1</sup>; Szénási, Gábor<sup>2</sup>; Benyó, Zoltán<sup>1</sup>

<sup>1</sup>*Institute of Clinical Experimental Research, Semmelweis University, Budapest, Hungary,* <sup>2</sup>*Department of Pathophysiology, Semmelweis University, Budapest, Hungary*

## **POSTER SESSION I – CLINICAL ASPECTS**

**P15 Reference Intervals of 24-hour Central Blood Pressure Assessed with an Oscillometric Device in Healthy Children and Adolescents**

Posokhov, Igor<sup>1</sup>; Sharykin, Alexandr<sup>2</sup>; Trunina, Inna<sup>2</sup>

<sup>1</sup>*Hemodynamic Laboratory Ltd, Nyzhny Novgorod, Russia,* <sup>2</sup>*Pirogov Russian National Research Medical University, Moscow, Russia*

**P16 Assessment of plaque vulnerability using a novel technique: multi-spectral PhotoAcoustic Imaging (CVENT-PAI)**

Imaizumi, Yuki<sup>1</sup>; Obeid, Hasan<sup>2</sup>; Julia, Pierre<sup>2</sup>; Calvet, David<sup>3</sup>; Boutouyrie, Pierre<sup>2</sup>

<sup>1</sup>*Université Paris Descartes, Paris, France,* <sup>2</sup>*Université Paris Descartes and Hôpital Européen Georges Pompidou, Paris, France,* <sup>3</sup>*Hôpital Sainte - Anne, Paris, France*

**P17 Comparisons of carotid-femoral pulse wave velocity obtained from the surface-distance measurement and from the population-derived distance formula: Associations with macro- and microvascular alterations in older adults**

Aizawa, Kunihiko; Casanova, Francesco; Mawson, Dave; Gooding, Kim; Elyas, Salim; Adingupu, Damilola; Strain, David; Gates, Phillip; Shore, Angela

*University of Exeter College of Medicine and Health, NIHR Exeter Clinical Research Facility, Exeter, UK*

**P18 Vascular Aging Index of the Finger Photoplethysmogram: A validation study with vascular stiffness, mental stress, and day-to-day variability**

Tarumi, Takashi<sup>1</sup>; Yamabe, Takayuki<sup>2</sup>; Sugawara, Jun<sup>1</sup>

<sup>1</sup>National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan, <sup>2</sup>University of Tsukuba, Tsukuba, Japan

**P19 Upper arm cuff inflation induces reactive changes in systolic blood pressure that could influence diagnosis in some individuals**

Morris, Louisa; Picone, Dean; Armstrong, Matthew; Schultz, Martin; Sharman, James

*Menzies Institute for Medical Research, Hobart, Australia*

**P20 Spontaneous Recanalization of the Internal Carotid Artery**

Varnai, Blanka; Simonyi, Gábor; Rapcsányi, Andrea; Finta, Ervin

*Szent Imre Hospital, Budapest, Hungary*

**P21 The association of vitamin K antagonists with aortic arch calcification in acute coronary syndrome patients**

Gkini, Konstantia-Paraskevi; Terentes-Printzios, Dimitrios; Vlachopoulos, Charalambos; Rigatou, Aggeliki; Gardikioti, Vasiliki; Sigala, Evangelia; Tousoulis, Dimitrios

*Hippokraton Hospital, First Department of Cardiology, National and Kapodistrian University of Athens, Greece*

**P22 Central and peripheral contributions to submaximal exercise performance in older adults in the Southall And Brent REvisited (SABRE) study**

Jones, Siana<sup>1</sup>; Schultz, Martin<sup>2</sup>; Tillin, Therese<sup>1</sup>; Williams, Suzanne<sup>1</sup>; Chaturvedi, Nishi<sup>1</sup>; Hughes, Alun<sup>1</sup>

<sup>1</sup>University College London, London, UK, <sup>2</sup>Menzies Institute for Medical Research, University of Tasmania, Australia

**P23 Tadalafil improves hemodynamic parameters and arterial stiffness in patients with grade I-II obesity without comorbidities**

Larios-Cardenas, Mariana; Grover-Páez, Fernando; Cardona-Muller, David; Cardona, Ernesto; Gonzalez-Radillo, Oscar I.; Trujillo-Quiros, Jonathan; Barocio-Pantoja, Marycruz; Quezada-Fernandez, Patricia; Ramos-Becerra, Carlos G.

*Physiology Department, University Health Sciences Center, University of Guadalajara, Mexico*

**P24 Restored physiological local carotid pulse wave velocity after bariatric surgery in obese subjects**

Giudici, Alessandro<sup>1</sup>; Morizzo, Carmela<sup>2</sup>; Kozakova, Michaela<sup>3</sup>; Losso, Lorenzo<sup>2</sup>; Palombo, Carlo<sup>2</sup>; Cruickshank, J Kennedy<sup>4</sup>; Khir, Ashraf<sup>1</sup>

<sup>1</sup>Biomedical Engineering Research Theme, Brunel University London, Uxbridge, UK, <sup>2</sup>Department of Surgical, Medical, Molecular Pathology and Critical Area Medicine, University of Pisa, Pisa, Italy.,

<sup>3</sup>Esaote SpA, Florence, Italy, <sup>4</sup>School of Life-Course/Nutritional Sciences, King's College, St. Thomas' & Guy's Hospitals, London, UK

### **P25 Effect of live-firefighting on ventricular-vascular coupling**

Hibner, Brooks<sup>1</sup>; Schroeder, Elizabeth<sup>1</sup>; Lefferts, Wesley<sup>1</sup>; Hilgenkamp, Thessa<sup>1</sup>; Yan, Huimin<sup>2</sup>; Horn, Gavin<sup>4</sup>; Smith, Denise<sup>4</sup>; Fernhall, Bo<sup>6</sup>

<sup>1</sup>University of Illinois at Chicago, Chicago, IL, USA, <sup>2</sup>University of Massachusetts Boston, Boston, Massachusetts, USA, <sup>3</sup>University of Illinois-Urbana/Champaign, Champaign, Illinois, USA, <sup>4</sup>Skidmore College, Saratoga Springs, New York, USA

### **P26 Ascending aorta longitudinal strain is not altered in bicuspid aortic valve patients**

Guala, Andrea<sup>1</sup>; Dux-Santoy, Lydia<sup>1</sup>; Teixido-Tura, Gisela<sup>2</sup>; Ruiz-Muñoz, Aroa<sup>1</sup>; Madrenas, Laura<sup>1</sup>; Gandara, Minerva<sup>1</sup>; Sao-Aviles, Augusto<sup>1</sup>; Valente, Filipa<sup>2</sup>; Galian-Gay, Laura<sup>2</sup>; Gutierrez, Laura<sup>2</sup>; Gonzalez-Alujas, Teresa<sup>2</sup>; Ferreira, Ignacio<sup>2</sup>; Evangelista, Arturo<sup>1</sup>; Rodriguez-Palomares, Jose<sup>2</sup>

<sup>1</sup>Vall d'Hebron Institute of Research, Barcelona, Spain, <sup>2</sup>Department of Cardiology, Vall d'hebron Hospital, Barcelona, Spain

## **POSTER SESSION I – EPIDEMIOLOGY**

### **P27 Non-validated blood pressure devices dominate the online marketplace: an initiative of the Lancet Commission on Hypertension Group**

Picone, Dean<sup>1</sup>; Deshpande, Rewati<sup>1</sup>; Schultz, Martin<sup>1</sup>; Fonseca, Ricardo<sup>1</sup>; Campbell, Norm<sup>3,4</sup>; Delles, Christian<sup>5</sup>; Hecht-Olsen, Michael<sup>6,7</sup>; Schutte, Aletta<sup>8</sup>; Stergiou, George<sup>9</sup>; Angell, Sonia<sup>10</sup>; Padwal, Raj<sup>11</sup>; Sharman, James<sup>1</sup>

<sup>1</sup>Menzies Institute for Medical Research, College of Health and Medicine, University of Tasmania, Australia, Australia, <sup>3</sup>Department of Medicine, Physiology and Pharmacology and Community Health Sciences, O'Brien Institute for Public Health, Calgary, Canada, <sup>4</sup>Libin Cardiovascular Institute of Alberta, University of Calgary, Calgary, Alberta, Canada, <sup>5</sup>Institute of Cardiovascular and Medical Sciences, University of Glasgow, Glasgow, UK, <sup>6</sup>Department of Internal Medicine, Holbaek Hospital, Holbaek, Denmark, <sup>7</sup>Centre for Individualized Medicine in Arterial Diseases (CIMA), Odense University Hospital, University of Southern Denmark, <sup>8</sup>Hypertension in Africa Research Team, Medical Research Council Unit for Hypertension and Cardiovascular Disease, North-West University, Potchefstroom, South Africa, <sup>9</sup>Hypertension Center STRIDE-7, National and Kapodistrian University of Athens, School of Medicine, Third Department of Medicine, Sotiria Hospital, Athens, Greece, <sup>10</sup>Division of Prevention and Primary Care, New York City Department of Health and Mental Hygiene, New York, USA, <sup>11</sup>Department of Medicine, University of Alberta, Edmonton, Alberta, Canada

### **P28 A commonly used single-item physical activity question fails to discriminate expected blood pressure-related cardiovascular risk in a general community sample**

Schultz, Martin; Picone, Dean; Fonseca, Ricardo; Sharman, James

*Menzies Institute for Medical Research, University of Tasmania, Hobart, Australia*

### **P30 Interplay of genetic and environmental factors determining carotid and femoral intima-media thickness and plaques**

Tarnoki, Adam Domonkos; Debreceni, Rebeka; Janositz, Greta; Gyulay, Kata; Zsofia, Jokkel; Berczi, Viktor; Szabo, Helga; Hernyes, Anita; Tarnoki, David Laszlo

*Department of Radiology, Semmelweis University, Budapest, Hungary*

### **P31 Aldosterone and cardiovascular function in a young cohort: The African-PREDICT study**

van Rooyen, Johannes<sup>1</sup>; Gafane-Matemané, Lebo<sup>1</sup>; Huisman, Hugo<sup>1</sup>; Mels, Carina<sup>2</sup>; Schutte, Alta<sup>2</sup>

<sup>1</sup>North West University, Potchefstroom, South Africa, <sup>2</sup>North West University, Potchefstroom, South Africa

### **P32 Nationwide comprehensive health protection screening program in Hungary 2010-2020-2030**

Barna, István<sup>1</sup>; Kékes, Ede<sup>2</sup>; Dankovics, Gergely<sup>3</sup>; Daiki, Tennó<sup>4</sup>

<sup>1</sup>Semmelweis University, Faculty of Medicine. I. Dept. of Internal Medicine, Hungary; <sup>2</sup>Cardiology, University of Pécs Medical School, Pécs, Hungary; <sup>3</sup>MAESZ Program, Szentendre, Hungary; <sup>4</sup>Eötvös Loránd University, Budapest, Hungary

### **P34 24-hour ambulatory brachial versus aortic systolic blood pressure: relationship with left ventricular mass significantly differs. Pooled results from the International 24 hour Aortic Blood Pressure Consortium (i24ABC)**

Wassertheurer, Siegfried<sup>1</sup>; Protogerou, Athanase<sup>2</sup>; Sharman, James<sup>3</sup>; Rodilla Sala, Enrique<sup>4</sup>; Jankowski, Piotr<sup>5</sup>; Muiesan, Maria Lorenza<sup>6</sup>; Giannattasio, Cristina<sup>7</sup>; Hametner, Bernhard<sup>8</sup>; Pascual, Jose Maria<sup>4</sup>; Zweiker, Robert<sup>9</sup>; Argyris, Antonio<sup>2</sup>; Paini, Anna<sup>6</sup>; Wilkinson, Ian<sup>10</sup>; Czarnecka, Danuta<sup>5</sup>; Salvetti, Massimo<sup>6</sup>; Maloberti, Alessandro<sup>7</sup>; McEniery, Carmel<sup>10</sup>; Li, Yan<sup>11</sup>; Nemcsik, Janos<sup>12</sup>; Pucci, Giacomo<sup>13</sup>; Ablasser, Cornelia<sup>9</sup>; Blacher, Jacques<sup>14</sup>; Valleé, Alexandre<sup>14</sup>; de la Sierra, Alejandro<sup>15</sup>; Zhang, Yi<sup>16</sup>; Ji, Hongwei<sup>16</sup>; McDonnell, Barry<sup>17</sup>; Mota, Marco<sup>18</sup>; Paiva, Annelise<sup>18</sup>; Brandao, Andrea<sup>18</sup>; Weber, Thomas<sup>19</sup>

<sup>1</sup>AIT Austrian Institute of Technology, Vienna, Austria, <sup>2</sup>Cardiovascular Prevention & Research Unit, Department of Pathophysiology, Medical School, Laiko Hospital, National and Kapodistrian University of Athens, Greece, <sup>3</sup>Menzies Institute for Medical Research, College of Health and Medicine, University of Tasmania, Australia., <sup>4</sup>Department of Medicina Interna, Hospital de Sagunto, Universidad Cardenal Herrera-CEU, CEU Universities, Valencia, Spain, <sup>5</sup>1st Department of Cardiology, Interventional Electrocardiology and Hypertension, Jagiellonian University, Medical College, Krakow, Poland, <sup>6</sup>Department of Clinical and Experimental Sciences, University of Brescia, Italy, <sup>7</sup>Cardiology IV, 'A. De Gasperis' Department, ASTT Ospedale Niguarda Ca' Granda, School of Medicine and Surgery Department, Milano-Bicocca University, Milan, Italy, <sup>8</sup>Center for Health & Bioresources, Department of Health and Environment, Austrian Institute of Technology, Vienna, Austria, <sup>9</sup>Cardiology Department, Medical University Graz, Austria, <sup>10</sup>Division of Experimental Medicine and Immunotherapeutics, University of Cambridge, UK, <sup>11</sup>Ruijin Hospital, Shanghai Jiaotong University School of Medicine, <sup>12</sup>Semmelweis University Budapest, Hungary, <sup>13</sup>Unit of Internal Medicine, Terni University Hospital, Department of Medicine, University of Perugia, Italy, <sup>14</sup>Diagnosis and Therapeutic Center, Hotel Dieu; AP-HP; University Paris Descartes, France, <sup>15</sup>Hospital Mutua Terrassa, University of Barcelona, Spain, <sup>16</sup>Department of Cardiology, Shanghai Tenth People's Hospital, Tongji University School of Medicine, China, <sup>17</sup>Cardiff Metropolitan University, UK, <sup>18</sup>Centro Universitário Cesmac / Hospital do Coração de Alagoas, Maceió Brazil, <sup>19</sup>Klinikum Wels-Grieskirchen, Kardiologie, Wels, Austria

### **P35 Education level may modify the association between cardiac index and cognitive function among elders with normal ejection function**

Hao-Min Cheng<sup>1,2</sup>, Shao-Yuan Chuang<sup>3</sup>, Yu-Ting Ko, Chao-Feng Liao<sup>1</sup>, Wen-Harn Pan<sup>4</sup>, Wen-Ling Liu<sup>3</sup>, Ms, Chen-Ying Hung<sup>5</sup>, Chen-Huan Chen<sup>2,3</sup>

<sup>1</sup>Faculty of Medicine, National Yang-Ming University School of Medicine, Taipei, Taiwan, R.O.C.

<sup>2</sup>Department of Medical Education, Taipei Veterans General Hospital, Taipei, Taiwan, R.O.C.

<sup>3</sup>Public Health Sciences Institute, National Health Research Institutes, Miaoli, Taiwan, R.O.C.

<sup>4</sup>Institutes of Biomedical Sciences, Academia Sinica, Taipei, Taiwan, R.O.C., <sup>5</sup>Taipei Veterans Hospital, Hsinchu Branch, Hsinchu, Taiwan, R.O.C.

## **POSTER SESSION I – HYPERTENSION**

### **P36 Leukocyte telomere length is inversely associated with wave reflection in 566 normotensive and never-treated hypertensive subjects**

Pörsti, Ilkka<sup>1,2</sup>; Honkonen, Milja<sup>1</sup>; Vääräniemi, Kati<sup>1</sup>; Saijonmaa, Outi<sup>3</sup>; Tikkakoski, Antti<sup>1</sup>; Koskela, Jenni<sup>1,2</sup>; Eräranta, Arttu<sup>1</sup>; Kähönen, Mika<sup>1</sup>; Mustonen, Jukka<sup>1</sup>; Fyhrquist, Frej<sup>3</sup>

<sup>1</sup>Faculty of Medicine and Health Technology, Tampere University, Tampere, Finland, <sup>2</sup>Clinic of Internal Medicine, Tampere University Hospital, Tampere, Finland, <sup>3</sup>Minerva Institute for Medical Research, Biomedicum U2 Helsinki, 00290 Helsinki, Finland

### **P37 Increased pressure dependency of pulse wave velocity with age**

Boguslavskiy, Andrii<sup>1</sup>; Gu, Haotian<sup>2</sup>; Fang, Lingyun<sup>3</sup>; Cobaco, Ana Rita Cabrito<sup>4</sup>; Chowienczyk, Philip<sup>2</sup>  
<sup>1</sup>Guy's and St Thomas' NHS Foundation Trust, <sup>2</sup>British Heart Foundation Centre, King's College London, London, UK, <sup>3</sup>Department of Ultrasound, Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, China., <sup>4</sup>King's College Hospital NHS Foundation Trust, London, UK

### **P38 Association of daytime augmentation index with brain-derived neurotrophic factor in untreated hypertensive patients**

Nemcsik, János<sup>1</sup>; Batta, Dóra<sup>1</sup>; Kőrösi, Beáta<sup>1</sup>; Nemcsik-Bencze, Zsófia<sup>2</sup>; László, Andrea<sup>3</sup>; Lénárt, Lilla<sup>4</sup>; Fekete, Andrea  
<sup>1</sup>Semmelweis University, Department of Family Medicine, Budapest, Hungary, <sup>2</sup>Semmelweis University, Magnetic Resonance Research Center, Budapest, Hungary, <sup>3</sup>First German Hospital for Traditional Chinese Medicine, Bad Kötzting, Germany, <sup>4</sup>MTA-SE "Lendület" Diabetes Research Group Budapest, Budapest, Hungary

### **P40 Arteriovenous fistula, blood pressure and arterial reservoir-wave analysis: Lessons from end-stage renal disease**

Paré, Mathilde<sup>1,2</sup>; Goupil, Rémi<sup>3</sup>; Fortier, Catherine<sup>4,5</sup>; Mac-Way, Fabrice<sup>5,4</sup>; Marquis, Karine<sup>5</sup>; Hametner, Bernhard<sup>6</sup>; Wassertheurer, Siegfried<sup>6</sup>; Schultz, Martin<sup>7</sup>; E. Sharman, James<sup>7</sup>; Agharazii, Mohsen<sup>2,1</sup>  
<sup>1</sup>Division of Nephrology Faculty of Medicine Université Laval, Québec, Canada, <sup>2</sup>CHU de Québec Research Center L'Hôtel-Dieu de Québec, Québec, Canada, <sup>3</sup>Hôpital du Sacré-Cœur de Montréal, Montréal, Canada, <sup>4</sup>Division of Nephrology, Faculty of Medicine, Université Laval, Québec, QC, Canada, <sup>5</sup>CHU de Québec Research Center, L'Hôtel-Dieu de Québec Hospital, Québec, QC, Canada, <sup>6</sup>Center for Health & Bioresources, AIT Austrian Institute of Technology, Vienna, Austria, <sup>7</sup>Menzies Institute for Medical Research, University of Tasmania, Hobart, Australia

### **P41 24h Arterial stiffness measurement on healthy and COPD patients**

R. M. Böcskei<sup>1,4</sup>, B. Benczúr<sup>2</sup>, A. Bikov<sup>3</sup>, Cs. Böcskei<sup>1</sup>, A. Bohács<sup>3</sup>, R. Husznai<sup>4</sup>, A. Cziráki<sup>4</sup>  
<sup>1</sup>Szt. Borbála County Hospital, Tatabánya, Hungary, <sup>2</sup>Balassa Janos County Hospital, Szekszárd, Hungary, <sup>3</sup>Semmelweis University, Department of Pulmonology, Budapest, Hungary, <sup>4</sup>Heart Institute University of Pécs-Pécs, Hungary

### **P42 Correlation between neck circumference and pulse wave velocity in a population based study in Salvador-Brazil, preliminary results**

Bessa, Larissa; Cunha, Roberta; Magalhães, Lucélia; da Silva, Diorlene; Filho, Antônio; Lima, Rodrigo; Vascon, Grupo  
*Faculdade de Tecnologia e Ciências (FTC), Salvador, Brazil*

### **P43 The association of irritable affective temperament with 24-hour brachial and central blood pressure and hemodynamic parameters in untreated hypertensive men**

Kőrösi, Beáta<sup>1</sup>; Batta, Dóra<sup>2</sup>; Vecsey-Nagy<sup>2</sup>, Milan<sup>3</sup>; Gonda, Xenia<sup>4</sup>; Rhimer, Zoltán<sup>4</sup>; Nemcsik-Bencze, Zsófia<sup>5</sup>; László, Andrea<sup>6</sup>; Nemcsik, János<sup>7</sup>  
<sup>1</sup>Semmelweis University, Budapest, Hungary, <sup>2</sup>Department of Family Medicine, Semmelweis University, Budapest, Hungary, <sup>3</sup>MTA-SE Cardiovascular Imaging Research Group, Semmelweis University, Budapest, Hungary, <sup>4</sup>Department of Psychiatry and Psychotherapy, Semmelweis University, Budapest, Hungary, <sup>5</sup>Magnetic Resonance Research Center, Semmelweis University, Budapest, Hungary, <sup>6</sup>First German Hospital for Traditional Chinese Medicine, Bad Kötzting, Germany, <sup>7</sup>Health Service of Zugló (ZESZ), Budapest, Hungary

**P44 Spurious systolic hypertension or a defined arterial stiffness phenotype**

Forcada, Pedro<sup>1,2</sup>; Sangiovanni, Miguel<sup>1</sup>; Pampinella, Wanda<sup>1</sup>; Montaña, Oscar<sup>1</sup>

<sup>1</sup>*dim Prevencion Cardiovascular Buenos Aires, Argentina, <sup>2</sup>Cardioarenales, Buenos Aires, Argentina*

**P45 Comparison of systemic and regional vascular parameters using new ultrasound techniques: are they clinically useful?**

Forcada, Pedro<sup>1,2</sup>; Sangiovanni, Miguel<sup>1</sup>; Pampinella, Wanda<sup>1</sup>; Montaña, Oscar<sup>1</sup>

<sup>1</sup>*dim Prevencion Cardiovascular - Buenos Aires - Argentina, <sup>2</sup>Cardioarenales - Buenos Aires – Argentina*

**P46 Haemodynamics determinants of central pressure during systole**

Vennin, Samuel; Li, Ye; Mariscal-Harana, Jorge; Gu, Haotian; Fok, Henry; Alastruey, Jordi; Chowienczyk, Phil

*King's College London, UK*

**P47 Hypertension prevalence in health sciences students of the University of Guadalajara**

Galan Ruiz, Claudia Yvette; Cardona Müller, David; Cardona Muñoz, Ernesto Germán; Totsuka Sutto, Sylvia Elena; Illescas Vidrio, Brandon Giovany; Grover Páez, Fernando; Ramos Becerra, Carlos Gerardo  
*Universidad De Guadalajara, Centro Universitario de Ciencias de la Salud, Guadalajara, Mexico*

## POSTER SESSION I - INTERVENTIONS

**P48 Effects of remote ischaemic preconditioning on haemodynamic and arterial stiffness parameters in patients undergoing lower limb angiographic procedure**

Kuusik, Karl; Kepler, Teele; Zilmer, Mihkel; Eha, Jaan; Vähi, Mare; Paapstel, Kaido; Kals, Jaak  
*University of Tartu, Tartu, Estonia*

**P49 Experimental flow visualization of a flow diverting stent in a popliteal aneurysm**

van de Velde, Lennart<sup>1,2,3</sup>; Reijnen, Michel<sup>4,5</sup>; Versluis, Michel<sup>6</sup>; Tessarek, Joerg<sup>7</sup>; Groot Jebbink, Erik<sup>5,4</sup>  
<sup>1</sup>*University of Twente, Enschede, The Netherlands, <sup>2</sup>Amsterdam UMC, location AMC, Amsterdam, The Netherlands, <sup>3</sup>Rijnstate Hospital, Arnhem, The Netherlands, <sup>4</sup>Department of Surgery, Rijnstate Hospital, Arnhem, The Netherlands, <sup>5</sup>M3i Multi-Modality Medical Imaging, TechMed Centre, University of Twente, Enschede, The Netherlands, <sup>6</sup>Physics of Fluids, TechMed Centre, University of Twente, Enschede, The Netherlands, <sup>7</sup>Department of Vascular Surgery, Bonifatius Hospital, Lingen, Germany*

**P50 The administration of losartan / amlodipine in fixed combination versus losartan improves the hemodynamic and arterial stiffness parameters in patients with systemic hypertension grade 1 and 2**

Jimenez, Mayra; Grover, Fernando; Barocio, Marycruz; Cardona, Ernesto; Quezada, Patricia; Trujillo, Jhonatan; Cardona, David; Ramos, Carlos  
*Department of Physiology, Arterial Stiffness Laboratory, Experimental Therapeutic and Clinic Institute, Health Sciences University Center, University of Guadalajara, Guadalajara, Mexico*

**P51 Effects of Pulsatile Exercise-Induced Shear Stress on eNOS, SOD, VCAM-1, and ICAM-1 mRNA Expression of Human Carotid Artery Endothelial Cells**

Morales-Acuna, Francisco<sup>1</sup>; Gurovich, Alvaro  
*The University of Texas at El Paso, El Paso, USA*

**P52 The long-term effects of transcatheter aortic valve implantation on aortic stiffness**

Gardikioti, Vasiliki<sup>1</sup>; Terentes-Printzios, Dimitrios<sup>1</sup>; Vlachopoulos, Charalambos<sup>1</sup>; Toutouzas, Konstantinos<sup>1</sup>; Christoforatu, Evangelia<sup>1</sup>; Xanthopoulou, Maria<sup>1</sup>; Benetos, Georgios<sup>1</sup>; Latsios, Georgios<sup>1</sup>; Siasos, Gerasimos<sup>1</sup>; Mpei, Evangelia<sup>1</sup>; Vavuranakis, Manolis<sup>1</sup>; Tousoulis, Dimitrios<sup>1</sup>  
<sup>1</sup>*First Department Of Cardiology, Hippokration General Hospital, Athens, Greece*



**P53 More than 2-year follow-up of resistant hypertensive patients with neurovascular decompression of the brain stem on the left side**

Fejes, Imola<sup>1</sup>; Vörös, Erika<sup>2</sup>; Barzó, Pál<sup>3</sup>; Bajcsi, Dóra<sup>1</sup>; Letoha, Annamária<sup>1</sup>; Sonkodi, Sándor<sup>1</sup>; Ábrahám, György<sup>1</sup>; Légrády, Péter<sup>1</sup>

<sup>1</sup>1st Department of Medicine, University of Szeged, Szeged, Hungary, <sup>2</sup>Radiology Department, University of Szeged, Szeged, Hungary, <sup>3</sup>Department of Neurosurgery, University of Szeged, Szeged, Hungary

**P54 Age-specific, pressure-independent acute changes in carotid-femoral pulse wave velocity during head-up tilt**

Pucci, Giacomo<sup>1,2</sup>; Avolio, Alberto<sup>3</sup>; Spronck, Bart<sup>4,5</sup>; Vaudo, Gaetano<sup>6</sup>; Anastasio, Fabio<sup>7</sup>; Van den Meiracker A.H, Anton H.<sup>2</sup>; Mattace-Raso, Francesco U.S.<sup>2</sup>

<sup>1</sup>1- Department of Medicine, University of Perugia - Unit of Internal Medicine, Terni University Hospital, Terni, Italy, <sup>2</sup>2- Department of Internal Medicine, Erasmus MC University Medical Center, Rotterdam, The Netherlands, <sup>3</sup>3- Department of Biomedical Sciences, Faculty of Medicine and Health Sciences, Macquarie University, Sydney, Australia, <sup>4</sup>4- Department of Biomedical Engineering Yale University, New Haven, CT, United States., <sup>5</sup>5- Department of Biomedical Engineering, CARIM School for Cardiovascular Diseases, Maastricht University, Maastricht, The Netherlands., <sup>6</sup>1- Department of Medicine, University of Perugia, Unit of Internal Medicine, Terni University Hospital, Terni, Italy, <sup>7</sup>6- Unit of Cardiology, ASST-VAL Hospital of Sondrio, Sondrio, Italy

**P55 Remote ischaemic preconditioning reduces cardiac biomarkers during vascular surgery**

Kepler, Teele<sup>1</sup>; Kuusik, Karl<sup>1</sup>; Lepner, Urmas<sup>1,2</sup>; Starkopf, Joel<sup>1,2</sup>; Zilmer, Mihkel<sup>1</sup>; Eha, Jaan<sup>1,2</sup>; Paapstel, Kaido<sup>2</sup>; Kals, Jaak<sup>1,2</sup>

<sup>1</sup>University of Tartu, Tartu, Estonia, <sup>2</sup>Tartu University Hospital, Tartu, Estonia

**P56 Renal endovascular interventions in Szeged Nephrology-Hypertension Center between 2007-2016**

Légrády, Péter<sup>1</sup>; Nádasdi, Bernadett<sup>1</sup>; Letoha, Annamária<sup>1</sup>; Gyói, Alexandra<sup>1</sup>; Bajcsi, Dóra<sup>1</sup>; Constantinou, Kypros<sup>1</sup>; Fejes, Imola<sup>1</sup>; Nagy, Endre<sup>2</sup>; Szakál, Tibor<sup>2</sup>; Vörös, Erika<sup>2</sup>; Sonkodi, Sándor<sup>1</sup>; Ábrahám, György<sup>1</sup>

<sup>1</sup>1st Department of Medicine, University of Szeged, Szeged, Hungary, <sup>2</sup>Radiology Department, University of Szeged, Szeged, Hungary

## **POSTER SESSION I – MODELS, METHODOLOGIES AND IMAGING TECHNOLOGIES**

**P57 In patients with chronic descending aorta dissection the maximum systolic flow deceleration rate in the false lumen is associated with aortic dilatation: a 4D-flow MRI study**

Guala, Andrea<sup>1</sup>; Ruiz-Muñoz, Aroa<sup>1</sup>; Duz-Santoy, Lydia<sup>1</sup>; Teixido-Tura, Gisela<sup>2</sup>; Granato, Chiara<sup>2</sup>; Sao-Aviles, Augusto<sup>1</sup>; La Mura, Lucia<sup>2</sup>; Lopez-Sainz, Angela<sup>2</sup>; Servato, Maria Luz<sup>2</sup>; Evangelista, Arturo<sup>1</sup>; Ferreira, Ignacio<sup>2</sup>; Rodriguez-Palomares, Jose<sup>2</sup>

<sup>1</sup>Vall d'Hebron Institute of Research, Barcelona, Spain, <sup>2</sup>Department of Cardiology, Vall d'hebron Hospital, Barcelona, Spain

**P58 Structured exercise training is associated with better post occlusive reactive hyperaemia in skeletal muscle measured using near infrared spectroscopy (NIRS)**

Rao, Chirag<sup>1</sup>; Jones, Siana<sup>1</sup>; Ezzi, Khadija<sup>1</sup>; Hughes, Alun<sup>1</sup>

<sup>1</sup>UCL Institute of Cardiovascular Science, London, United Kingdom

**P59 Marked differences in cerebral haemodynamics obtained with transcranial Doppler vs. 2-D angle-corrected ultrasound**

Brown, Christopher; Al Shezawi, Mahfoudha; Watkeys, Laura; Munnery, Maggie; Pugh, Christopher; Stöhr, Eric<sup>1</sup>; McDonnell, Barry  
*Cardiff Metropolitan University, Cardiff, UK*

**P60 Invasive validation of antares, a new algorithm to calculate central blood pressure from oscillometric upper arm pulse waves**

Doerr, Marcus<sup>1,2</sup>; Richter, Stefan<sup>3</sup>; Eckert, Siegfried<sup>4</sup>; Ohlow, Marc-Alexander<sup>3</sup>; Hammer, Fabian<sup>1</sup>; Hummel, Astrid<sup>1</sup>; Dornberger, Vivien<sup>1</sup>; Genzel, Elisabeth<sup>1</sup>; Baulmann, Johannes<sup>5,6</sup>  
<sup>1</sup>*Department of Internal Medicine B, University Medicine Greifswald, Germany,* <sup>2</sup>*German Centre for Cardiovascular Research (DZHK), partner site Greifswald, Germany,* <sup>3</sup>*Zentralklinik Bad Berka GmbH, Herzzentrum, Department of Cardiology, Germany,* <sup>4</sup>*Klinik für Allgemeine und Interventionelle Kardiologie/Angiologie, Universitätsklinik der Ruhr-Universität Bochum, Bad Oeynhausen, Germany,* <sup>5</sup>*Medizinische Universität Graz, Austria,* <sup>6</sup>*European Prevention Center, Düsseldorf, Germany*

**P61 Comparison of two oscillometric technics for measuring pulse wave velocity**

Benczúr, Béla<sup>1</sup>; Bocskei, Renata<sup>2</sup>; Cziraki, Attila<sup>2</sup>  
<sup>1</sup>*Balassa Janos County Hospital, Ist Dept. of Internal Medicine (Cardiology/Nephrology), Szekszard, Hungary,* <sup>2</sup>*Heart Institute, University of Pecs, Pecs, Hungary*

**P62 Estimation of wave intensity in humans using only pressure waveforms and reservoir analysis**

Hughes, Alun<sup>1,2</sup>; Parker, Kim<sup>3</sup>; Chaturvedi, Nish<sup>1,2</sup>; Park, Chloe<sup>1</sup>  
<sup>1</sup>*Department of Population Science & Experimental Medicine, Institute of Cardiovascular Science, UCL, London, UK,* <sup>2</sup>*MRC Unit for Lifelong Health and Aging@UCL, London, UK,* <sup>3</sup>*Department of Bioengineering, Imperial College London, UK*

**P63 Accuracy (validation) of central blood pressure measurement using the Sphygmocor Xcel-cuff device**

Schultz, Martin<sup>1</sup>; Picone, Dean<sup>1</sup>; Armstrong, Matthew<sup>1</sup>; Black, Andrew<sup>2</sup>; Dwyer, Nathan<sup>2</sup>; Roberts-Thomson, Philip<sup>2</sup>; Sharman, James<sup>1</sup>  
<sup>1</sup>*Menzies Institute for Medical Research, University of Tasmania, Hobart, Australia,* <sup>2</sup>*Royal Hobart Hospital, Hobart, Australia*

**P64 Carotid artery tracking with automated wall position resets yields robust distension waveforms in long-term ultrasonic recordings**

Beutel, Fabian<sup>1,2</sup>; Mansilla Valle, Laura<sup>1,3</sup>; Van Hoof, Chris<sup>4,2</sup>; Hermeling, Evelien<sup>1</sup>  
<sup>1</sup>*imec, Eindhoven, The Netherlands,* <sup>2</sup>*KU Leuven, Leuven, Belgium,* <sup>3</sup>*University of Vic, Vic, Catalonia,* <sup>4</sup>*imec, Leuven, Belgium*

**P65 A beat-to-beat quality indicator based on piecewise spatiotemporal estimates of carotid pulse wave velocity improves correlation with pulse pressure**

Beutel, Fabian<sup>1,2</sup>; Van Hoof, Chris<sup>2,3</sup>; Hermeling, Evelien<sup>1</sup>  
<sup>1</sup>*imec, Eindhoven, The Netherlands,* <sup>2</sup>*KU Leuven, Leuven, Belgium,* <sup>3</sup>*imec, Leuven, Belgium*

**P66 Mathematical Model of the Renal Microcirculation and Effects of Chronic Kidney Disease**

Fountoulakis, Nikolaos<sup>1</sup>; Sanchez-Cazares, Karla<sup>2</sup>; Parker, Kim<sup>2</sup>; Karalliedde, Janaka<sup>3</sup>

<sup>1</sup>King's College London, <sup>2</sup>Department of Bioengineering, Imperial College London, <sup>3</sup>Department of Vascular Biology and Inflammation, King's College London

**P67 Detecting preload reduction with machine learning on arterial waveform parameters**

van der Ster, Björn<sup>1</sup>; Wijnberge, Marije<sup>1</sup>; Huntelaar, Marthe<sup>1</sup>; de Haan, Job<sup>1</sup>; van der Sluijs, Koen<sup>1</sup>; Veelo, Denise<sup>1</sup>; Westerhof, Berend<sup>1,2,3,4</sup>

<sup>1</sup>Department of Anesthesiology, Amsterdam UMC - Locatie AMC, Anaesthesia, Amsterdam, the Netherlands, <sup>2</sup>Department of Pulmonary Medicine, Amsterdam UMC, Vrije Universiteit Amsterdam, <sup>3</sup>Amsterdam Cardiovascular Sciences, Amsterdam, Netherlands, <sup>4</sup>Department of Medical Biology, Section of Systems Physiology, Laboratory for Clinical Cardiovascular Physiology, Amsterdam UMC, University of Amsterdam, Amsterdam Cardiovascular Sciences, Amsterdam

**P68 Usefulness of an optimal cut-off in central augmentation pressure for the detection of left ventricular hypertrophy in men**

Obayashi, Masakazu<sup>1</sup>; Kobayashi, Shigeki<sup>2</sup>; Yamamoto, Hirotsuka<sup>1</sup>; Hamada, Yoriomi<sup>1</sup>; Nanno, Takumi<sup>1</sup>; Kohno, Michihiro<sup>3</sup>; Yano, Masafumi<sup>2</sup>

<sup>1</sup>Sanyo-Onoda City Hospital, Sanyo-Onoda, Japan, <sup>2</sup>Division of Cardiology, Department of Medicine and Clinical Science, Yamaguchi University Graduate School of Medicine, Ube, Japan, <sup>3</sup>Kohno Clinic, Hagi, Japan

**P69 The initial upstroke time is most strongly associated with the severity of as among brachial pulse wave parameters**

Takahashi, Masao<sup>1</sup>; Fukatani, Kyohei<sup>2</sup>; Kabutoya, Tomoyuki<sup>3</sup>; Hoshide, Satoshi<sup>3</sup>; Yoneyama, Tatsuya<sup>4</sup>; Ito, Tetsuya<sup>2</sup>; Kario, Kazuomi<sup>3</sup>

<sup>1</sup>Department of Cardiovascular Medicine, Jichi Medical University, Shimotsuke, Japan, <sup>2</sup>Academic Promotion Section, Fukuda Denshi Co., Ltd., <sup>3</sup>Jichi Medical University, Japan, <sup>4</sup>R&D Head Office, Fukuda Denshi Co., Ltd.

**P70 Effects of different vitamin D status on mechanical, pharmacological and histological characteristics of coronary arterioles in male rat model**

Sziva, Reka Eszter<sup>1</sup>; Fontanyi, Zoltan<sup>1</sup>; Pal, Eva<sup>2</sup>; Hadjadj, Leila<sup>2</sup>; Monori-Kiss, Anna<sup>2</sup>; Horvath, Eszter Maria<sup>3</sup>; Benko, Rita<sup>3</sup>; Magyar, Attila<sup>4</sup>; Heinzlmann, Andrea<sup>5</sup>; Benyo, Zoltan<sup>2</sup>; Nadasy, Gyorgy L.<sup>3</sup>; Varbiro, Szabolcs<sup>1</sup>; Bányai, Bálint

<sup>1</sup>Semmelweis University Department of Obstetrics and Gynaecology, Budapest, Hungary, <sup>2</sup>Semmelweis University Institute of Clinical Experimental Research, Budapest, Hungary, <sup>3</sup>Semmelweis University Department of Physiology, Budapest, Hungary, <sup>4</sup>Semmelweis University, Department of Anatomy, Histology and Embriology, Budapest, Hungary, <sup>5</sup>University of Veterinary Medicine Budapest, Department of Anatomy and Histology, Budapest, Hungary

## POSTER SESSION I – SPECIAL POPULATIONS

**P71 The interrelationship between the alteration of arterial markers and left ventricular diastolic dysfunction in metabolic syndrome subjects**

Solovjova, Svetlana; Ryliskyte, Ligita; Celutkiene, Jelena; Badariene, Jolita; Laucevicius, Aleksandras Vilnius University Hospital Santaros Clinics, Vilnius, Lithuania

**P72 Vascular aging prediction in high cardiovascular risk cohort**

Laucyte-Cibulskiene, Agne; Ryliskyte, Ligita; Kovaite, Milda; Rimsevicius, Laurynas; Balkeviciene, Laura; Badariene, Jolita; Laucevicius, Aleksandras

*Institute of Clinical Medicine, Faculty of Medicine, Vilnius University, Vilnius, Lithuania*

**P73 The relationship between different measurements of arterial stiffness**

Szabó, Eszter; Gáspár, Krisztina; Szabó, Ildikó; Kovács, Viktória; Pál, Zsuzsanna; Simonyi, Gábor; Kolossváry, Endre; Farkas, Katalin

*Szent Imre Teaching Hospital, Budapest, Hungary*

**P74 Validation of surface distance measurement by MRI for pulse wave velocity in children**

Bárczi, Adrienn<sup>1</sup>; Dégi, Arianna<sup>1</sup>; Cseprekál, Orsolya<sup>2</sup>; Kis, Eva<sup>3</sup>; Szabó, Ádám<sup>4</sup>; Rudas, Gábor<sup>4</sup>; Reusz, George S<sup>1</sup>

*<sup>1</sup>1st Department of Pediatrics, Semmelweis University, Budapest, Hungary, <sup>2</sup>Department of Transplantation and Surgery, Semmelweis University, Budapest, Hungary, <sup>3</sup>Gottsegen György Hungarian Institute of Cardiology, Budapest, Hungary, <sup>4</sup>Semmelweis University, MR Research Center, Budapest, Hungary*

**P76 Carotid artery disease in patients with newly diagnosed, untreated familial hypercholesterolemia**

Nádró, Báborka; Kovács, Beáta; Diószegi, Ágnes; Juhász, Lilla; Páll, Dénes; Paragh, György; Harangi, Mariann

*Department of Internal Medicine, University of Debrecen Faculty of Medicine, Debrecen, Hungary*

**P77 Long-term effects of LDL apheresis on carotid arterial atherosclerosis in two severe heterozygous familial hypercholesterolemic patients**

Diószegi, Ágnes; Juhász, Lilla; Nádró, Báborka; Paragh, György; Oláh, László; Páll, Dénes; Balla, József; Harangi, Mariann

*University of Debrecen Faculty of Medicine, Debrecen, Hungary*

**P78 Endothelial dysfunction and arterial stiffness during type 2 diabetes**

Toure, Maimouna<sup>1</sup>; Hallab, Magid<sup>2</sup>; Thiam, Souleymane<sup>3</sup>; Mane, Sheikh AB<sup>1</sup>; Belem, Farid<sup>1</sup>; Samb, Abdoulaye<sup>1</sup>

*<sup>1</sup>Laboratory of Physiology Human and Functional Explorations, FMPO, UCAD, Senegal, <sup>2</sup>Clinique Bizet, 75008 Paris, France, <sup>3</sup>Laboratory of Biochemistry and Molecular Biology, OPCF, UCAD, Dakar, Senegal*

**P79 Non-invasive estimation of central pressures in abdominal aortic aneurysm patients and changes in PWV after EVAR**

Holewijn, Suzanne<sup>1</sup>; van de Velde, Lennart<sup>2,3</sup>; Vermeulen, Jenke<sup>4,3</sup>; Reijnen, Michel<sup>3,2</sup>

*<sup>1</sup>Rijnstate, Vascular Research Center, Arnhem, Netherlands, <sup>2</sup>Multimodality Medical Imaging Group, Technical Medical Centre, University of Twente, Enschede, <sup>3</sup>Rijnstate, department of Vascular Surgery, Arnhem, Netherlands, <sup>4</sup>RadboudUMC, Nijmegen, Netherlands*

**P80 Predictors of middle cerebral artery pulsatility index in Chronic Obstructive Pulmonary Disease and healthy controls; data from the ACRADe study**

Al Shezawi, Mahfoudha<sup>1,2</sup>; Munnery, Maggie<sup>2</sup>; Cockcroft, John<sup>2</sup>; Watkeys, Laura<sup>2</sup>; Stohr, Eric<sup>2</sup>; Gale, Nicola<sup>1</sup>; McDonnell, Barry<sup>2</sup>

*<sup>1</sup>Cardiff University, Cardiff, UK, <sup>2</sup>Cardiff Metropolitan University, Cardiff, UK*

**P81 Antibody to cardiotonic steroid reduces blood pressure and vascular fibrosis in preeclampsia**

Bagrov, Alexei

*Sechenov Institute of Evolutionary Physiology, St. Petersburg, Russia*

### **P82 Impaired skin microvascular function in Systemic Lupus Erythematosus**

Koletsos, Nikolaos<sup>1</sup>; Gkaliagkousi, Eugenia<sup>1</sup>; Lazaridis, Antonios<sup>1</sup>; Anyfanti, Panagiota<sup>1</sup>; Triantafyllou, Areti<sup>1</sup>; Dipla, Konstantina<sup>2</sup>; Dolgyras, Panagiotis<sup>1</sup>; Galanopoulou, Vasiliki<sup>3</sup>; Aslanidis, Spyros<sup>4</sup>; Douma, Stella<sup>1</sup>

<sup>1</sup>3rd Department of Internal Medicine, Papageorgiou Hospital, Aristotle University of Thessaloniki, Thessaloniki, Greece, <sup>2</sup>Exercise Physiology and Biochemistry Laboratory, Department of Sports Science at Serres, Aristotle University of Thessaloniki, Serres, Greece, <sup>3</sup>Rheumatology Department, Papageorgiou Hospital, Aristotle University of Thessaloniki, Thessaloniki, Greece, <sup>4</sup>Rheumatology Department-2nd Propedeutic Department of Internal Medicine, Hippokration Hospital, Aristotle University of Thessaloniki, Thessaloniki, Greece

## **POSTER SESSION II – CLINICAL ASPECTS**

### **P83 Effect of aging on the aortic reservoir and excess pressure in normal humans**

Yamakado, Tetsu; Ko, Hideyoshi

*Suzuka University of Medical Science, Suzuka City, Mie, Japan*

### **P84 Prediction of cardiovascular events and mortality by pulse wave velocity: a comparison of invasive measurements and noninvasive estimation methods**

Hametner, Bernhard<sup>1</sup>; Wassertheurer, Siegfried<sup>1</sup>; Mayer, Christopher Clemens<sup>1</sup>; Danninger, Kathrin<sup>2</sup>; Binder, Ronald<sup>2</sup>; Weber, Thomas<sup>2</sup>

<sup>1</sup>Center for Health & Bioresources, AIT Austrian Institute of Technology, Vienna, Austria, <sup>2</sup>Cardiology Department, Klinikum Wels-Grieskirchen, Wels, Austria

### **P85 Acute systemic inflammation reduces both carotid and aortic wave reflection in young healthy adults**

Schroeder, Elizabeth; Lefferts, Wesley; Hilgenkamp, Thessa; Fernhall, Bo

*University of Illinois at Chicago, Chicago, IL, United States*

### **P86 Can central blood pressure be accurately estimated in individuals with and without systolic blood pressure amplification?**

Goupil, Remi<sup>1</sup>; Kowalski, Cédric; Lamarche, Florence

*Hôpital du Sacré-Coeur de Montréal, Montreal, Canada*

### **P87 Ultra –high frequency ultrasound assessment in Vascular Ehlers Danlos Syndrome: a validation and reproducibility study**

Bruno, Rosa Maria<sup>1,2</sup>; Alexopoulou, Magdalini<sup>1</sup>; Khettab, Hakim<sup>3</sup>; Jeunemaitre, Xavier<sup>3</sup>; Boutouyrie, Pierre<sup>3</sup>

<sup>1</sup>University of Pisa, Pisa, Italy, <sup>2</sup>INSERM U970, Equipe 7, Paris, France, <sup>3</sup>APHP, Hôpital Européen Georges Pompidou, Paris, France

### **P88 Improvement in functional capacity with spironolactone masks the treatment effect on exercise blood pressure**

Moore, Myles<sup>1</sup>; Schultz, Martin<sup>1</sup>; Hare, James<sup>2</sup>; Marwick, Thomas<sup>2</sup>; Sharman, James<sup>1</sup>

<sup>1</sup>Menzies Institute for Medical Research, University of Tasmania, Hobart, Australia, <sup>2</sup>Baker Heart and Diabetes Institute & Department of Cardiology, The Alfred Hospital, Melbourne, Australia

**P89 Non-invasive Blood Pressure Measurement System Using Three-Axis Tactile Force Sensor**

Lee, Hae-Young

*Seoul National University Hospital*

**P90 Indexing left ventricular mass to body size: which method is the most appropriate in early adulthood?**

Taylor, Hannah<sup>1</sup>; Park, Chloe<sup>1</sup>; Fraser, Abigail<sup>2</sup>; Howe, Laura<sup>2</sup>; Ferreira, Dianna<sup>2</sup>; Timpson, Nic<sup>2</sup>; Lawlor, Debbie<sup>2</sup>; Davey-Smith, George<sup>2</sup>; Chaturvedi, Nishi<sup>1</sup>; Hughes, Alun<sup>1</sup>

<sup>1</sup>Cardiometabolic Phenotyping Group, University College London, London, UK, <sup>2</sup>MRC Integrative Epidemiology Unit, University of Bristol, Bristol, UK

**P92 The association of agreeableness and conscientiousness with 24-hour brachial blood pressure and hemodynamic parameters in untreated hypertensive patients**

Vecsey-Nagy, Milán<sup>1</sup>; Kőrösi, Beáta<sup>2</sup>; Batta, Dóra<sup>2</sup>; Gonda, Xénia<sup>3</sup>; Rihmer, Zoltán<sup>3</sup>; Nemcsik-Bencze, Zsófia<sup>4</sup>; László, Andrea<sup>5</sup>; Nemcsik, János<sup>6</sup>

<sup>1</sup>Semmelweis University, Budapest, Hungary, <sup>2</sup>Department of Family Medicine, Semmelweis University, Budapest, <sup>3</sup>Department of Psychiatry and Psychotherapy, Semmelweis University, Budapest, <sup>4</sup>Magnetic Resonance Research Center, Semmelweis University, Budapest, <sup>5</sup>MD Office Jula/Schindler, Nürnberg, Germany, <sup>6</sup>Department of Family Medicine, Semmelweis University, Budapest, Hungary; Health Service of Zugló (ZESZ), Budapest, Hungary

**P93 Relationship between central pressure and urinary sodium excretion in a population-based study in Salvador, Brazil, preliminary results**

de Castro, Roberta; Magalhães, Lucélia; Brustolim, Danielle; da Silva, Diorlene; Filho, Antonio; Bessa, Larissa; Vascor, Grupo

*Faculdade de Tecnologia e Ciências, Salvador, Brazil*

**P94 Relationship between central pressure and potassium urinary excretion in a population-based study in Salvador, Brazil, preliminary results**

Filho, Antonio<sup>1</sup>; Magalhães, Lucélia<sup>1</sup>; Brustolim, Danielle<sup>1</sup>; da Silva, Diorlene<sup>1</sup>; de Castro, Roberta<sup>1</sup>; Bessa, Larissa<sup>1</sup>; grupo VASCOR, VASCOR<sup>1</sup>

<sup>1</sup>Faculdade de Tecnologia e Ciências, Salvador, Brazil

## **POSTER SESSION II – EPIDEMIOLOGY, BRAIN AND OTHER**

**P96 Soluble receptor for advanced glycation end-products independently influenced individual age-dependent increase of arterial stiffness**

Gelžinský, Július

*Medical Faculty in Pilsen, Charles University, Czech Republic*

**P97 Age modifies the relationship between arterial stiffness, adiposity and blood pressure from adolescence to adulthood in men and women**

Park, Chloe<sup>1</sup>; Charakida, Marietta<sup>1</sup>; Howe, Laura<sup>2</sup>; Fraser, Abigail<sup>2</sup>; Rapala, Alicja<sup>1</sup>; Williams, Suzanne<sup>1</sup>; Jones, Siana<sup>1</sup>; Deanfield, John<sup>1</sup>; Chaturvedi, Nish<sup>1</sup>; Hughes, Alun<sup>1</sup>

<sup>1</sup>Institute of Cardiovascular Science, UCL, London, UK, <sup>2</sup>MRC Integrative Epidemiology Unit, University of Bristol, Bristol, UK

**P98 Impaired pulmonary function is associated with increased cardio-ankle vascular index in HIV patients in Ghana**

Yeboah, Kwame<sup>1</sup>; Musah, Latif<sup>1</sup>; Essel, Samuel<sup>1</sup>; Dzudzor, Bartholomew<sup>1</sup>; Cruickshank, J Kennedy<sup>2</sup>

<sup>1</sup>Medical School, University of Ghana, Ghana <sup>2</sup>Cardiovascular Medicine Group, Division of Diabetes and Nutrition, King's College and King's Health Partners, London, UK

**P99 A computerized method for assessment of baroreflex sensitivity and heart rate variability based on continuous blood pressure tracings**

Collard, Didier<sup>1</sup>; van de Velde, Lennart<sup>1</sup>; Westerhof, Berend<sup>2</sup>; Vogt, Liffert<sup>3</sup>; van den Born, Bert-Jan<sup>1</sup>  
<sup>1</sup>Amsterdam UMC, University of Amsterdam, Department of Vascular Medicine, <sup>2</sup>Amsterdam UMC, University of Amsterdam, Department of Medical Biology, <sup>3</sup>Amsterdam UMC, University of Amsterdam, Department of Nephrology

**P101 Arterial stiffness vs sarcopenia in Portuguese elderly population**

Vassilenko, Valentina<sup>1,4,5</sup>, Serrano, Andreia<sup>1,4,5</sup>, Ramalho, Beatriz<sup>1</sup>, Bonifácio, Paulo<sup>1,4,5</sup>, Coelho, Ana C.<sup>2</sup>, Pimentel-Santos, Fernando<sup>3</sup>  
<sup>1</sup>Laboratory of Instrumentation, Biomedical Engineering and Radiation Physics (LIBPHYS), NOVA School of Science and Technology - NOVA University Lisbon, 2829-516 Caparica, Portugal, <sup>2</sup>Santa Casa da Misericórdia de Almada, Portugal, <sup>3</sup>Centre for Chronic Diseases, Nova Medical School (CEDOC/FCM-UNL), Lisbon, Portugal, <sup>4</sup>NMT, S.A., Parque Tecnológico de Cantanhede, Núcleo 04, Portugal  
<sup>5</sup>Iberian Network on Central Hemodynamic and Arterial Structure, Lisbon, Portugal

**P102 Large artery stiffness is associated with lower brain pH and memory performance in middle-aged and older adults**

DuBose, Lyndsey<sup>1</sup>; Magnotta, Vincent<sup>1</sup>; Moser, David<sup>1</sup>; Mitchell, Gary<sup>2</sup>; Nuckols, Virginia<sup>1</sup>; Ward, Ryan<sup>1</sup>; Pierce, Gary<sup>1</sup>; Boles Ponto, Laura<sup>1</sup>  
<sup>1</sup>University of Iowa, Iowa City, IA, USA, <sup>2</sup>Cardiovascular Engineering, Inc. Norwood, MA, USA

**P103 Improved metabolic vasoreactivity in the brain of HM3 patients and its underlying microcirculatory mechanisms**

Stöhr, Eric J.<sup>1</sup>; Ji, Ruiping<sup>2</sup>; Akiyama, Koichi<sup>2</sup>; Castagna, Francesco<sup>2</sup>; Alberto, Pinsino<sup>2</sup>; Cockcroft, John<sup>1</sup>; Yuzefpolskaya, Melana<sup>2</sup>; Garan, Reshad<sup>2</sup>; Topkara, Veli<sup>2</sup>; Takayama, Hiroo<sup>2</sup>; Takeda, Koji<sup>2</sup>; Naka, Yoshifumi<sup>2</sup>; Colombo, Paolo<sup>2</sup>; Willey, Joshua<sup>2</sup>; McDonnell, Barry J.<sup>1</sup>  
<sup>1</sup>Cardiff Metropolitan University, Cardiff, UK, <sup>2</sup>Columbia University Irving Medical Center, New York City, USA

**P104 White coat hypertension is associated with increased small vessel disease in the brain**

Kirkham, Fran<sup>1</sup>; Drazich, E<sup>1</sup>; Vundavalli, A<sup>1</sup>; Rankin, P<sup>1</sup>; Timeyin, J<sup>1</sup>; Bunting, E<sup>1</sup>; Ali, K<sup>1,2</sup>; Rajkumar, C<sup>1,2</sup>  
<sup>1</sup>Brighton and Sussex University College Hospitals Trust, UK, <sup>2</sup>Department of Medicine, Brighton and Sussex Medical School, Brighton, UK

**P105 Photoplethysmographic signals analysis before, during, and after the Finnish sauna exposures**

Huotari, Matti  
University of Oulu, Oulu, Finland

**P106 Effect of Açai-Juçara on Central Pressure in Individuals with Overweight or Obesity**

Ortiz, Tainah<sup>1</sup>; Gorski, Fernanda<sup>2</sup>; Lehen, Tatiana<sup>3</sup>; Boll, Liliana<sup>1</sup>; Eibel, Bruna<sup>1</sup>; Lehen, Alexandre<sup>1</sup>; Barbosa, Eduardo<sup>4</sup>  
<sup>1</sup>Institute of Cardiology of Rio Grande do Sul/Foundation University of Cardiology, Porto Alegre, Brazil, <sup>2</sup>Federal University of Health Sciences of Porto Alegre (UFCSA), Porto Alegre, Brazil., <sup>3</sup>Thyroid Section, Endocrine Division, Hospital de Clínicas de Porto Alegre, Porto Alegre, Brazil, <sup>4</sup>Hypertension League, Porto Alegre, Brazil

**P107 Endothelial dysfunction associated with arterial stiffness in postmenopausal women with obesity**

Ramírez Soltero, Patricia Lizette<sup>1</sup>; García Benavides, Leonel<sup>2</sup>; Barocio Pantoja, Marycruz<sup>1</sup>; Illescas Vidrio, Brandon Giovanni<sup>1</sup>; Cardona Müller, David<sup>1</sup>; Cardona Muñoz, Ernesto Germán<sup>1</sup>; Totsuka Sutto, Sylvia Elena<sup>1</sup>  
<sup>1</sup>Department of Physiology, Arterial Stiffness Laboratory, Experimental Therapeutic and Clinic Institute, Health Sciences University Center, University of Guadalajara, Guadalajara, Mexico, <sup>2</sup>Department of Physiology, University Center Tonalá, University of Guadalajara, Guadalajara, Mexico

**P108 Relation between abdominal aorta and carotid artery responses to sympathetic stimulation using duplex ultrasound**

Jansen, Anne-Jet<sup>1,2</sup>; Vermeulen, Jenke<sup>1,3</sup>; Holewijn, Suzanne<sup>1</sup>; Thijssen, Dick<sup>3</sup>; Reijnen, Michel<sup>1,2</sup>  
<sup>1</sup>Rijnstate, Arnhem, the Netherlands, <sup>2</sup>University of Twente, Enschede, the Netherlands, <sup>3</sup>Radboudumc, Nijmegen, the Netherlands

**POSTER SESSION II – HYPERTENSION**

**P109 The influence of sex on cuff blood pressure accuracy**

Stoneman, Elif<sup>1</sup>; Picone, Dean<sup>1</sup>; Schultz, Martin<sup>1</sup>; Armstrong, Matthew<sup>1</sup>; Bos, Willem<sup>2,3</sup>; Dwyer, Nathan<sup>1,4</sup>; Lacy, Peter<sup>5</sup>; Laugesen, Esben<sup>6</sup>; Omboni, Stefano<sup>7,8</sup>; Pucci, Giacomo<sup>9</sup>; Roberts-Thomson, Philip<sup>1,4</sup>; Stouffer, George<sup>10</sup>; Takazawa, Kenji<sup>11</sup>; Weber, Thomas<sup>12</sup>; Westerhof, Berend<sup>13</sup>; Sharman, James<sup>1</sup>

<sup>1</sup>Menzies Institute for Medical Research, University of Tasmania, Hobart, Australia, <sup>2</sup>Department of Internal Medicine, Leiden University Medical Center, Leiden, The Netherlands, <sup>3</sup>St Antonius Hospital, Department of Internal Medicine, Nieuwegein, The Netherlands, <sup>4</sup>Royal Hobart Hospital, Hobart, Tasmania, <sup>5</sup>Institute of Cardiovascular Sciences University College London (UCL) and National Institute for Health Research (NIHR) UCL/UCL Hospitals Biomedical Research Centre, London, United Kingdom, <sup>6</sup>Department of Endocrinology and Internal Medicine, Aarhus University Hospital, Aarhus, Denmark, <sup>7</sup>Clinical Research Unit, Italian Institute of Telemedicine, Varese, Italy, <sup>8</sup>Scientific Research Department of Cardiology, Science and Technology Park for Biomedicine, Sechenov First Moscow State Medical University, Moscow, Russian Federation, <sup>9</sup>Unit of Internal Medicine at Terni University Hospital, Department of Medicine, University of Perugia, Perugia, Italy, <sup>10</sup>University of North Carolina, US, <sup>11</sup>Center for Health Surveillance and Preventive Medicine, Tokyo Medical University Hospital, Tokyo, Japan, <sup>12</sup>Cardiology Department, Klinikum Wels-Grieskirchen, Wels, Austria, <sup>13</sup>Department of Pulmonary Diseases, VU University Medical Center, Amsterdam, The Netherlands

**P110 Impact of cardiac pre-load on arterial stiffness in patient with essential hypertension**

Faconti, Luca; McNally, Ryan; Farukh, Bushra; Chowienczyk, Phil  
King's College London, Department of Clinical Pharmacology, London, UK

**P111 Arterial stiffness and unattended and attended BP values**

Paini, Anna; Aggiusti, Carlo; Bertacchini, Fabio; Stassaldi, Deborah; Capellini, Sara; Agabiti Rosei, Enrico; Muiesan, Maria Lorenza; Salvetti, Massimo  
ASST Spedali Civili di Brescia, University of Brescia, Italy

**P112 Influence of cuff blood pressure accuracy on identification of isolated systolic hypertension**

Picone, Dean<sup>1</sup>; Schultz, Martin<sup>1</sup>; Armstrong, Matthew<sup>1</sup>; Bos, Willem<sup>2,3</sup>; Dwyer, Nathan<sup>4,5</sup>; Lacy, Peter<sup>6</sup>; Laugesen, Esben<sup>7</sup>; Omboni, Stefano<sup>8,9</sup>; Pucci, Giacomo<sup>10</sup>; Roberts-Thomson, Philip<sup>5,1</sup>; Stouffer, George<sup>11</sup>; Takazawa, Kenji<sup>12</sup>; Weber, Thomas<sup>13</sup>; Westerhof, Berend<sup>14</sup>; Sharman, James<sup>15</sup>  
<sup>1</sup>Menzies Institute for Medical Research, College of Health and Medicine, University of Tasmania, Australia, <sup>2</sup>St Antonius Hospital, Department of Internal Medicine, Nieuwegein, The Netherlands, <sup>3</sup>Department of Internal Medicine, Leiden University Medical Center, Leiden, The Netherlands, <sup>4</sup>Menzies Institute for Medical Research, College of Health and Medicine, University of Tasmania, Hobart, Australia, <sup>5</sup>Royal Hobart Hospital, Hobart, Australia, <sup>6</sup>UCL Institute of Cardiovascular Science, <sup>7</sup>Department of Endocrinology and Internal Medicine, Aarhus University Hospital, Aarhus, Denmark, <sup>8</sup>Clinical Research Unit, Italian Institute of Telemedicine, Varese, Italy, <sup>9</sup>Scientific Research Department of Cardiology, Science and Technology Park for Biomedicine, Sechenov First Moscow State Medical University, Moscow, Russian Federation, <sup>10</sup>Unit of Internal Medicine at Terni University Hospital, Department of Medicine, University of Perugia, Perugia, Italy, <sup>11</sup>Division of Cardiology, University of North Carolina at Chapel Hill, Chapel Hill, United States, <sup>12</sup>Center for Health Surveillance and Preventive Medicine, Tokyo Medical University Hospital, Tokyo, Japan, <sup>13</sup>Cardiology Department, Klinikum Wels-



Grieskirchen, Wels, Austria, <sup>14</sup>Department of Pulmonary Diseases, VU University Medical Center, Amsterdam, The Netherlands, <sup>15</sup>Menzies Institute for Medical Research, College of Health and Medicine, University of Tasmania, Hobart, Australia

**P113 The forgotten black box of blood pressure: error in oscillometric mean arterial pressure is associated with cuff measurement inaccuracy**

Picone, Dean<sup>1</sup>; Schultz, Martin<sup>1</sup>; Armstrong, Matthew<sup>1</sup>; Dwyer, Nathan<sup>1,2</sup>; Roberts-Thomson, Philip<sup>1,2</sup>; Weber, Thomas<sup>3</sup>; Sharman, James<sup>2</sup>

<sup>1</sup>Menzies Institute for Medical Research, College of Health and Medicine, University of Tasmania, Australia, <sup>2</sup>Royal Hobart Hospital, Hobart, Australia, <sup>3</sup>Cardiology Department, Klinikum Wels-Grieskirchen, Wels, Austria

**P114 “Stiffflammation” is an essential cause of cardiovascular hospitalizations in hypertensives**

Christopoulou, Georgia; Vlachopoulos, Charalambos; Korogiannis, Lambros; Terentes-Printzios, Dimitrios; Sigala, Evangelia; Koutagiari, Iosif; Gardikioti, Vasiliki; Tousoulis, Dimitrios  
*1st Department of Cardiology, Hippokration Hospital, University of Athens, Greece*

**P115 Does post-stroke white coat hypertension/effect (WCH/E) require intensive blood pressure management?**

Kirkham, Fran<sup>1</sup>; Nuredini, GN<sup>2</sup>; Saunders, A<sup>2</sup>; Drazich, Erin<sup>1</sup>; Bunting, Eva<sup>1</sup>; Rankin, Philip<sup>1</sup>; Ali, K<sup>1,2</sup>; Okorie, M<sup>2,1</sup>; Rajkumar, Chakravarthi<sup>2,1</sup>

<sup>1</sup>Department of Elderly Care and Stroke Medicine, Brighton and Sussex University Hospitals Trust, Brighton, UK, <sup>2</sup>Department of Medicine, Brighton and Sussex Medical School, Brighton, UK

**P116 Post-stroke white coat hypertension/effect is associated with greater arterial stiffness**

Kirkham, Fran<sup>1</sup>; Saunders, A<sup>2</sup>; Nuredini, GN<sup>2</sup>; Drazich, E<sup>3</sup>; Rankin, Philip<sup>3</sup>; Bunting, E<sup>3</sup>; Ali, K<sup>3,2</sup>; Okorie, M<sup>2,3</sup>; Rajkumar, C<sup>3,2</sup>

<sup>1</sup>Brighton and Sussex University College Hospitals Trust, UK, <sup>2</sup>Department of Medicine, Brighton and Sussex Medical School, Brighton, UK, <sup>3</sup>Department of Elderly Care and Stroke Medicine, Brighton and Sussex University Hospitals Trust, Brighton, UK

**P117 Case report of a patient with extreme reverse dipping phenomenon decades after kidney transplantation**

Batta, Dóra<sup>1</sup>; Kőrösi, Beáta<sup>1</sup>; Nemcsik-Bencze, Zsófia<sup>2</sup>; Nemcsik, János<sup>3</sup>

<sup>1</sup>Department of Family Medicine, Semmelweis University, Budapest, Hungary, <sup>2</sup>Magnetic Resonance Research Center, Semmelweis University, Budapest, Hungary, <sup>3</sup>Health Service of Zugló (ZESZ), Budapest, Hungary

**P118 Arterial stiffness in patients with arterial hypertension on short term dual treatment with fimasartan/amlodipine**

Illescas Vidrio, Brandon Giovany; Cardona Müller, David; Cardona Muñoz, Ernesto Germán; Gálan Ruiz, Claudia Yvette; Ramos Becerra, Carlos Gerardo; Grover Páez, Fernando  
*Laboratorio de Mecánica Vasculard, Universidad de Guadalajara, Guadalajara, Mexico*

**P119 Carotid stiffness is strongly associated with skin microvascular dysfunction in normotensives and newly-diagnosed hypertensives**

Lazaridis, Antonios; Gkaliagkousi, Eugenia; Koletsos, Nikolaos; Gavriilaki, Eleni; Anyfanti, Panagiota; Nikolaidou, Barbara; Triantafyllou, Areti; Dipla, Konstantina; Douma, Stella  
*Aristotle University of Thessaloniki, Thessaloniki, Greece*

**P120 Early sympathovagal imbalance associates with future arrhythmic events in hypertensives**

Terentes-Printzios, Dimitrios; Vlachopoulos, Charalambos; Christopoulou, Georgia; Korogiannis, Lampros; Xydis, Panos; Gardikioti, Vasiliki; Solomou, Eirini; Ioakeimidis, Nikolaos; Georgakopoulos, Christos; Dima, Ioanna; Tousoulis, Dimitrios

*First Cardiology Department, National and Kapodistrian, University of Athens University Medical School, Hippokration Hospital, Athens, Greece*

**P121 Background of the development of carotid and femoral atherosclerotic plaques in twins**

Tarnoki, David Laszlo; Szabo, Helga; Gyulay, Kata; Jokkel, Zsofia; Debreceni, Rebeka; Janositz, Greta; Hernyes, Anita; Berczi, Viktor; Tarnoki, Adam Domonkos

*Department of Radiology, Semmelweis University, Budapest, Hungary*

## **POSTER SESSION II – MODELS, METHODOLOGIES AND IMAGING TECHNOLOGIES**

**P122 Unrealistic pulse pressures from calibrated tonometric waveforms**

Reesink, Koen<sup>1</sup>; Marais, Louise<sup>2</sup>; Boutouyrie, Pierre<sup>2</sup>

<sup>1</sup>*CARIM School of Cardiovascular Diseases, Maastricht University Medical Center, Maastricht, NL,*

<sup>2</sup>*INSERM, Paris, France*

**P123 Beyond diameters, flow hemodynamics quantified by magnetic resonance imaging to help characterizing aneurysmal aorta**

Houriez--Gombaud-Saintonge, Sophia<sup>1,2</sup>; Pascaner, Ariel<sup>3</sup>; Soulat, Gilles<sup>4</sup>; Gencer, Umit<sup>5</sup>; Diertenbeck, Thomas<sup>6</sup>; Craiem, Damian<sup>7</sup>; Bollache, Emilie<sup>6</sup>; Chenoune, Yasmina<sup>2</sup>; Mousseaux, Elie<sup>4</sup>; Kachenoura, Nadjia<sup>1</sup>

<sup>1</sup>*Laboratoire d'Imagerie Biomédicale, <sup>2</sup>ESME Research Lab, <sup>3</sup>IMETTYB - Universidad Favaloro - CONICET, Buenos Aires, Argentina, <sup>4</sup>Hopital Européen Georges Pompidou, Paris, France, <sup>5</sup>Hôpital Européen Georges Pompidou, Paris, France, <sup>6</sup>Laboratoire d'Imagerie Biomédicale, Paris, France, <sup>7</sup>IMETTYB - Universidad Favaloro - CONICET, Buenos Aires, France*

**P124 Impact of tapering on arterial blood pressure using a one-dimensional computational model**

Abdullateef, Shima<sup>1</sup>; Mariscal-Harana, Jorge<sup>2</sup>; Alastruey, Jordi<sup>2</sup>; Khir, Ashraf<sup>1</sup>

<sup>1</sup>*Biomedical Engineering Research Theme, Brunel University London, Middlesex, United Kingdom,*

<sup>2</sup>*School of Biomedical Engineering and Imaging Sciences, King's College London, London, UK*

**P125 Local pulse wave velocity in the arterial tree: site matters!**

Campos Arias, Daimé<sup>1,2</sup>; Stergiopoulos, Nikos<sup>3</sup>; Rodríguez Moliner, Tania<sup>2</sup>; Segers, Patrick<sup>1</sup>

<sup>1</sup>*BiTech-bioMMeda, Ghent University, Ghent, Belgium, <sup>2</sup>BioMec, Cujae, Havana, Cuba, <sup>3</sup>LHTC, EPFL, Lausanne, Switzerland*

**P126 Characterization of skin temperature changes in response to photobiostimulation using thermal imaging: A thermo-anatomical correlation**

Hoffer, Oshrit<sup>1</sup>; Rabin, Neta<sup>1</sup>; Gavish, Lilach<sup>2</sup>; Halak, Moshe<sup>3</sup>; Haim, Ortal<sup>1</sup>; Shayovitz, Yuval<sup>1</sup>; Shkilevich, Simon<sup>1</sup>; Gavish, Benjamin<sup>4</sup>; Zimmer, Yair<sup>1</sup>; Ovadia-Blechman, Zehava<sup>1</sup>

<sup>1</sup>*Afeka Tel-Aviv Academic College of Engineering, Tel-Aviv, Israel, <sup>2</sup>Hebrew University of Jerusalem, Jerusalem, Israel, <sup>3</sup>Department of Vascular Surgery, Sheba Medical Center, Ramat-Gan, Israel,*

<sup>4</sup>*Yazmonit Ltd., Jerusalem, Israel*

**P127 Graded cuff compression protocol to induce retrograde shear produces proportionate increment in regional arterial compliance in human peripheral artery**

Afreen, Naaz<sup>1</sup>; Chandran, Dinu<sup>1</sup>; Jaryal, Ashok<sup>1</sup>; Deepak, Kishore<sup>1</sup>; Roy, Sitikantha<sup>2</sup>

<sup>1</sup>*All India Institute of Medical Sciences, New Delhi, India, <sup>2</sup>Indian Institute of Technology, New Delhi, India*

**P128 Accuracy of age-appropriate transfer functions in modelling central arterial waveform features**

Cai, Tommy<sup>1,2</sup>; Meroni, Alice<sup>1</sup>; Qasem, Ahmad<sup>3,4</sup>; Butlin, Mark<sup>3</sup>; Ayer, Julian<sup>5,1</sup>; Celermajer, David<sup>2,1</sup>; Avolio, Alberto<sup>3</sup>; Skilton, Michael<sup>1</sup>

<sup>1</sup>University of Sydney, Sydney, Australia, <sup>2</sup>Royal Prince Alfred Hospital, Sydney, Australia, <sup>3</sup>Macquarie University, Sydney, Australia, <sup>4</sup>AtCor Medical, Sydney, Australia, <sup>5</sup>The Children's Hospital at Westmead, Sydney, Australia

**P129 Arterial stiffness in bicuspid or tricuspid aortic valve aortopathy using Magnetic Resonance Imaging: crossing the physical and hemodynamic limits?**

Pascaner, Ariel<sup>1</sup>; Houriez--Gombaud-Saintonge, Sophia<sup>2,3</sup>; Soulat, Gilles<sup>4</sup>; Gencer, Umit<sup>4</sup>; Diertenbeck, Thomas<sup>2</sup>; Chenoune, Yasmina<sup>3</sup>; Kachenoura, Nadja<sup>2</sup>; Mousseaux, Elie<sup>4</sup>; Craiem, Damian<sup>1</sup>; Bollache, Emilie<sup>2</sup>

<sup>1</sup>IMETTYB – CONICET – Universidad Favaloro, Buenos Aires, <sup>2</sup>Sorbonne Université, INSERM, CNRS, Laboratoire d'Imagerie Biomédicale, Paris, <sup>3</sup>ESME Sudria Research Lab, Paris, <sup>4</sup>Hôpital Européen Georges-Pompidou, Paris

**P130 Cardiac Resynchronization Therapy improves early ventricular contraction and reduces time to onset of relaxation**

Gu, Haotian<sup>1</sup>; Claridge, Simon<sup>2</sup>; Rinaldi, Aldo<sup>2</sup>; Chowienczyk, Phil<sup>1</sup>

<sup>1</sup>King's College London, London, UK, <sup>2</sup>St Thomas' Hospital, London, UK

**P152 Prediction of death or heart failure-related Hospitalizations by cardio-ankle vascular index (CAVI) and CAVIO**

Spronck, Bart<sup>1,2</sup>; Lee, Jonathan<sup>3,4</sup>; Oldland, Garrett<sup>3,4</sup>; Obeid, Mary Jo<sup>3</sup>; Paravathaneni, Mahati<sup>3</sup>; Gadela, Naga Vaishnavi<sup>3</sup>; Ans, Armghan<sup>3</sup>; Singh, Gurpreet<sup>3,5</sup>; Bhuva, Rushik<sup>3</sup>; Akers, Scott<sup>4</sup>; Chirinos, Julio<sup>6</sup>

<sup>1</sup>Department of Biomedical Engineering, School of Engineering and Applied Science, Yale University, New Haven, CT, USA, <sup>2</sup>Department of Biomedical Engineering, CARIM School for Cardiovascular Diseases, Maastricht University, Maastricht, The Netherlands, <sup>3</sup>Hospital of the University of Pennsylvania. Philadelphia, PA, USA.,

<sup>4</sup>Philadelphia VA Medical Center. Philadelphia, PA, USA., <sup>5</sup>Rowan University School of Osteopathic Medicine. Stratford, NJ, USA., <sup>6</sup>University of Pennsylvania Perelman School of Medicine. Philadelphia, PA. USA

**P153 Radial-finger pulse wave velocity as a measure of microvascular stiffness: feasibility and response to nitroglycerin**

Fortier, Catherine; Agharazii, Mohsen; Garneau, Charles-Antoine; Marquis, Karine  
CHU de Québec Research Center-L'Hôtel-Dieu de Québec Hospital, Québec, Canada

## POSTER SESSION II - PATHOPHYSIOLOGY

**P134 A new method for non-invasive measurement of arterial wave intensity, speed and reflection**

Rowland, Ethan; Riemer, Kai; Lichtenstein, Kevin; Tang, Mengxing; Weinberg, Peter

Department of Bioengineering, Imperial College London, UK

**P135 Assessment of novel blood pressure corrected cardio-ankle vascular index in response to acute blood pressure changes**

Mestanik, Michal<sup>1</sup>; Spronck, Bart<sup>2</sup>; Jurko Jr., Alexander<sup>3</sup>; Mestanikova, Andrea<sup>1</sup>; Jurko, Tomas<sup>4</sup>; Butlin, Mark<sup>5</sup>; Avolio, Alberto<sup>5</sup>; Bona Olexova, Lucia<sup>6</sup>; Visnovcova, Zuzana<sup>1</sup>; Sekaninova, Nikola<sup>6</sup>; Tonhajzerova, Ingrid<sup>6</sup>

<sup>1</sup>Biomedical Center Martin and Department of Physiology, Jessenius Faculty of Medicine in Martin, Comenius University in Bratislava, Martin, Slovakia, <sup>2</sup>Department of Biomedical Engineering, Yale University, New Haven, Connecticut, USA; Department of Biomedical Engineering, CARIM School for

*Cardiovascular Diseases, Maastricht University, Maastricht, the Netherlands, <sup>3</sup>Pediatric Cardiology, external workplace of Jessenius Faculty of Medicine in Martin, Comenius University in Bratislava, Martin, Slovakia, <sup>4</sup>Neonatalogic Clinic, Jessenius Faculty of Medicine in Martin, Comenius University in Bratislava, University Hospital Martin, Martin, Slovakia, <sup>5</sup>Department of Biomedical Sciences, Faculty of Medicine and Health Sciences, Macquarie University, Sydney, NSW, Australia, <sup>6</sup>Department of Physiology and Biomedical Center Martin, Jessenius Faculty of Medicine in Martin, Comenius University in Bratislava, Martin, Slovakia*

**P136 Determinants of arterial stiffness in children using population-indexed anthropometric and hemodynamic parameters**

Cai, Tommy<sup>1,2</sup>; Meroni, Alice<sup>1</sup>; Qasem, Ahmad<sup>3,4</sup>; Butlin, Mark<sup>3</sup>; Ayer, Julian<sup>5,1</sup>; Celermajer, David<sup>2,1</sup>; Avolio, Alberto<sup>3</sup>; Skilton, Michael<sup>1</sup>

<sup>1</sup>University of Sydney, Sydney, Australia, <sup>2</sup>Royal Prince Alfred Hospital, Sydney, Australia, <sup>3</sup>Macquarie University, Sydney, Australia, <sup>4</sup>AtCor Medical, Sydney, Australia, <sup>5</sup>The Children's Hospital at Westmead, Sydney, Australia

**P137 Reflections revisited: reinterpretation required**

Westerhof, Berend<sup>1,2</sup>; Westerhof, Nico<sup>1</sup>

<sup>1</sup>Department of Pulmonary Medicine, Amsterdam UMC, Vrije Universiteit Amsterdam, Amsterdam Cardiovascular Sciences, Amsterdam, Netherlands, <sup>2</sup>Department of Medical Biology, Section of Systems Physiology, Laboratory for Clinical Cardiovascular Physiology, Amsterdam UMC, University of Amsterdam, Amsterdam Cardiovascular Sciences, Amsterdam, Netherlands

**P138 Modelling and simulation of pressure re-reflections at the aortic valve using difference equations**

Hametner, Bernhard<sup>1</sup>; Kastinger, Hannah<sup>2</sup>; Wassertheurer, Siegfried<sup>1</sup>

<sup>1</sup>Center for Health & Bioresources, AIT Austrian Institute of Technology, Vienna, Austria, <sup>2</sup>Institute for Analysis and Scientific Computing, Vienna University of Technology, Vienna, Austria

**P154 Effect of vitamin D deficiency on insulin induced vasodilatation and receptor expression in rat model of polycystic ovary syndrome**

Bányai, Bálint<sup>1</sup>; Rita Benko<sup>2</sup>; Róbert Tarszabó<sup>2</sup>; Krisztina Lajtai<sup>2</sup>; Eszter Mária Horváth<sup>2</sup>; Szabolcs Várbíró<sup>2</sup>

<sup>1</sup>Semmelweis University Department of Physiology, Budapest, Hungary, <sup>2</sup>Semmelweis University Department of Obstetrics & Gynaecology, Budapest, Hungary

## **POSTER SESSION II – SPECIAL POPULATIONS**

**P139 Does early life programming influence arterial stiffness and central hemodynamics in adulthood? Could birth cohort effects be of importance?**

Nilsson, Peter; Sperling, Johannes

*Lund University, Dept. Clinical Sciences, Skane Univesrity Hospital, Malmo, Sweden*

**P141 Long-term effects of LDL apheresis on vascular complications in five severe heterozygous familial hypercholesterolemic patients**

Kovács, Beáta; Diószegi, Ágnes; Juhász, Lilla; Nádró, Báborka; Paragh, György; Páll, Dénes; Balla, József; Harangi, Mariann<sup>2</sup>

*Department of Internal Medicine, University of Debrecen Faculty of Medicine, Debrecen, Hungary*

**P142 Androgen receptor reduced sensitivity is associated with cardiovascular mortality in men with type 2 diabetes - A 14-year follow up study**

Heald, Adrian<sup>1,2</sup>; Yadegarfar, Ghasem<sup>2,3</sup>; Livingston, Mark<sup>4</sup>; Fachim, Helene<sup>2,1</sup>; Narayanan, Ram Prakash<sup>2,5</sup>; Lunt, Mark<sup>6</sup>; Siddals, Kirk<sup>6</sup>; Cortes, Gabriela<sup>7</sup>; Gibson, Martin<sup>2,1</sup>; Donn, Rachele<sup>2</sup>; Anderson,

Simon<sup>8</sup>; Hackett, Geoff<sup>9</sup>; Jones, Hugh<sup>10</sup>

<sup>1</sup>Salford Royal Hospital, Salford, UK, <sup>2</sup>University of Manchester, UK, <sup>3</sup>Isfahan University of Medical Sciences, Isfahan, Iran, <sup>4</sup>Walsall Manor Hospital, Walsall, UK, <sup>5</sup>University of Liverpool, UK, <sup>6</sup>University of Manchester, <sup>7</sup>High Speciality Regional Hospital of Ixtapaluca, Mexico City, Mexico, <sup>8</sup>University of the West Indies, Barbados, <sup>9</sup>Heartlands Hospital, Birmingham, UK, <sup>10</sup>University of Sheffield, Sheffield, UK

#### **P143 Updated and revised reference values of aortic and brachial systolic blood pressure in healthy children and adolescents**

Hidvégi, Erzsébet Valéria<sup>1</sup>; Jakab, Andrea Emese<sup>2</sup>; Bereczki, Csaba<sup>2</sup>; Cziráki, Attila<sup>1</sup>; Illyés, Miklós<sup>1</sup>

<sup>1</sup>Heart Institute, Faculty of Medicine, University of Pécs, Pécs, Hungary, <sup>2</sup>Department of Pediatrics, Albert Szent-Györgyi Medical Center, University of Szeged, Szeged, Hungary

#### **P144 Augmentation index is not a reliable measure of wave reflections in patients with severe aortic stenosis**

Pagoulidou, Stamatia<sup>1</sup>; Stergiopoulos, Nikolaos<sup>1</sup>; Biki, Vasiliki<sup>1</sup>; Rovas, Georgios<sup>1</sup>; Müller, Hajo<sup>2</sup>; Noble, Stéphane<sup>2</sup>; Adamopoulos, Dionysios<sup>2</sup>

<sup>1</sup>Ecole Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland, <sup>2</sup>Geneva University Hospitals (HUG), Geneva, Switzerland

#### **P145 Central hemodynamic response to lower body negative pressure in individuals with down syndrome**

I, Thessa<sup>1</sup>; Wee, Sang Ouk<sup>2</sup>; Grigoriadis, Georgios<sup>1</sup>; Schroeder, Elizabeth<sup>1</sup>; Baynard, Tracy<sup>1</sup>; Fernhall, Bo<sup>1</sup>

<sup>1</sup>University of Illinois at Chicago, Chicago, USA, <sup>2</sup>California State University San Bernardino, San Bernardino, CA

#### **P146 The predictive role of arterial stiffness in the development of acute kidney injury in patients undergoing surgical aortic valve replacement**

Sigala, Evangelia; Vlachopoulos, Charalambos; Triantafyllou, Konstantinos; Katsaros, Andreas; Koumallos, Nikolaos; Lozos, Vasilios; Baikoussis, Nikolaos; Kouerinis, Ilias; Giakis, Nikolaos; Michael, Demosthenous; Terentes Printzios, Dimitrios; Filis, Konstantinos; Tousoulis, Dimitrios  
*Hippokraton Hospital of Athens*

#### **P147 Association between inflammatory markers of low intention and arterial stiffness**

Brustolim, Daniele<sup>1,2,3</sup>; Magalhaes, Lucelia<sup>1,3</sup>; Oliveira Mariano, Yuri<sup>2,3</sup>; Louzada Castro, Vinicius<sup>4,3</sup>; Perrone, João Victor<sup>2</sup>; Jesus Barreto Júnior, Joilson<sup>2</sup>; Valverde, Gabriela<sup>2</sup>

<sup>1</sup>Medical School, University Center of Science and Technology, Brazil <sup>2</sup>Bahian School of Medicine and Public Health, Salvador-Bahia, Brazil, <sup>3</sup>Vascor Group, Salvador-Bahia, Brazil, <sup>4</sup>Federal University of Bahia, Salvador-Bahia, Brazil

#### **P148 The administration of green tea extract improves hemodynamic parameters, arterial stiffness and renal function in patients with diabetic nephropathy**

Barocio, Marycruz; Grover, Fernando; Jiménez, Mayra; Larios, Mariana; Quezada, Patricia; Trujillo, Jhonatan; Cardona, Ernesto; Cardona, David; Ramos, Carlos  
*University of Guadalajara, Guadalajara, Mexico*

#### **P149 The relationship between insulin resistance scores parameters and chemerin in diabetic and obese patients**

Cozma, Angela; Fodor, Adriana; Negrean, Vasile; Sampelean, Dorel; Minciuna, Ionut; Oltean, Monica; Popovici, Ionela; Coste, Sorina; Dadarlat, Alexandra; Pop, Dana; Orasan, Olga Hilda; Sitar-Taut, Adela-Viviana

*University of Medicine and Pharmacy "Iuliu Hatieganu", Cluj-Napoca, Romania*

**P150 Study of hemodynamic and macrocirculation indices between uncontrolled naïve hypertensives and well controlled diabetic patients**

Triantafyllou, Areti; Koletsos, Nick; Dipla, Konstantina; Zografou, Ioanna; Avgerinos, Xristos; Papadopoulos, Stauros; Zafeiridis, Alexandros-Savvas; Kritikou, Stella; Gkaliagkousi, Eugenia; Zafeiridis, Andreas; Douma, Stella

*Aristotle University of Thessaloniki, Greece*

**P151 Microvascular dysfunction is associated with impaired beta-cell function: The Maastricht Study**

Li, Wenjie; Houben, Alfons; Berendschot, Tos; Webers, Carroll; Kroon, Abraham; van Greevenbroek, Marleen; van der Kallen, Carla; Henry, Ronald; Sep, Simone; Dagnelie, Pieter; Schaper, Nicolaas; Eussen, Simone; Schalkwijk, Casper; Schram, Miranda; Stehouwer, Coen

*Maastricht University Medical Center+, Maastricht, The Netherlands*