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 Maria1,2; Nilsson, Peter3; Ensgrtom, Gunnar3; Wadstrom, Benjamin3;
      Empana, Jean-Philippe2; Boutouyrie, Pierre4; Laurent, Stephane4
      1University of Pisa, Pisa, Italy, 2INSERM, U970, Paris Cardiovascular Research Center –PARCC,
      Paris, France, 3Lund University, Skane University Hospital, Malmo, Sweden, 4APHP, 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1.3 Abstract withdrawn by author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, Natalie1; Gori, Tommaso1; Gündling, Anika1; Schulz, Andreas1; Prochaska, Jürgen H.1;
      Panova-Noeva, Marina1; Schmidtmann, M. Irene1; Pfeiffer, Norbert1; Beutel, Manfred1;
      Lackner, Karl J.2; Münzel, Thomas2; Wild, Philipp S1
      1University Medical Center of the Johannes Gutenberg-University Mainz, Mainz, Germany,
      2Institute 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, Rachel1; Boutouyrie, Pierre2; Perier, Marie-Cecile1; Guibout, Catherine1; van Slotten, Thomas1; Thomas, Frederique3; Danchin, Nicolas3; Sharman, James4; Laurent, Stephane1; Jouven, Xavier1; Empana, Jean-Philippe1
1Inserm U970, 2INSERM, U970, APHP, 3Investigations Préventives et cliniques, 4Menzies Institute for Medical Research

13.15 Lunch, Poster and Exhibition viewing
14.30 Special Guest Lecture
Novel imaging techniques 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 Sebbah 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
**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\(^1\); Shay, Oliver\(^3\); Liao, Catherine\(^1\); Butlin, Mark\(^1\); Avolio, Alberto\(^1\)
\(^1\)Macquarie University, Sydney, AUSTRALIA, \(^2\)AtCor/Cardiex Ltd, Sydney Australia, \(^3\)Blumio Inc, San Francisco, CA, USA

**2.2 Modest region-specific, sex-independent aortic remodeling when hypertension is superimposed on aging**
Spronck, Bart\(^1,2\); Ferruzzi, Jacopo\(^1\); Caulk, Alexander W.\(^1\); Murtada, Sae-II\(^1\); Humphrey, Jay D.\(^1,3\)
\(^1\)Yale University, New Haven, CT, USA, \(^2\)Maastricht University, Maastricht, The Netherlands, \(^3\)Yale School of Medicine, New Haven, CT, USA

**2.3 Exosomes Derived from Endothelial Progenitor Cells Modulate Flow-Induced Remodeling and Increase Vasculogeneis in Mesenteric Arteries of Mice**
Bobi, Joaquim\(^1\); Vessieres, Emilie\(^2\); Grimaud, Linda\(^2\); Sabate, Manel\(^1\); Henrion, Daniel\(^3\)
Dantas, Ana Paula\(^1\)
\(^1\)IDIBAPS, Barcelona, Spain, \(^2\)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; Khettab, Hakim; Li, Yanlu; Segers, Patrick; Baets, Roel; Reesink, Koen; Aasmul, Soren; De Melis, Mirko; Boutouyrie, Pierre
1Inserm U970 - PARCC, Paris, France, 2Ghent University, Ghent, Belgium, 3bioMMeda - Institute Biomedical Technology, Ghent University, Ghent, Belgium, 4CARIM, Maastricht University Medical Center, Maastricht, The Netherlands, 5Medtronic 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; Davies, Hannah; Nawaytou, Omar; Field, Mark; Madine, Jillian; Akhtar, Riaz
1University of Liverpool, Liverpool, UK, 2Liverpool 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; Chowienczyk, 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; Biasioli, Luca; Hann, Evan; Ramirez, Julia; Lukaschuk, Elen; Aung, Nay; Paiva, Jose; Werys, Konrad; Sanghvi, Mihir; Thomson, Ross; Rayner, Jennifer; Puchta, Henrik; Moon, Niall; Thomas, Katharine; Lee, Aaron; Piechnik, Stefan; Neubauer, Stefan; Petersen, Steffen; Munroe, Patricia
1Queen Mary University of London, London, UK, 2University 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, Sophie1; Bruno, Rosa Maria2; Shkredova, Daria3; Thompson, Andrew4; Dawson, Ellen1; Jones, Helen1; Hopkins, Nicola1; Hopman, Maria5; Bailey, Tom6; Coombes, Jeff7; Askew, Christopher8; Naylor, Louise9; Maiorana, Andrew10; Ghiadoni, Lorenzo5; Green, Daniel9; Thijssen, Dick1,5
1Liverpool John Moores University, Liverpool, United Kingdom, 2University of Pisa, Pisa, Italy, 3University of British Columbia, Kelowna, Canada, 4University of Liverpool, Liverpool, United Kingdom, 5Radboud University Medical Center, Nijmegen, the Netherlands, 6The University of Queensland, Brisbane, Australia; University of the Sunshine Coast, Sippy Downs, Australia, 7The University of Queensland, Brisbane, Australia, 8University of the Sunshine Coast, Birtinya, Australia, 9The University of Western Australia, Crawley, Australia, 10Curtin University, Perth, Australia; Fiona Stanley Hospital, Perth, Australia

3.4 Micro- and macro-vascular remodeling and cognitive function in hypertension
Gallo, Antonio1,2; Charpentier, Etienne2; Dietenbeck, Thomas2; Dufay, Antoine1; Redheuil, Alban2; Chupin, Marie2; Hanon, Olivier1; Girerd, Xavier1; Kachenoura, Nadjia2
1University Hospital Pitié-Salpêtrière, Paris, France, 2Sorbonne Universités, Paris, France, 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, Lamia1; Park, Chloe1; Tillin, Therese1; Mayet, Jamil2; Chaturvedi, Nishi1; Hughes, Alun1
1University College London (UCL), London, UK, 2Imperial College London and Imperial College Healthcare NHS Trust

3.6 Fitness, fatness and exercise blood pressure in adolescence
Huang, Zhengzheng1,2; Park, Chloe3; Chaturvedi, Nish1; Howe, Laura4; Sharman, James2; Hughes, Alun3; Schultz, Martin2
1Menzies Institute for Medical Research, Tasmania, Australia, 2University of Tasmania, Hobart, Australia, 3University College London, London, UK, 4University of Bristol, Bristol, UK

3.7 Exercise Systolic Blood Pressure Response And Incident Depressive Symptoms – The Maastricht Study
Zhou, Tan Lai1,2; Kroon, Abraham1,2; Henry, Ronald1,2; Koster, Annemarie3,4; Dagnelie, Pieter1,2; Bosma, Hans3,4; van Greevenbroek, Marleen6,2; van der Kallen, Carla4,2; Schalkwijk, Casper4,2; Wesselius, Anke6; Reesink, Koen2,4; Köhler, Sebastian6,6; Schram, Miranda1,2; Stehouwer, Coen1,2; van Sloten, Thomas1,2,7,8
1Maastricht University Medical Centre+, Maastricht, The Netherlands, 2CARIM School for Cardiovascular Diseases, Maastricht, The Netherlands, 3CAPHRI Care and Public Health Research Institute, Maastricht, the Netherlands, 4Maastricht University, Maastricht, the Netherlands, 5Alzheimer Centre Limburg, Maastricht University Medical Centre+, Maastricht, the Netherlands, 6MHeNs School for Mental Health and Neuroscience, Maastricht, the Netherlands, 7Université Paris Descartes, Paris, France, 8INSERM 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, Remi1; Lamarche, Florence1; Agharazii, Mohsen2; Madore, François1
1Hôpital du Sacré-Cœur de Montréal, Montreal, Canada, 2Hôtel-Dieu de Québec, Quebec City, Canada
4.2 Biological and vascular contributors to cerebral pulsatility and pulsatile damping
Lefferts, Wesley¹; DeBlois, Jacob²; Augustine, Jacqueline³; Keller, Allison¹; Heffernan, Kevin²
¹University of Illinois at Chicago, USA, ²Syracuse University, New York, USA ³SUNY 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, Bushra¹; McNally, Ryan¹; Webb, Andrew¹; Chowienczyk, Phil¹
¹King’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, Ye¹; Gu, Haotian¹; Sinha, Manish¹,²; Chowienczyk, Phil¹
¹King’s College London, UK, ²Evelina 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, Christian¹,²; Jung, Susanne¹; Bosch, Agnes¹; Kannenkeril, Dennis¹; Striepe, Kristina¹; Schmieder, Roland¹
¹Friedrich-Alexander-University Erlangen-Nuremberg, Erlangen, Germany, ²Paracelsus Medical School Nuremberg, Nuremberg, Germany

4.7 Prediabetes and type 2 diabetes are associated with wider retina arterioles and venules
Li, Wenjie¹; Schram, Miranda¹; Berendschot, Tos¹; Webers, Carroll¹; Kroon, Abraham¹; van der Kallen, Carla¹; Henry, Ronald¹; Koster, Annemarie¹; Dagnelie, Pieter¹; Schaper, Nicolaas³; Huang, Fan²; Dashtbozorg, Behdad²; Tan, Tao²; Zhang, Jiong²; Abbasi-Sureshjani, Samaneh³; ter Haar Romeny, Bart²; Stehouwer, Coen¹; Houben, Alfons¹
¹Maastricht University Medical Center+, Maastricht, The Netherlands, ²Eindhoven University of Technology, Eindhoven, The Netherlands

4.8 Reference values for submaximal exercise blood pressure: the EXERCise stress Test collaboration (EXERTION)
Schultz, Martin¹; Kovacevic, Ann-Marie¹; Roberts-Thomson, Philip²; Stanton, Tony³; Hamilton-Craig, Christian¹; Wahl, Sudir¹; Hare, James⁶; Selvanayagam, Joseph¹; Maiorana, Andrew⁸; Venn, Alison¹; Sharman, James³
¹Menzies Institute for Medical Research, University of Tasmania, ²Royal Hobart Hospital, Hobart, Australia, ³Sunshine Coast University Hospital, Birtinya, Australia, ⁴The Prince Charles Hospital, Brisbane, Australia, ⁵Princess Alexandra Hospital, Brisbane, Australia, ⁶The Alfred Hospital, Melbourne, Australia, ⁷Flinders University, Adelaide, Australia, ⁸Curtin 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-Bibocca

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 Jarai, Hungarian Society of Hypertension, Hungary

r 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
Karayiannis, Christopher¹; Moran, Chris¹; Beare, Richard¹; Sharman, James²; Phan, Thanh³;
Thrift, Amanda³; Wang, Wei¹; Srikanth, Velandai³
¹Peninsula Health, Melbourne, Australia, ²University of Tasmania, Tasmania, Australia, ³Monash University, Melbourne, Australia

5.2 Arterial stiffness and periodontitis: a systematic review and meta-analysis.
Darnaud, Christelle¹; Courtet, Alexandre²; Schmitt, audrey³; Carra, Clotilde⁴; Boutouyrie, Pierre⁴;
Bouchard, Philippe²
¹Paris Cardiovascular Research Center, UMR-S970, Department of Epidemiology, Paris, France, ²Rothschild 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, Shikai¹; McDonnell, Barry¹; Maki-Petaja, Kaisa¹; Cockcroft, John¹; Wilkinson, Ian¹;
McEniery, Carmel³
¹University of Cambridge, Cambridge, UK, ²Cardiff 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$^{1,2}$; Amelard, Robert$^2$; Yiu, Billy$^{1,2}$; Nahas, Hassan$^{1,2}$; Hughson, Richard$^2$; Yu, Alfred$^{1,2}$
$^1$University of Waterloo, Waterloo, Canada, $^2$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$^1$; Dietenbeck, Thomas$^1$; Soulat, Gilles$^2$; Houriez--Gombaud-Saintonge, Sophia$^1$; Bargiotas, Ioannis$^3$; De Cesare, Alain$^1$; Gencer, Umit$^2$; Giron, Alain$^1$; Redheuil, Alban$^1$; Bollache, Emilie$^1$; Lucor, Didier$^4$; Mousseaux, Elie$^2$; Kachenoura Nadjia$^1$
$^1$Sorbonne Université, INSERM, CNRS, Laboratoire d’Imagerie Biomédicale, Paris, France, $^2$Hôpital Européen Georges Pompidou, INSERM 970, Paris, France, $^3$CMLA, ENS Cachan, CNRS, Université Paris-Saclay, 94235 Cachan, France, $^4$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; Davies, Hannah; Field, Mark; Madine, Jillian; Yang, Ying; Akhtar, Riaz
University of Liverpool, Liverpool, United Kingdom, Liverpool Heart and Chest Hospital, Liverpool, United Kingdom, 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, Diogo Casal, João Goyri O’Neill and Valentina Vassilenko
Laboratory of Instrumentation, Biomedical Engineering and Radiation Physics (LIBPHYS), NOVA School of Science and Technology - NOVA University Lisbon, Portugal, Plastic and Reconstructive Surgery Dept. and Burn Unit; Centro Hospitalar de Lisboa Central, Lisbon, Portugal, Anatomy Department, Nova Medical School, NOVA University of Lisbon, Lisboa, Portugal, 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; Aresu, Maria; Spear, Jeanette; Chowienczyk, Phil; Alastruey, Jordi
King’s College London, King’s Health Partners, London, UK, Imperial College London, London, UK

**P8 O-GlcNAcylation increases constriction in common carotid artery of senescent-accelerated female mice**
Costa, Tiago J.; Silva, Josiane F.; da Silva, Renée de Nazaré O.; Barros, Paula R.; Bolsoni, Juliana; Rodrigues, Daniel; Akamine, Eliana H.; Tostes, Rita
Department of Pharmacology, Ribeirao Preto Medical School, University of Sao Paulo, Brazil, 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, Mark1; Cox, James1; Spronck, Bart2; Tan, Isabella1; Avolio, Alberto3
1Department of Biomedical Sciences, Faculty of Medicine and Health Sciences, Macquarie University, Sydney, Australia, 2School of Engineering and Applied Science, Yale University, New Haven, CT, USA, 3Macquarie 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, Alexandre1; Belozertseva, Ekaterina2; Louis, Huguette2; Li, Zhenlin3; Regnault, Veronique2; Lacolley, Patrick2
1Université de Lorraine, Nancy, France, 2Inserm U1116, Nancy, France, 3Inserm ERL 1164, Paris, France

P12 Proliferation and procoagulant activity of vascular smooth muscle cells from thoracic and abdominal aortic aneurysms
Didelot, Melusine1; LAGRANGE, Jeremy1; Michel, Jean-Baptiste2; LACOLLEY, Patrick1; REGNAULT, Veronique1
1Inserm U1116, Nancy, FRANCE, 2Inserm U1148, Paris, FRANCE

P13 Role of adipose tissue and skeletal muscle in peripheral arterial disease
Ferreira, Joana1; Cunha, Pedro2; Carneiro, Alexandre3; Cunha, Cristina3; Silva, Cristina3; Vila, Isabel3; Mesquita, Amilcar4; Cotter, Jorge4
1Hospital da Senhora da Oliveira- Guimarães, 2Hospital da Senhora da Oliveira, 3Centro Hospitalar de Trás-os-Montes e Alto Douro, 4Hospital da Senhora da Oliveira, Guimarães, Portugal

P14 The C3a-induced vasoconstriction is mediated by thromboxane A2 in mouse thoracic aorta
Kerkovits, Nóra Melinda1; Órfi, Erik2; Ruisanchez, Éva1; Szénási, Gábor2; Benyó, Zoltán1
1Institute of Clinical Experimental Research, Semmelweis University, Budapest, Hungary, 2Department 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, Igor1; Sharykin, Alexandr2; Trunina, Inna2
1Hemodynamic Laboratory Ltd, Nyzhny Novgorod, Russia, 2Pirogov Russian National Research Medical University, Moscow, Russia

P16 Assessment of plaque vulnerability using a novel technique: multi-spectral PhotoAcoustic Imaging (CVENT-PAI)
Imaizumi, Yuki1; Obeid, Hasan2; Julia, Pierre2; Calvet, David3; Boutouyrie, Pierre2
1Université Paris Descartes, Paris, France, 2Université Paris Descartes and Hôpital Européen Georges Pompidou, Paris, France, 3Hôpital Sainte - Anne, Paris, France
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

Vascular Aging Index of the Finger Photoplethysmogram: A validation study with vascular stiffness, mental stress, and day-to-day variability
Tarumi, Takashi; Yamabe, Takayuki; Sugawara, Jun
1National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan, 2University of Tsukuba, Tsukuba, Japan

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

Spontaneous Recanalization of the Internal Carotid Artery
Varnai, Blanka; Simonyi, Gábor; Rapcsányi, Andrea; Finta, Ervin
Szent Imre Hospital, Budapest, Hungary

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

Central and peripheral contributions to submaximal exercise performance in older adults in the Southall And Brent REvisited (SABRE) study
Jones, Siana; Schultz, Martin; Tillin, Therese; Williams, Suzanne; Chaturvedi, Nishi; Hughes, Alun
1University College London, London, UK, 2Menzies Institute for Medical Research, University of Tasmania, Australia

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-Quirós, Jonathan; Barocio-Pantoja, Marycruz; Quezada-Fernandez, Patricia; Ramos-Becerra, Carlos G.
Physiology Department, University Health Sciences Center, University of Guadalajara, Mexico

Restored physiological local carotid pulse wave velocity after bariatric surgery in obese subjects
Giudici, Alessandro; Morizzo, Carmela; Kozakova, Michaela; Losso, Lorenzo; Palombo, Carlo; Cruickshank, J Kennedy; Khir, Ashraf
1Biomedical Engineering Research Theme, Brunel University London, Uxbridge, UK, 2Department of Surgical, Medical, Molecular Pathology and Critical Area Medicine, University of Pisa, Pisa, Italy, 3Esaote SpA, Florence, Italy, 4School 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, Brooks1; Schroeder, Elizabeth1; Lefferts, Wesley1; Hilgenkamp, Thessa1; Yan, Huimin2; Horn, Gavin3; Smith, Denise4; Fernhall, Bo6
1University of Illinois at Chicago, Chicago, IL, USA, 2University of Massachusetts Boston, Boston, Massachusetts, USA, 3University of Illinois–Urbana/Champaign, Champaign, Illinois, USA, 4Skidmore College, Saratoga Springs, New York, USA

P26 Ascending aorta longitudinal strain is not altered in bicuspid aortic valve patients
Guala, Andrea1; Dux-Santoy, Lydia1; Teixido-Tura, Gisela2; Ruiz-Muñoz, Aroa1; Madrenas, Laura1; Gandara, Minerva1; Sao-Aviles, Augusto1; Valente, Filipa2; Galian-Gay, Laura2; Gutierrez, Laura2; Gonzalez-Alujas, Teresa2; Ferreira, Ignacio2; Evangelista, Arturo1; Rodriguez-Palomares, Jose2
1Vall d’Hebron Institute of Research, Barcelona, Spain, 2Department 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, Dean1; Deshpande, Rewati1; Schultz, Martin1; Fonseca, Ricardo1; Campbell, Norm1,4; Delles, Christian2; Hecht-Olsen, Michael1,7; Schute, Aletta3; Stergiou, George3; Angell, Sonia10; Padwal, Raj11; Sharman, James1
1Menzies Institute for Medical Research, College of Health and Medicine, University of Tasmania, Australia, Australia, 2Department of Medicine, Physiology and Pharmacology and Community Health Sciences, O’Brien Institute for Public Health, Calgary, Canada, 3Libin Cardiovascular Institute of Alberta, University of Calgary, Calgary, Alberta, Canada, 4Institute of Cardiovascular and Medical Sciences, University of Glasgow, Glasgow, UK, 5Department of Internal Medicine, Holbaek Hospital, Holbaek, Denmark, 6Centre for Individualized Medicine in Arterial Diseases (CIMA), Odense University Hospital, University of Southern Denmark, 7Hypertension in Africa Research Team, Medical Research Council Unit for Hypertension and Cardiovascular Disease, North-West University, Potchefstroom, South Africa, 8Hypertension Center STRIDE-7, National and Kapodistrian University of Athens, School of Medicine, Third Department of Medicine, Sotiria Hospital, Athens, Greece, 9Division of Prevention and Primary Care, New York City Department of Health and Mental Hygiene, New York, USA, 10Division of Prevention and Primary Care, New York City Department of Health and Mental Hygiene, New York, USA, 11Department 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, Johannes1; Gafane-Matemane, Lebo1; Huisman, Hugo1; Mels, Carina2; Schutte, Alta2
1North West University, Potchefstroom, South Africa, 2North West University, Potchefstroom, South Africa
P32 Nationwide comprehensive health protection screening program in Hungary 2010-2020-2030
Barna, István; Kékes, Ede; Dankovics, Gergely; Daiki, Tennō
1Semmelweis University, Faculty of Medicine, I. Dept. of Internal Medicine, Hungary; 2Cardiology, University of Pécs Medical School, Pécs, Hungary; 3MAESZ Program, Szentendre, Hungary; 4Éötvös 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, Siegfried1; Protogerou, Athanase2; Sharman, James3; Rodilla Sala, Enrique4; Jankowski, Piotr5; Muiesan, Maria Lorenzo5; Giannattasio, Cristina6; Hametner, Bernhard3; Pascual, Jose Maria4; Zweiker, Robert5; Argyris, Antonio2; Paini, Anna6; Wilkinson, Ian10; Czarnecka, Danuta5; Salvetti, Massimo6; Maloberti, Alessandro7; McEniery, Carmel10; Li, Yan11; Nemcsik, Janos12; Pucci, Giacomo13; Ablasser, Cornelia8; Blacher, Jacques14; Vallee, Alexandre14; de la Sierra, Alejandro15; Zhang, Yi15; Ji, Hongwei16; McDonnell, Barry17; Mota, Marco18; Paiva, Annelise18; Brandao, Andrea18; Weber, Thomas19
1AIT Austrian Institute of Technology, Vienna, Austria, 2Cardiovascular Prevention & Research Unit, Department of Pathophysiology, Medical School, Laiko Hospital, National and Kapodistrian University of Athens, Greece, 3Menzies Institute for Medical Research, College of Health and Medicine, University of Tasmania, Australia, 4Department of Medicina Interna, Hospital de Sagunto, Universidad Cardenal Herrera-CEU, CEU Universities, Valencia, Spain, 51st Department of Cardiology, Interventional Electrophysiology and Hypertension, Jagiellonian University, Medical College, Krakow, Poland, 6Department of Clinical and Experimental Sciences, University of Brescia, Italy, 7‘Cardiology IV, ‘A. De Gasperis’ Department, ASTT Ospedale Niguarda Ca’ Granda, School of Medicine and Surgery Department, Milano-Bicocca University, Milan, Italy, 8Center for Health & Bioresources, Department of Health and Environment, Austrian Institute of Technology, Vienna, Austria, 9Cardiology Department, Medical University Graz, Austria, 10Division of Experimental Medicine and Immunotherapeutics, University of Cambridge, UK, 11Ruijin Hospital, Shanghai Jiaotong University School of Medicine, 12Semmelweis University Budapest, Hungary, 13Unit of Internal Medicine, Terni University Hospital, Department of Medicine, University of Perugia, Italy, 14Diagnosis and Therapeutic Center, Hotel Dieu; AP-HP; University Paris Descartes, France, 15Hospital Mutua Terrassa, University of Barcelona, Spain, 16Department of Cardiology, Shanghai Tenth People’s Hospital, Tongji University School of Medicine, China, 17Cardiff Metropolitan University, UK, 18Centro Universitario Cesmac / Hospital do Coração de Alagoas, Maceió Brazil, 19Klinikum 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 Cheng1,2, Shao-Yuan Chuang3, Yu-Ting Ko, Chao-Feng Liao1, Wen-Harn Pan4, Wen-Ling Liu3, Ms, Chen-Ying Hung5, Chen-Huan Chen2,3
1Faculty of Medicine, National Yang-Ming University School of Medicine, Taipei, Taiwan, R.O.C., 2Department of Medical Education, Taipei Veterans General Hospital, Taipei, Taiwan, R.O.C., 3Public Health Sciences Institute, National Health Research Institutes, Miaoli, Taiwan, R.O.C., 4Institutes of Biomedical Sciences, Academia Sinica, Taipei, Taiwan, R.O.C., 5Taipei 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, Ilkka1,2; Honkonen, Milja1; Vääraäniemi, Kati1; Sajionmaa, Outi1; Tikkakoski, Antti1; Koskela, Jenni1,2; Eräranta, Arttu1; Kähönen, Mika1; Mustonen, Jukka1; Fyhrrqvist, Frej1
1Faculty of Medicine and Health Technology, Tampere University, Tampere, Finland, 2Clinic of Internal Medicine, Tampere University Hospital, Tampere, Finland, 3Minerva Institute for Medical Research, Biomedicum U2 Helsinki, 00290 Helsinki, Finland
P37 Increased pressure dependency of pulse wave velocity with age
Boguslavskyi, Andrii; Gu, Haotian; Fang, Lingyun; Cobaco, Ana Rita Cabrito; Chowienczyk, Philip
1Guy’s and St Thomas’ NHS Foundation Trust, 2British Heart Foundation Centre, King’s College London, London, UK, 3Department of Ultrasound, Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, China., 4King’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; Batta, Dóra; Kőrösi, Beáta; Nemcsik-Bencze, Zsófia; László, Andrea; Lénárt, Lilla; Fekete, Andrea
1Semmelweis University, Department of Family Medicine, Budapest, Hungary, 2Semmelweis University, Magnetic Resonance Research Center, Budapest, Hungary, 3First German Hospital for Traditional Chinese Medicine, Bad Kötzting, Germany, 4MTA-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; Goupil, Rémi; Fortier, Catherine; Mac-Way, Fabrice; Marquis, Karine; Hametner, Bernhard; Wassertherueun, Siegfried; Schultz, Martin; E. Sharman, James; Agharazii, Mohsen
1Division of Nephrology Faculty of Medicine Université Laval, Québec, Canada, 2CHU de Québec Research Center L’Hôtel-Dieu de Québec, Quebec, Canada, 3Hôpital du Sacré-Cœur de Montréal, Montréal, Canada, 4Division of Nephrology, Faculty of Medicine, Université Laval, Québec, QC, Canada, 5CHU de Québec Research Center, L’Hôtel-Dieu de Québec Hospital, Québec, QC, Canada, 6Center for Health & Bioresources, AIT Austrian Institute of Technology, Vienna, Austria, 7Menzies Institute for Medical Research, University of Tasmania, Hobart, Australia

P41 24h Arterial stiffness measurement on healthy and COPD patients
R. M. Böcskei, B. Benczúr, A. Bikov, Cs. Böcskei, A. Bohács, R. Husznai, A. Csiráki
1Szt. Borbála County Hospital, Tatabánya, Hungary, 2Balassa Janos County Hospital, Szekszárd, Hungary, 3Semmelweis University, Department of Pulmonology, Budapest, Hungary, 4Heart 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; Vascor, 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; Batta, Dóra; Vecsey-Nagy, Milan; Gonda, Xenia; Rhimer, Zoltán; Nemcsik-Bencze, Zsófia; László, Andrea; Nemcsik, János
1Semmelweis University, Budapest, Hungary, 2Department of Family Medicine, Semmelweis University, Budapest, Hungary, 3MTA-SE Cardiovascular Imaging Research Group, Semmelweis University, Budapest, Hungary, 4Department of Psychiatry and Psychotherapy, Semmelweis University, Budapest, Hungary, 5Magnetic Resonance Research Center, Semmelweis University, Budapest, Hungary, 6First German Hospital for Traditional Chinese Medicine, Bad Kötzting, Germany, 7Health Service of Zugló (ZESZ), Budapest, Hungary
P44 Spureous systolic hypertension or a defined arterial stiffness phenotype
Forcada, Pedro1,2; Sangiovanni, Miguel1; Pampinella, Wanda1; Montaña, Oscar1
1dim Prevencion Cardiovascular Buenos Aires, Argentina, 2Cardioarenales, Buenos Aires, Argentina

P45 Comparison of systemic and regional vascular parameters using new ultrasound techniques: are they clinically useful?
Forcada, Pedro1,2; Sangiovanni, Miguel1; Pampinella, Wanda1; Montaña, Oscar1
1dim Prevencion Cardiovascular - Buenos Aires - Argentina, 2Cardioarenales - Buenos Aires – Argentina

P46 Haemodynamics determinants of central pressure during systole
Vennin, Samuel; Li, Ye; Mariscal-Harana, Jorge; Gu, Haotian; Fok, Henry; Alaotruye, Jordi; Chowienczyk, Phil
King’s College London, UK

P47 Hypertension prevalence in health sciences students of the University of Guadalajara
Galan Ruiz, Claudia Yanette; Cardona Müller, David; Cardona Muñoz, Ernesto Germán; Totzuka 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, Lennart1,2,3; Reijnen, Michel4,5; Versluis, Michel6; Tessarek, Joerg7; Groot Jebbink, Erik5,4
1University of Twente, Enschede, The Netherlands, 2Amsterdam UMC, location AMC, Amsterdam, The Netherlands, 3Rijnstate Hospital, Arnhem, The Netherlands, 4Department of Surgery, Rijnstate Hospital, Arnhem, The Netherlands, 5M3i Multi-Modality Medical Imaging, TechMed Centre, University of Twente, Enschede, The Netherlands, 6Physics of Fluids, TechMed Centre, University of Twente, Enschede, The Netherlands, 7Department 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; 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
Gardikiot, Vasiliki1; Terentes-Printzios, Dimitrios1; Vlachopoulos, Charalambo1; Toutouzas, Konstantinos1; Christoforotou, Evangelia1; Xanthopoulou, Maria1; Benetos, Georgios2; Latsios, Georgios1; Siassas, Gerasimos1; Mpe1, Evangelia1; Vavuranakis, Manolis1; Tousoulis, Dimitrios1
1First 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, Imola¹; Vörös, Erika²; Barzó, Pál³; Bajcsi, Dóra³; Letoha, Annamária³; Sonkodi, Sándor³; Ábrahám, György¹; Légrády, Péter¹
¹1st Department of Medicine, University of Szeged, Szeged, Hungary, ²Radiology Department, University of Szeged, Szeged, Hungary, ³Department 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, Giacomo¹,²; Avolio, Alberto³; Spronck, Bart⁴,⁵; Vaudo, Gaetano⁶; Anastasio, Fabio⁷; Van den Meiracker A.H, Anton H.²; Mattace-Raso, Francesco U.S.²
¹- Department of Medicine, University of Perugia - Unit of Internal Medicine, Terni University Hospital, Terni, Italy, ²- Department of Internal Medicine, Erasmus MC University Medical Center, Rotterdam, The Netherlands, ³- Department of Biomedical Sciences, Faculty of Medicine and Health Sciences, Macquarie University, Sydney, Australia, ⁴- Department of Biomedical Engineering Yale University, New Haven, CT, United States., ⁵- Department of Biomedical Engineering, CARIM School for Cardiovascular Diseases, Maastricht University, Maastricht, The Netherlands., ⁶- Department of Medicine, University of Perugia, Unit of Internal Medicine, Terni University Hospital, Terni, Italy, ⁷- Unit of Cardiology, ASST-VAL Hospital of Sondrio, Sondrio, Italy

P55 Remote ischaemic preconditioning reduces cardiac biomarkers during vascular surgery
Kepler, Teele¹; Kuusik, Karl¹; Lepner, Urmas¹,²; Starkopf, Joel¹,²; Zilmer, Mihkel¹; Eha, Jaan¹,²; Paapstel, Kaido²; Kals, Jaak¹,²
¹University of Tartu, Tartu, Estonia, ²Tartu University Hospital, Tartu, Estonia

P56 Renal endovascular interventions in Szeged Nephrology-Hypertension Center between 2007-2016
Légrády, Péter¹; Nádasdi, Bernadett¹; Letoha, Annamária¹; Győi, Alexandra¹; Bajcsi, Dóra¹; Constantinou, Kypros¹; Fejes, Imola¹; Nagy, Endre²; Szakál, Tibor²; Vörös, Erika²; Sonkodi, Sándor¹; Ábrahám, György¹
¹1st Department of Medicine, University of Szeged, Szeged, Hungary, ²Radiology 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, Andrea¹; Ruiz-Muñoz, Aroa¹; Duz-Santoyo, Lydia¹; Teixido-Tura, Gisela²; Granato, Chiara²; Sao-Aviles, Augusto¹; La Mura, Lucia²; Lopez-Sainz, Angela²; Servato, Maria Luz²; Evangelista, Arturo¹; Ferreira, Ignacio²; Rodriguez-Palomares, Jose²
¹Vall d’Hebron Institute of Research, Barcelona, Spain, ²Department 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, Chirag¹; Jones, Siana¹; Ezzi, Khadija¹; Hughes, Alun¹
¹UCL 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, Mahfouda; Watkeys, Laura; Munnery, Maggie; Pugh, Christopher; Stöhr, Eric; 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; Richter, Stefan; Eckert, Siegfried; Ohlow, Marc-Alexander; Hammer, Fabian; Hummel, Astrid; Dornberger, Vivien; Genzel, Elisabeth; Baulmann, Johannes
1Department of Internal Medicine B, University Medicine Greifswald, Germany, 2German Centre for Cardiovascular Research (DZHK), partner site Greifswald, Germany, 3Zentralklinik Bad Berka GmbH, Herzzentrum, Department of Cardiology, Germany, 4Klinik für Allgemeine und Interventionelle Kardiologie/Angiologie, Universitätsklinik der Ruhr-Universität Bochum, Bad Oeynhausen, Germany, 5Medizinische Universität Graz, Austria, 6European Prevention Center, Düsseldorf, Germany

P61 Comparison of two oscillometric technics for measuring pulse wave velocity
Benczúr, Béla; Bocskei, Renata; Cziraki, Attila
1Balassa Janos County Hospital, Ist Dept. of Internal Medicine (Cardiology/Nephrology), Szekszard, Hungary, 2Heart Institute, University of Pecs, Pecs, Hungary

P62 Estimation of wave intensity in humans using only pressure waveforms and reservoir analysis
Hughes, Alun; Parker, Kim; Chaturvedi, Nish; Park, Chloe
1Department of Population Science & Experimental Medicine, Institute of Cardiovascular Science, UCL, London, UK, 2MRC Unit for Lifelong Health and Aging@UCL, London, UK, 3Department of Bioengineering, Imperial College London, UK

P63 Accuracy (validation) of central blood pressure measurement using the Sphygmocor Xcel-cuff device
Schultz, Martin; Picone, Dean; Armstrong, Matthew; Black, Andrew; Dwyer, Nathan; Roberts-Thomson, Philip; Sharman, James
1Menzies Institute for Medical Research, University of Tasmania, Hobart, Australia, 2Royal Hobart Hospital, Hobart, Australia

P64 Carotid artery tracking with automated wall position resets yields robust distension waveforms in long-term ultrasonic recordings
Beutel, Fabian; Mansilla Valle, Laura; Van Hoof, Chris; Hermeling, Evelien
1imec, Eindhoven, The Netherlands, 2KU Leuven, Leuven, Belgium, 3University of Vic, Vic, Catalonia, 4imec, 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; Van Hoof, Chris; Hermeling, Evelien
1imec, Eindhoven, The Netherlands, 2KU Leuven, Leuven, Belgium, 3imec, Leuven, Belgium
P66 Mathematical Model of the Renal Microcirculation and Effects of Chronic Kidney Disease
Fountoulakis, Nikolaos1; Sanchez-Cazares, Karla2; Parker, Kim2; Karalliedde, Janaka3
1King’s College London, 2Department of Bioengineering, Imperial College London, 3Department of Vascular Biology and Inflammation, King’s College London

P67 Detecting preload reduction with machine learning on arterial waveform parameters
van der Ster, Björn1; Wijnberge, Marije1; Huntelaar, Marthe1; de Haan, Job1; van der Sluijs, Koen1; Veelo, Denise1; Westerhof, Berend1,2,3,4
1Department of Anesthesiology, Amsterdam UMC - Locatie AMC, Anaesthesia, Amsterdam, the Netherlands, 2Department of Pulmonary Medicine, Amsterdam UMC, Vrije Universiteit Amsterdam, 3Amsterdam Cardiovascular Sciences, Amsterdam, Netherlands, 4Department 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, Masakazu1; Kobayashi, Shigeki2; Yamamoto, Hirotsuka1; Hamada, Yorimichi1; Nanno, Takumi1; Kohn, Michihiro3; Yano, Masafumi2
1Sanyo-Onoda City Hospital, Sanyo-Onoda, Japan, 2Division of Cardiology, Department of Medicine and Clinical Science, Yamaguchi University Graduate School of Medicine, Ube, Japan, 3Kohno Clinic, Hagi, Japan

P69 The initial upstroke time is most strongly associated with the severity of as among brachial pulse wave parameters
Takahashi, Masao1; Fukatani, Kyohei2; Kabutoya, Tomoyuki3; Hoshide, Satoshi1; Yoneyama, Tatsuya4; Ito, Tetsuya2; Kario, Kazuomi3
1Department of Cardiovascular Medicine, Jichi Medical University, Shimotsuke, Japan, 2Academic Promotion Section, Fukuda Denshi Co., Ltd., 3Jichi Medical University, Japan, 4R&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 Eszter1; Fontanyi, Zoltan1; Pal, Eva2; Hadjadj, Leila2; Monori-Kiss, Anna2; Horvath, Eszter Maria3; Benko, Rita3; Magyar, Attila4; Heinzlmann, Andrea5; Benyo, Zoltan2; Nadas, Gyorgy L.1; Varbiro, Szabolcs1; Bánya, Bálint
1Semmelweis University Department of Obstetrics and Gynaecology, Budapest, Hungary, 2Semmelweis University Institute of Clinical Experimental Research, Budapest, Hungary, 3Semmelweis University Department of Physiology, Budapest, Hungary, 4Semmelweis University, Department of Anatomy, Histology and Embriology, Budapest, Hungary, 5University 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; Rylikyte, 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; Ryłiskyte, Ligita; Kovaite, Milda; Rimsevicius, Laurynas; Balkeviciene, Laura; Badariene, Jolita; Laucевичius, 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, Adrienn1; Dégi, Arianna1; Cseprekál, Orsolya2; Kis, Eva3; Szabó, Ádám4; Rudas, Gábor4; Reusz, George S5
11st Department of Pediatrics, Semmelweis University, Budapest, Hungary, 2Department of Transplantation and Surgery, Semmelweis University, Budapest, Hungary, 3Gottsegen György Hungarian Institute of Cardiology, Budapest, Hungary, 4Semmelweis University, MR Research Center, Budapest, Hungary

P76 Carotid artery disease in patients with newly diagnosed, untreated familial hypercholesterolemia
Nádró, Bíborka; 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, Bíborka; 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, Maimouna1; Hallab, Magid2; Thiam, Souleymane3; Mane, Sheikh AB1; Belem, Farid1; Samb, Abdoulaye1
1Laboratory of Physiology Human and Functional Explorations, FMPO, UCAD, Senegal, 2Clinique Bizet, 75008 Paris, France, 3Laboratory 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, Suzanne1; van de Velde, Lennart1,3; Vermeulen, Jenske4,5; Reijnen, Michel1,2
1Rijnstate, Vascular Research Center, Arnhem, Netherlands, 2Multimodality Medical Imaging Group, Technical Medical Centre, University of Twente, Enschede, 3Rijnstate, department of Vascular Surgery, Arnhem, Netherlands, 4RadboudUMC, 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, Mahfoudha1,2; Munnery, Maggie1; Cockcroft, John1; Watkeys, Laura2; Stohr, Eric2; Gale, Nicola1; McDonnell, Barry2
1Cardiff University, Cardiff, UK, 2Cardiff 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, Nikolaos1; Gkaliagkousi, Eugenia1; Lazaridis, Antonios1; Anyfanti, Panagiota1; Triantafyllou, Areti1; Dipla, Konstantina2; Dolgyras, Panagiotis1; Galanopoulou, Vasiliki3; Aslanidis, Spyros4; Douma, Stella1
13rd Department of Internal Medicine, Papageorgiou Hospital, Aristotle University of Thessaloniki, Thessaloniki, Greece, 2Exercise Physiology and Biochemistry Laboratory, Department of Sports Science at Serres, Aristotle University of Thessaloniki, Serres, Greece, 3Rheumatology Department, Papageorgiou Hospital, Aristotle University of Thessaloniki, Thessaloniki, Greece, 4Rheumatology 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, Bernhard1; Wassertheurer, Siegfried1; Mayer, Christopher Clemens1; Danningger, Kathrin2; Binder, Ronald2; Weber, Thomas2
1Center for Health & Bioresources, AIT Austrian Institute of Technology, Vienna, Austria, 2Cardiology 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, Remi1; 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 Maria1,2; Alexopoulou, Magdalini1; Khettab, Hakim3; Jeunemaitre, Xavier3; Boutouyrie, Pierre3
1University of Pisa, Pisa, Italy, 2INSERM U970, Equipe 7, Paris, France, 3APHP, Hôpital Européen Georges Pompidou, Paris, France

P88 Improvement in functional capacity with spironolactone masks the treatment effect on exercise blood pressure
Moore, Myles1; Schultz, Martin1; Hare, James2; Marwick, Thomas2; Sharman, James1
1Menzies Institute for Medical Research, University of Tasmania, Hobart, Australia, 2Baker 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, Hannah¹; Park, Chloe¹; Fraser, Abigail²; Howe, Laura³; Ferreira, Dianna³; Timpson, Nic²; Lawlor, Debbie²; Davey-Smith, George²; Chaturvedi, Nishi¹; Hughes, Alun¹
¹Cardiometabolic Phenotyping Group, University College London, London, UK, ²MRC 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, Milán¹; Kőrösi, Beáta²; Batta, Dóra²; Gonda, Xénia³; Rihmer, Zoltán¹; Nemcsik-Bencze, Zsófia¹; László, Andrea³; Nemcsik, János⁶
¹Semmelweis University, Budapest, Hungary, ²Department of Family Medicine, Semmelweis University, Budapest, ³Department of Psychiatry and Psychotherapy, Semmelweis University, Budapest, ⁴Magnetic Resonance Research Center, Semmelweis University, Budapest, ⁵MD Office Jula/Schindler, Nürnberg, Germany, ⁶Department 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; Vasco, 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, Antonio¹; Magalhães, Lucélia¹; Brustolim, Danielle¹; da Silva, Diorlene¹; de Castro, Roberta¹; Bessa, Larissa¹; grupo VASCOR, VASCOR¹
¹Faculdade 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, Chloe¹; Charakida, Marietta¹; Howe, Laura²; Fraser, Abigail²; Rapala, Alicja¹; Williams, Suzanne¹; Jones, Siana¹; Deanfield, John¹; Chaturvedi, Nish¹; Hughes, Alun¹
¹Institute of Cardiovascular Science, UCL, London, UK, ²MRC 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, Kwame¹; Musah, Latif¹; Essel, Samuel¹; Dzudzor, Barotholomew²; Cruickshank, J Kennedy²
¹Medical School, University of Ghana, Ghana ²Cardiovascular 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, Didier1; van de Velde, Lennart1; Westerhof, Berend2; Vogt, Liffert2; van den Born, Bert-Jan1
1Amsterdam UMC, University of Amsterdam, Department of Vascular Medicine, 2Amsterdam UMC, University of Amsterdam, Department of Medicine, 3Amsterdam UMC, University of Amsterdam, Department of Cardiology

P101 Arterial stiffness vs sarcopenia in Portuguese elderly population
Vassilenko, Valentina1,4,5; Serrano, Andreia1,4,5; Ramalho, Beatriz1; Bonifácio, Paulo1,4,5; Coelho, Ana C.2; Pimentel-Santos, Fernando3
1Laboratory of Instrumentation, Biomedical Engineering and Radiation Physics (LIBPHYS), NOVA School of Science and Technology - NOVA University Lisbon, 2829-516 Caparica, Portugal, 2Laboratory of Instrumentation, Biomedical Engineering and Radiation Physics (LIBPHYS), NOVA School of Science and Technology - NOVA University Lisbon, 2829-516 Caparica, Portugal, 3Centre for Chronic Diseases, Nova Medical School (CEDOC/FCM-UUL), Lisbon, Portugal, 4NMT, S.A., Parque Tecnológico de Cantanhede, Núcleo 04, Portugal, 5Iberian 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, Lyndsey1; Magnotta, Vincent1; Moser, David1; Mitchell, Gary2; Nuckols, Virginia1; Ward, Ryan1; Pierce, Gary2; Boles Ponto, Laura1
1University of Iowa, Iowa City, IA, USA, 2Cardiovascular Engineering, Inc. Norwood, MA, USA

P103 Improved metabolic vasoreactivity in the brain of HM3 patients and its underlying microcirculatory mechanisms
Stöhr, Eric J.1; Ji, Ruiping2; Akiyama, Koichi2; Castagna, Francesco3; Alberto, Pinsino2; Cockcroft, John1; Yuzefpolskaya, Melana2; Garan, Reshad2; Topkara, Veli3; Takayama, Hiroo3; Takeda, Koji3; Naka, Yoshifumi2; Colombo, Paolo2; Willey, Joshua2; McDonnell, Barry J.1
1Cardiff Metropolitan University, Cardiff, UK, 2Columbia University Irving Medical Center, New York City, USA

P104 White coat hypertension is associated with increased small vessel disease in the brain
Kirkham, Fran1; Drazich, E1; Vundavalli, A1; Rankin, P1; Timeyin, J1; Bunting, E1; Ali, K1,2; Rajkumar, C1,2
1Brighton and Sussex University College Hospitals Trust, UK, 2Department 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 Açaí-Juçara on Central Pressure in Individuals with Overweight or Obesity
Ortiz, Tainah1; Gorski, Fernanda2; Lehnen, Tatiana3; Boll, Liliana1; Eibel, Bruna1; Lehnen, Alexandre1; Barbosa, Eduardo4
1Institute of Cardiology of Rio Grande do Sul/Foundation University of Cardiology, Porto Alegre, Brazil, 2Federal University of Health Sciences of Porto Alegre (UFSCPA), Porto Alegre, Brazil, 3Thyroid Section, Endocrine Division, Hospital de Clínicas de Porto Alegre, Porto Alegre, Brazil, 4Hypertension League, Porto Alegre, Brazil

P107 Endothelial dysfunction associated with arterial stiffness in postmenopausal women with obesity
Ramírez Soltero, Patricia Lizette1; García Benavides, Leonel2; Barocio Pantoja, Marycruz1; Illescas Vidrio, Brandon Giovanni1; Cardona Müller, David1; Cardona Muñoz, Ernesto Germán1; Totsuka Sutto, Sylvia Elena1
1Department of Physiology, Arterial Stiffness Laboratory, Experimental Therapeutic and Clinic Institute, Health Sciences University Center, University of Guadalajara, Guadalajara, Mexico, 2Department 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-Jet1,2; Vermeulen, Jenske1,3; Holewijn, Suzanne1; Thijsse, Dick1; Reijnen, Michel1,2
1Rijnstate, Arnhem, the Netherlands; 2University of Twente, Enschede, the Netherlands; 3Radboudumc, Nijmegen, the Netherlands

P109 The influence of sex on cuff blood pressure accuracy

Stoneman, Elif1; Picone, Dean1; Schultz, Martin1; Armstrong, Matthew1; Bos, Willem2,3; Dwyer, Nathan1,4; Laey, Peter5; Laugesen, Esben6; Omboni, Stefano7,8; Pucci, Giacomo9; Roberts-Thomson, Philip1,2; Stouffer, George10; Takazawa, Kenji11; Weber, Thomas12; Westerhof, Berend13; Sharman, James1
1Menzies Institute for Medical Research, University of Tasmania, Hobart, Australia; 2Department of Internal Medicine, Leiden University Medical Center, Leiden, The Netherlands; 3St Antonius Hospital, Department of Internal Medicine, Nieuwegein, The Netherlands; 4Royal Hobart Hospital, Hobart, Tasmania; 5Institute of Cardiovascular Sciences University College London (UCL) and National Institute for Health Research (NIHR) UCL/UCL Hospitals Biomedical Research Centre, London, United Kingdom; 6Department of Endocrinology and Internal Medicine, Aarhus University Hospital, Aarhus, Denmark; 7Clinical Research Unit, Italian Institute of Telemedicine, Varese, Italy; 8Scientific Research Department of Cardiology, Science and Technology Park for Biomedicine, Sechenov First Moscow State Medical University, Moscow, Russian Federation; 9Unit of Internal Medicine at Terni University Hospital, Department of Medicine, University of Perugia, Perugia, Italy; 10University of North Carolina, US; 11Center for Health Surveillance and Preventive Medicine, Tokyo Medical University Hospital, Tokyo, Japan; 12Cardiology Department, Klinikum Wels-Grieskirchen, Wels, Austria; 13Department of Pulmonary Diseases, VU University Medical Center, Amsterdam, The Netherlands

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

Facconi, 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, Dean1; Schultz, Martin1; Armstrong, Matthew1; Bos, Willem2,3; Dwyer, Nathan4,5; Lacy, Peter6; Laugesen, Esben7; Omboni, Stefano8,9; Pucci, Giacomo10; Roberts-Thomson, Philip1,2; Stouffer, George11; Takazawa, Kenji12; Weber, Thomas13,15; Westerhof, Berend14; Sharman, James15
1Menzies Institute for Medical Research, University of Tasmania, Hobart, Australia; 2Department of Internal Medicine, Leiden University Medical Center, Leiden, The Netherlands; 3St Antonius Hospital, Department of Internal Medicine, Nieuwegein, The Netherlands; 4Royal Hobart Hospital, Hobart, Australia; 5Menzies Institute for Medical Research, College of Health and Medicine, University of Tasmania, Hobart, Australia; 6Radboudumc, Nijmegen, the Netherlands; 7Clinical Research Unit, Italian Institute of Telemedicine, Varese, Italy; 8Scientific Research Department of Cardiology, Science and Technology Park for Biomedicine, Sechenov First Moscow State Medical University, Moscow, Russian Federation; 9Unit of Internal Medicine at Terni University Hospital, Department of Medicine, University of Perugia, Perugia, Italy; 10Unit of Internal Medicine at Terni University Hospital, Tokyo Medical University Hospital, Tokyo, Japan; 11Division of Cardiology, University of North Carolina at Chapel Hill, Chapel Hill, United States; 12Center for Health Surveillance and Preventive Medicine, Tokyo Medical University Hospital, Tokyo, Japan; 13Cardiology Department, Klinikum Wels-
P113 The forgotten black box of blood pressure: error in oscillometric mean arterial pressure is associated with cuff measurement inaccuracy
Picone, Dean¹; Schultz, Martin¹; Armstrong, Matthew¹; Dwyer, Nathan¹;²; Roberts-Thomson, Philip¹;²; Weber, Thomas³; Sharman, James³
¹Menzies Institute for Medical Research, College of Health and Medicine, University of Tasmania, Hobart, Australia, ²Royal Hobart Hospital, Hobart, Australia, ³Cardiology Department, Klinikum Wels-Grieskirchen, Wels, Austria

P114 “Stifflammation” is an essential cause of cardiovascular hospitalizations in hypertensives
Christopoulou, Georgia; Vlachopoulos, Charalambos; Korogiannis, Lambros; Terentes-Printzios, Dimitrios; Sigala, Evangelia; Koutagiar, 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, Fran¹; Nuredini, GN²; Saunders, A²; Drazich, Erin¹; Bunting, Eva¹; Rankin, Philip¹; Ali, K¹;²; Okorie, M²;¹; Rajkumar, Chakravarthi²;¹
¹Department of Elderly Care and Stroke Medicine, Brighton and Sussex University Hospitals Trust, Brighton, UK, ²Department of Medicine, Brighton and Sussex Medical School, Brighton, UK

P116 Post-stroke white coat hypertension/effect is associated with greater arterial stiffness
Kirkham, Fran¹; Saunders, A²; Nuredini, GN²; Drazich, E¹;²; Rankin, Philip¹; Bunting, E³; Ali, K³;²; Okorie, M²;³; Rajkumar, C³;²
¹Brighton and Sussex University College Hospitals Trust, UK, ²Department of Medicine, Brighton and Sussex Medical School, Brighton, UK, ³Department 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, Dóra¹; Kőrösi, Beáta¹; Nemcsik-Bencze, Zsófia³; Nemcsik, János³
¹Department of Family Medicine, Semmelweis University, Budapest, Hungary, ²Magnetic Resonance Research Center, Semmelweis University, Budapest, Hungary, ³Health Service of Zugló (ZESZ), Budapest, Hungary

P118 Arterial stiffness in patients with arterial hypertension on short term dual treatment with fimasartan/amlopidine
Illescas Vidrio, Brandon Giovany; Cardona Müller, David; Cardona Muñoz, Ernesto Germán; Gálan Ruiz, Claudia Yanette; Ramos Becerra, Carlos Gerardo; Grover Páez, Fernando
Laboratorio de Mecánica Vascular, 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; Gavriliak, Eleni; Anyfanti, Panagiota; Nikolaidou, Barbara; Triantafyllou, Are; 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, Lampos; 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, Koen1; Marais, Louise2; Boutouyrie, Pierre2
1CARIM School of Cardiovascular Diseases, Maastricht University Medical Center, Maastricht, NL,
2INSERM, Paris, France

P123 Beyond diameters, flow hemodynamics quantified by magnetic resonance imaging to help characterizing aneurysmal aorta
Houriez-Gombaud-Saintonge, Sophia1,2; Pascaner, Ariel3; Soulat, Gilles4; Gencer, Umit5; Dietenbeck, Thomas6; Craiem, Damian1; Bollache, Emilie6; Chenoune, Yasmine2; Mousseaux, Elie6; Kachenoura, Nadja1
1Laboratoire d’Imagerie Biomédicale, 2ESME Research Lab, 3IMETTY - Universidad Favaloro - CONICET, Buenos Aires, Argentina, 4Hôpital Européen Georges Pompidou, Paris, France, 5Hôpital Européen Georges Pompidou, Paris, France, 6Laboratoire d’Imagerie Biomédicale, Paris, France, 7IMETTY - Universidad Favaloro - CONICET, Buenos Aires, France

P124 Impact of tapering on arterial blood pressure using a one-dimensional computational model
Abdulateef, Shima1; Mariscal-Harana, Jorge2; Alastruey, Jordi2; Khir, Ashraf1
1Biomedical Engineering Research Theme, Brunel University London, Middlesex, United Kingdom,
2School 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, Daimé1,2; Stergiopulos, Nikos3; Rodríguez Moliner, Tania2; Segers, Patrick1
1IBiTech-bioMMeda, Ghent University, Ghent, Belgium, 2BioMec, Cujae, Havana, Cuba, 3LHTC, EPFL, Lausanne, Switzerland

P126 Characterization of skin temperature changes in response to photobiostimulation using thermal imaging: A thermo-anatomical correlation
Hoffer, Oshrit1; Rabin, Neta1; Gavish, Lilach2; Halak, Moshe3; Haim, Ortal1; Shayovitz, Yuval1; Shkilevich, Simon1; Gavish, Benjamin1; Zimmer, Yair1; Ovadia-Bleichman, Zehava1
1Afeka Tel-Aviv Academic College of Engineering, Tel-Aviv, Israel, 2Hebrew University of Jerusalem, Jerusalem, Israel, 3Department of Vascular Surgery, Sheba Medical Center, Ramat-Gan, Israel,
4Yazmonit Ltd., Jerusalem, Israel

P127 Graded cuff compression protocol to induce retrograde shear produces proportionate increment in regional arterial compliance in human peripheral artery
Afreen, Naaz1; Chandran, Dinu1; Jaryal, Ashok1; Deepak, Kishore1; Roy, Sitikantha2
1All India Institute of Medical Sciences, New Delhi, India, 2Indian Institute of Technology, New Delhi, India
P128 Accuracy of age-appropriate transfer functions in modelling central arterial waveform features
Cai, Tommy1,2; Meroni, Alice1; Qasem, Ahmad3,4; Butlin, Mark3; Ayer, Julian5,1; Celerama, David4,1; Avolio, Alberto3; Skilton, Michael1
1University of Sydney, Sydney, Australia; 2Royal Prince Alfred Hospital, Sydney, Australia; 3Macquarie University, Sydney, Australia; 4AtCor Medical, Sydney, Australia; 5The 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, Ariel1; Houriez-Gombaud-Saintonge, Sophia2,3; Soulat, Gilles4; Gencer, Umit5; Dietenbeck, Thomas2; Chenoune, Yasmina2; Kachenoura, Nadija2; Mousseaux, Elie4; Craiem, Damian1; Bollache, Emilie2
1IMETTYB – CONICET – Universidad Favaloro, Buenos Aires, 2Sorbonne Université, INSERM, CNRS, Laboratoire d’imagerie Biomédicale, Paris, 3ESME Sudria Research Lab, Paris, 4Hôpital Européen Georges-Pompidou, Paris

P130 Cardiac Resynchronization Therapy improves early ventricular contraction and reduces time to onset of relaxation
Gu, Haotian1; Claridge, Simon2; Rinaldi, Aldo3; Chowienczyk, Phil1
1King's College London, London, UK; 2St Thomas' Hospital, London, UK

P152 Prediction of death or heart failure-related Hospitalizations by cardio-ankle vascular index (CAVI) and CAVI0
Spronck, Bart1,2; Lee, Jonathan3,4; Oldland, Garrett3,4; Obeid, Mary Jo3; Paravathaneni, Mahati3; Gadela, Naga Vaishnav3; Ans, Armghan3; Singh, Gurpreet3,4; Bhuva, Rushik3; Akers, Scott4; Chirinos, Julio5
1Department of Biomedical Engineering, School of Engineering and Applied Science, Yale University, New Haven, CT, USA; 2Department of Biomedical Engineering, CARIM School for Cardiovascular Diseases, Maastricht University, Maastricht, The Netherlands; 3Hospital of the University of Pennsylvania, Philadelphia, PA, USA; 4Philadelphia VA Medical Center, Philadelphia, PA, USA; 5Rowan University School of Osteopathic Medicine, Stratford, NJ, USA; 6University 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, Michal5; Spronck, Bart2; Jurko Jr., Alexander3; Mestanikova, Andrea1; Jurko, Tomas4; Butlin, Mark3; Avolio, Alberto5; Bona Olexova, Lucia6; Visnovcova, Zuzana1; Sekaninova, Nikola6; Tonhajzerova, Ingrid6
1Biomedical Center Martin and Department of Physiology, Jessenius Faculty of Medicine in Martin, Comenius University in Bratislava, Martin, Slovakia; 2Department of Biomedical Engineering, Yale University, New Haven, Connecticut, USA; Department of Biomedical Engineering, CARIM School for
P136 Determinants of arterial stiffness in children using population-indexed anthropometric and hemodynamic parameters
Cai, Tommy¹,²; Meroni, Alice¹; Qasem, Ahmad³,⁴; Butlin, Mark³; Ayer, Julian⁵,¹; Clermager, David²,¹; Avolio, Alberto³; Skilton, Michael¹
¹University of Sydney, Sydney, Australia, ²Royal Prince Alfred Hospital, Sydney, Australia, ³Macquarie University, Sydney, Australia, ⁴AtCor Medical, Sydney, Australia, ⁵The Children’s Hospital at Westmead, Sydney, Australia

P137 Reflections revisited: reinterpretation required
Westerhof, Berend¹,²; Westerhof, Nico¹
¹Department of Pulmonary Medicine, Amsterdam UMC, Vrije Universiteit Amsterdam, Amsterdam Cardiovascular Sciences, Amsterdam, Netherlands, ²Department 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, Bernhard¹; Kastinger, Hannah²; Wasseertheurer, Siegfried¹
¹Center for Health & Bioresources, AIT Austrian Institute of Technology, Vienna, Austria, ²Institute 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, Bálint¹, Rita Benko²; Róbert Tarszabó²; Krisztina Lajtai²; Eszter Mária Horváth²; Szabolcs Vábírő²
¹Semmelweis University Department of Physiology, Budapest, Hungary, ²Semmelweis 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; Nádó, Biborka; Parag, György; Páll, Dénes; Balla, József; Harangi, Mariann²
¹Department 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, Adrian¹,²; Yadegarifar, Ghassam²,³; Livingston, Mark⁴; Fachim, Helene²,¹; Narayanan, Ram Prakash²,³; Lunt, Mark⁴; Siddals, Kirk⁴; Cortes, Gabriela³; Gibson, Martin²,¹; Donn, Rachelle²; Anderson,
143 Updated and revised reference values of aortic and brachial systolic blood pressure in healthy children and adolescents
Hidvégi, Erzsébet Valéria; Jakab, Andrea Emese; Bereczki, Csaba; Cziráki, Attila; Illyés, Miklós
Heart Institute, Faculty of Medicine, University of Pécs, Pécs, Hungary, 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
Pagoulatou, Stamatia; Stergiopoulos, Nikolaos; Bikia, Vasiliki; Rovas, Georgios; Müller, Hajo; Noble, Stéphane; Adamopoulos, Dionysios
Ecole Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland, Geneva University Hospitals (HUG), Geneva, Switzerland

P145 Central hemodynamic response to lower body negative pressure in individuals with down syndrome
I, Thessa; Wee, Sang Ouk; Grigoriadis, Georgios; Schroeder, Elizabeth; Baynard, Tracy; Fernhall, Bo
University of Illinois at Chicago, Chicago, USA, 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, Charalampos; Triantafyllou, Konstantinos; Katsaros, Andreas; Koumallos, Nikolaos; Lozos, Vasilios; Baikoussis, Nikolaos; Kouerinis, Ilias; Giakis, Nikolaos; Michael, Demosthenous; Terentes Printzios, Dimitrios; Filis, Konstantinos; Tousoulis, Dimitrios
Hippokration Hospital of Athens

P147 Association between inflammatory markers of low intention and arterial stiffness
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P148 The administration of green tea extract improves hemodynamic parameters, arterial stiffness and renal function in patients with diabetic nephropathy
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University of Guadalajara, Guadalajara, Mexico

P149 The relationship between insulin resistance scores parameters and chemerin in diabetic and obese patients
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**P150 Study of hemodynamic and macrocirculation indices between uncontrolled naïve hypertensives and well controlled diabetic patients**
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**P151 Microvascular dysfunction is associated with impaired beta-cell function: The Maastricht Study**
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