ARTERY

ARTERY 25

16 - 17 October 2025

Ilustre Colegio Oficial
de Médicos de Valencia
Valencia, Spain

www.arterysociety.org

Programme Book

ARTERY
Association for Research into Arterial Structure and Physiology

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Join ARTERY now and help us shape a better future for promoting the advancement of knowledge and dissemination of information concerning all aspects of arterial structure and function, either basic science, clinical research or epidemiology.

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By becoming a member of ARTERY, you will instantly be part of an international, professionally diverse network of members. ARTERY members form a vast community of researchers, with active collaborative research, exchanges of students etc. The ARTERY community has produced some of the most quoted publications ever in the field.

Being a member offers privileged access to the annual ARTERY Meeting, with rebate price covering the membership. The annual subscription fee includes a subscription to ARTERY RESEARCH.

Please visit **www.arterysociety.org** to find out more about the activities of our society and how you can join and become involved with ARTERY.

T: **+44 (0) 20 8977 7997**
E: **artery@conferencecollective.co.uk**

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SECRETARIAT

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Email: technicalsecretary@artery25.com
ARTERY25: www.artery25.com

Welcome

Dear colleague,

it is our great pleasure to welcome you to the *Illustrious Official College of Physicians of Valencia*, Spain, for **ARTERY25**.

Our 25th ARTERY Conference continues to focus on all aspects of arterial structure, haemodynamics and function, with special emphasis on clinical implications for treatment of arterial diseases. All disciplines representing relevant aspects of basic and clinical science are represented - imaging, bioengineering, physiology, epidemiology, pharmacology, therapeutics, preventive measures and digital innovations. Other aspects include arterial-venous crosstalk and new antihypertensive drugs and we are pleased to welcome companies focusing on these areas.

As usual, the conference is a prime opportunity to establish new collaborations and network with a highly informed, friendly audience from various backgrounds. Colleagues from sister societies in North America (North American ARTERY), Latin American ARTERY (LATAM ARTERY), Asia and Australia (Pulse of Asia), with particular attention on Young Investigators will present communications and lectures.

You will have many opportunities to meet fellow conference participants, particularly during the refreshment breaks, the networking poster sessions and the Training School, a novelty for **ARTERY25**, aimed at stimulating engagement in research and acquiring practical skills, that will precede the conference, counting with the support of many different technical companies. It is our intention to offer a stimulating scientific atmosphere in which you can meet old colleagues and make new friends and contacts, inspired by the beautiful, historic city of Valencia.

Valencia is very well connected, the airport is very close to the Venue, the *Illustrious Official College of Physicians of Valencia*. Founded 1898, this institution offers multiple meeting opportunities, is close to the historic center, and contributes its expertise to supporting medical research.

In addition to excellent scientific content, we will offer an unforgettable social program that will include a guided tour to learn about the Roman, Muslim, Christian and modern architecture that defines Valencia and learning how to cook the authentic paella on the beach by the sea during a very special conference dinner.

On behalf of the **ARTERY Executive Committee** and **ARTERY25 Local Organizing Committee**, we look forward to welcoming you in Valencia.

Your participation directly supports our charitable and educational goals and we thank you for this.

Professor Carmel McEniery,
Cambridge, UK
President of ARTERY

Professor Enrique Rodilla,
Valencia, Spain
Chair, Organising Committee

Training School

The Present and Future of Arterial Hemodynamics: Training School for Early Career Researchers and Health Professionals


ORGANIZING COMMITTEE:

- Enrique Rodilla (Chair)
- Rachel Climie
- Carolina Seabra
- Christopher Mayer
- Panagiota Veloudi
- Fernando Martínez-García
- Yolandi Breet
- Keeron Stone
- Chloe Park
- Jess Willimas
- Kalliopi Dalakleidi

GOALS:

- Face-to-face meeting
- Update in arterial hemodynamics
- Stimulating collaborative projects
- Developing new activities and advancing “Horizon Europe” grant ideas
- Exchange of scientific and teaching activities
- Stimulating engagement in research and acquiring practical skills
- Develop an interdisciplinary collaborative network

LOCATION:

- The Illustrious Official College of Physicians of Valencia
  Av. de la Plata, 34, Quatre Carreres, 46013 València, Valencia, Spain

SCHEDULE: Industry Practical Workshops

WEDNESDAY 15 OCTOBER 2025

8:00-8:15	**Welcome & Registration, Meet the Attendees**	
8:15-12:30	**Group 1: Industry Practical Workshops (8 rotating groups, 5 -7 persons/group)**	
TBD	8:15-8:45	**Industry Practical Workshop 1**
	8:45-9:15	**Industry Practical Workshop 2**
	9:15-9:45	**Industry Practical Workshop 3**
	9:45-10:15	**Industry Practical Workshop 4**
10:15-10:30	**Coffee Break**	
TBD	10:30-11:00	**Industry Practical Workshop 5**
	11:00-11:30	**Industry Practical Workshop 6**
	11:30-12:00	**Industry Practical Workshop 7**
	12:00-12:30	**Industry Practical Workshop 8**
12:30-13:00	**Session 1: Dialogue Between Basic Science and Clinics**	
Sala Chulià-Campos	12:30-12:45	**Why are Basic Questions in Physiology Necessary?** RM Bruno
	12:45-13:00	**FMD, from clinical nihilizm to advanced knowledge** A Januszewicz
13:00-14:00	**Lunch (Restaurant ICOMV)**	
14:00-14:30	**Session 2: Chances to Engage in Arterial Hemodynamics**	
Sala Chulià-Campos	14:00-14:15	**VascAgeNet for Translation to Practice** E Bianchini / CC Mayer
	14:15-14:30	**Future Activities of ARTERY** P Cunha
14:30-18:45	**Group 2: Industry Practical Workshops (8 rotating groups, 5 -7 persons/group)**	
TBD	14:30-15:00	**Industry Practical Workshop 1**
	15:00-15:30	**Industry Practical Workshop 2**
	15:30-16:00	**Industry Practical Workshop 3**
	16:00-16:30	**Industry Practical Workshop 4**
16:30-16:45	**Coffee break**	
TBD	16:45-17:15	**Industry Practical Workshop 5**
	17:15-17:45	**Industry Practical Workshop 6**
	17:45-18:15	**Industry Practical Workshop 7**
	18:15-18:45	**Industry Practical Workshop 8**
18:45-19:30	**Young Investigators´ Meeting** C Neutel	
21:00	**Dinner (Bar Bukowski)** * Dinner will be at each guest's own expense	

TBD: To be determined.

Details of the Sessions: see Page 38.

Programme

WEDNESDAY 15 OCTOBER 2025

Time	Title	Location
14:30 – 16.15	**Meeting Working Groups**	Sala Chulià Campos
16.15 – 17.15	**Meeting Executive Committee**	Sala Chulià Campos
17.30 – 18:30	**Meeting Editorial Board**	Sala Chulià Campos
19:00 - 21:30	**Dinner* for Young Investigators near Il·lustre Col·legi Oficial de Metges de València** * Dinner will be at Young Investigators expense	Bar Bukowski

THURSDAY 16 OCTOBER 2025

Time	Title	Location
08.00 – 09:00	**Registration**	ICOMV
09.00 – 09.15	Conference Opening Remarks **Conference Co-chairs: Carmel McEniery, University of Cambridge, UK, and Enrique Rodilla, Hospital de Sagunto, FISABIO / CEU University, Spain**	Sala Chulià Campos
09.15 – 10.45 09.15 – 09.45 09.45 – 10.45	**Session 1** **Co-chairs: Carmel McEniery, University of Cambridge, UK, Pedro Cunha, University of Minho, Portugal** Opening Lecture Arterial stiffness markers: an objective for treatment? **Josep Redón, Universitat de València, Spain** **Co-chairs: Thomas Weber, Klinikum Wels-Grieskirchen, Austria and Peter Nilsson, Lund University, Sweden** Hyperlipidemia and Arterial Hemodynamics New developments in lipid lowering treatments **Lluis Masana, Rovira i Virgili University, Reus-Tarragona, Spain** The Impact of the Blood Lipids Levels on Arterial Stiffness **Ioana Mozos, "Victor Babeş" Univ. of Med. and Pharmacy, Timișoara, Romania** A systematic review of lipid-lowering treatments on arterial stiffness **Iván Cavero, Universidad de Castilla-La Mancha, Spain**	
10.45 – 11.15	**Refreshments, exhibition and poster viewing** **Young Investigator Business Meeting**	Hall Sala Chulià Campos
11.15 – 12.20 11.15 – 12.00	**Session 2** **Co-chairs: Veronique Regnault, French Institute of Health and Medical Research, France, Barry McDonnell, Cardiff Metropolitan University, UK** Young Investigator Award – ORAL SESSION 1 **1.01 MICROVASC Study - Assessing Early Vascular Aging and Feasibility of Measuring Arterial Stiffness Via Pulse Wave Velocity During a Parabolic Flight Campaign** Karen Barchetti[1,2], Audrey Derobertmasure[1,2,3], Serena Zanelli[4], Smriti Badhwar[1], Stéphanie Chhun[5], Marie Beauvalet[1], Raphael Couronné[1], Rosa-Maria Bruno[1,2,3], Louise-Laure Mariani[6], Pierre Boutouyrie[1,2,3]. [1]INSERM UMRS 970, Paris Cardiovascular Research Centre – PARCC, Paris, France. [2]Université	

	Paris Cité, Faculté de Médecine, Paris, France. [3]Assistance Publique Des Hôpitaux De Paris, Hôpital Européen Georges Pompidou, Clinical Pharmacology Unit and DMU CARTE, Université Paris Cité, Paris France. [4]Axelife, Paris, France. [5]Laboratory of Immunology and DMU BIOPHYGEN, Georges Pompidou European Hospital and Necker-Enfants Malades Hospital, AP-HP, Paris, France; Université Paris-Cité, INEM, Inserm U1151, Paris, France. [6]Départements de neurologie et de pharmacologie médicale, CIC Neurosciences, Hôpital Pitié-Salpêtrière, AP-HP, Institut du Cerveau ICM, Sorbonne Université, INSERM, Paris, France. **1.02 A comparison between constitutive and non-constitutive wall models in capturing pressure–diameter relationships along the aortic length** Mobina Izadpanah[1], Lydia Aslanidou[2], Cindy van Loo[1], Jordi Alastruey[3], Ramin Shahbad[4], Majid Jadidi[4], Tammo Delhaas[1], Bart Spronck[1,5], Alessandro Guidici[1,6]. [1]Department of Biomedical Engineering, Cardiovascular Research Institute Maastricht (CARIM), Maastricht University, Maastricht, The Netherlands. [2]Laboratory of Hemodynamics and Cardiovascular Technology (LHTC), École Polytechnique Fédérale de Lausanne, Lausanne, Switzerland. [3]School of Biomedical Engineering and Imaging Sciences, Department of Digital Twins for Healthcare, King's College London, London, United Kingdom. [4]Department of Biomechanics, University of Nebraska Omaha, Omaha, NE, United States. [5]Macquarie Medical School, Faculty of Medicine, Health and Human Sciences, Macquarie University, Sydney, NSW, Australia. [6]GROW Institute for Oncology and Reproduction, Maastricht University, Maastricht, The Netherlands. **1.03 Assessment of cerebral arterial stiffness in multistage renal disease model a numerical study** Obeid Hasan[1,2], Bikia Vasiliki[3,4], Addour Saliha[1], Stergiopulos Nikos[3], Agharazii Mohsen[1,2]. [1]CHU de Québec Research Center – L'Hôtel-Dieu de Québec Hospital, Québec City, Québec, Canada. [2]Division of Nephrology, Department of Medicine, Faculty of Medicine, Université Laval, Québec City, Québec, Canada. [3]Byers Center for Biodesign, Stanford University, Stanford, CA, USA. [4]Laboratory of Hemodynamics and Cardiovascular Technology, Swiss Federal Institute of Technology, Lausanne, Switzerland. **1.04 The impact of nocturnal ambulatory blood pressure measurements on the autonomic nervous system** Johanna N.A. Bergmans[1], Maartje H. Hoogeveen[1], Jesse D. Quadt[1,2], Marion Barbeau[1], Fabian Beutel[1], Evelien Hermeling[1]. [1]imec The Netherlands, Eindhoven, The Netherlands. [2]Eindhoven University of Technology, Eindhoven, The Netherlands.	Sala Chulià Campos
12.00 – 12.20	**Co-chairs: Cédric Neutel, Maastricht University, The Netherlands, Elisabetta Bianchini, Italian National Research Council (CNR), Italy** **Invited Lecture** Contribution of digital health to research in arterial haemodynamics **Kelvin Tsoi, Chinese University of Hong Kong, New Territories**	
12.20 – 13.15 12.20 – 13.00	**Session 3** **Co-chairs: Ana Jeroncic, University of Split, Croatia, János Nemcsik, Semmelweis University of Budapest, Hungary** **Young Investigator Award – ORAL SESSION 2** **2.01 Basal autophagy activation attenuates aortic stiffness in a mouse model of elastic fibre fragmentation** Van Praet M., Jacobs C., Neutel C.H.G., Roeyen E., Wesley C., Guns P.J., De Meyer G.R.Y., Martinet W. and Roth L. Laboratory of Physiopharmacology, University of Antwerp,Belgium. **2.02 Exogenous Methylglyoxal supplementation reduces arterial stiffening and vascular dysfunction in a mouse model of type 2 diabetes** Margarita G. Pencheva[1,2], Philippe Vangrieken[1,3], Koen W.F. van der Laan[2], Alessandro Giudici[2,4], Petra Niessen[1], Jean L.J.M. Scheijen[1], Peter Leenders[3,5], Maria Soledad Fernandez Alfonso[6], Bart Spronck[2,7], Koen D. Reesink[2], Casper G. Schalkwijk[1]. [1]Department of Internal Medicine, Cardiovascular Research Institute Maastricht (CARIM), Maastricht University, Maastricht, the Netherlands. [2]Department of Biomedical Engineering, Cardiovascular Research Institute Maastricht (CARIM), Maastricht University, Maastricht, the Netherlands. [3]Department of Pharmacology and Toxicology, Cardiovascular Research Institute Maastricht (CARIM), MHeNs, School for Mental Health and Neuroscience, Maastricht University, Maastricht, the Netherlands. [4]GROW Research Institute for Oncology and Reproduction, Maastricht University, Maastricht, the Netherlands. [5]Department of Biochemistry,	Sala Chulià Campos

	Cardiovascular Research Institute Maastricht (CARIM), Maastricht University, Maastricht, the Netherlands. [6]Department of Pharmacology, Pharmacognosy and Botany, Pluridisciplinary Institute, Complutense University of Madrid, Madrid, Spain. [7]Macquarie Medical School, Faculty of Medicine, Health and Human Sciences, Macquarie University, Sydney, Australia. **2.03 Machine Learning-Based Classification of Fetal Growth Restriction Using Ultrasound aortic Diameter Waveforms** Fatma Alimahomed[1], Marietta Charakida[2], Tanvi Mansukhani[2], Mengxing Tang[3], Peter H. Charlton[4], Kirsten Christensen-Jeffries[1], Jordi Alastruey[1]. [1]School of Biomedical Engineering & Imaging Sciences, Faculty of Life Sciences & Medicine, King's College London, St Thomas' Hospital, London, UK. [2]Harris Birthright Research Centre for Fetal Medicine & Department of Cardiovascular Imaging, School of Biomedical Engineering & Imaging Sciences, King's College London, London, UK, St Thomas' Hospital, London, UK. [3]Department of Bioengineering, Faculty of Engineering, Imperial College London, London, UK. [4]Department of Public Health and Primary Care, University of Cambridge, Cambridge, UK. **2.04 Cost-effectiveness of screening for arterial stiffness in individuals with elevated blood pressure** Cédric H.G. Neutel[1], Alessandro Giudici[1], Smriti Badhwar[2], Tammo Delhaas[1], Giacomo Pucci[3], Mickaël Hiligsmann[4], Rosa Maria Bruno[2,5], Bart Spronck[1,6,7]. [1]Department of Biomedical Engineering, Cardiovascular Research Institute Maastricht (CARIM), Maastricht University, Maastricht, the Netherlands. [2]Paris Cardiovascular Research Centre, INSERM, Paris, France. [3]Unit of Internal and Translational Medicine, Terni Hospital – Department of Medicine and Surgery, University of Perugia, Italy. [4]Department of Health Services Research, CAPHRI Care and Public Health Research Institute, Maastricht University, Maastricht, the Netherlands. [5]Assistance Publique Hôpitaux de Paris, Hôpital Européen Georges Pompidou, Paris, France. [6]Department of Biomedical Engineering, School of Engineering & Applied Science, Yale University, New Haven, Connecticut, USA. [7]Macquarie Medical School, Faculty of Medicine, Health and Human Sciences, Macquarie University, Sydney, New South Wales, Australia.	
13.00 – 13.15	**Poster Storm 1** **P.65 Associations between pulse pressure amplification and inflammation in young adults according to body composition: The African-PREDICT study** Yolandi Breeta[1,2], Christian Delles[3], Paul Welsh[3], Catharina M.C. Mels[1,2]. [1]Hypertension in Africa Research Team (HART), North-West University, Potchefstroom, South Africa. [2]MRC Research Unit for Hypertension and Cardiovascular Disease, North-West University, Potchefstroom, South Africa. [3]School of Cardiovascular and Metabolic Health, University of Glasgow, Glasgow, UK. **P.66 Comparative effect of dialysate calcium doses on arterial stiffness in dialysis patients: A network meta-analysis** Óscar Martínez-Cifuentes[1], Irene Martínez-García[1], Nerea Moreno-Herraiz[1], Iris Otero-Luis[1], Samuel López-López[1], Carla Geovanna Lever-Megina[1], Iván Cavero-Redondo[1], Alicia Saz-Lara[1]. [1]CarVasCare Research Group, Faculty of Nursing, University of Castilla-La Mancha, Cuenca, Spain. **P.67 Calciprotein particles impair autophagic flux in human aortic endothelial and smooth muscle cells in vitro** Negar Sharifimoghaddammood[1], Celine Civati[1], Wim Martinet[1], Pieter-Jan Guns[1], Cédric H.G. Neutel[1], Lynn Roth[1]. [1]Department of Biomedical Engineering, Cardiovascular Research Institute Maastricht (CARIM), Maastricht University, Maastricht, The Netherlands. **P.68 Endogenous bradykinin in perivascular adipose tissue: role on arterial function in early chronic kidney disease** Ana Karen Guzmán-Aguayo[1], Marta Sanz-Gómez[1], Oliver Domenig[2], Marko Poglitsch[3], María S. Fernández-Alfonso[1]. [1]Pluridisciplinary Institute of UCM, Madrid, Spain. [2]Attoquant Diagnostics GmbH, Vienna, Austria. [3]Covirabio GmbH, Vienna, Austria. **P.69 Dual-channel ultrasound sensor for pulse wave velocity and blood pressure estimation a proof-of-concept study** Ana Carolina Gonçalves Seabra[1,2], Andreas Fischbach[1,2], Ana Belen Amado-Rey[1,2], Thomas Stieglitz[1,2,3]. [1]Laboratory for Biomedical Microtechnology, Department of Microsystems Engineering – IMTEK, IMBIT // NeuroProbes, BrainLinks-BrainTools Center, University of Freiburg, Freiburg, Germany. [2]BrainLinks-BrainTools Center, University of Freiburg, Freiburg, Germany. [3]Bernstein Center Freiburg, University of Freiburg, Freiburg, Germany.	Sala Chulià Campos

P.70 Dual-wavelength optical investigation of the microcirculation and macrocirculation

Esther Maas[1], Jorge Herranz Olazabal[1], Alex van Kraaij[1], Marion Barbeau[1], Marc Verhoeven[1], Evelien Hermeling[1].
[1]imec The Netherlands, Eindhoven, The Netherlands.

P.71 Deep learning-based segmentation of the carotid artery

Mauro Andretta[1], Laura De Rosa[1], Sara Sinceri[2], Rosa Maria Bruno[3], Francesco Faita[1], Elisabetta Bianchini[1], Vincenzo Gemignani[1,2].
[1]National Research Council (CNR), Institute of Clinical Physiology (IFC), Pisa, Italy. [2]Quipu srl, Pisa, Italy. [3]INSERM, U970, Paris Cardiovascular Research Center (PARCC), Université de Paris, Hôpital Européen Georges Pompidou – APHP, Paris, France.

P.72 In-vivo estimation of blood pressure with commercial ultrasound devices

Ana Belen Amado-Rey[1,2], Elisabetta Bianchini[3], Christopher C. Mayer[4], Bernhard Hametner[4], Vincenzo Gemignani[5], Thomas Stieglitz[1,2,6].
[1]Laboratory for Biomedical Microtechnology, Department of Microsystems Engineering – IMTEK, IMBIT // NeuroProbes, BrainLinks-BrainTools Center, University of Freiburg, Freiburg, Germany. [2]BrainLinks-BrainTools Center, University of Freiburg, Freiburg, Germany. [3]National Research Council (CNR), Institute of Clinical Physiology (IFC), Pisa, Italy. [4]AIT Austrian Institute of Technology, Center for Health & Bioresources, Medical Signal Analysis, Vienna, Austria. [5]Quipu srl, Pisa, Italy. [6]Bernstein Center Freiburg, University of Freiburg, Freiburg, Germany.

P.73 Evaluation of calibration methods for blood pressure estimation from 24-hour pulse wave velocity data

Jesse D. Quadt[1,2], Maartje H. Hoogeveen[1], Johanna N.A. Bergmans[1], Rebecca N. Pelsser[1,2], Fabian Beutel[1], Evelien Hermeling[1].
[1]imec The Netherlands, Eindhoven, The Netherlands. [2]Eindhoven University of Technology, Eindhoven, The Netherlands.

P.74 Determining reference values for pulse wave velocity in youth lessons learned in harmonising data

Kodithuwakku V.[1], Breslin M.[1], Hersant J.[1], Gall S.[1], Climie R.[1], Hidvegi E.V.[2+3], Cziraki A.[2], Jakab A.E.[3], Zocalo Y.[4+5], Bia D.[5], Nilsson P.M.[6+7], Hanssen H.[8], Diaz A.[9], Urbina E.M.[10+11], Mels C.M.C.[12], Schutte A.E.[12+13], Bruno R.M.[14], Boutouyrie P.[14], Kruger R.[12+15], Ranque B.[16+14], Menet A.[14], Mill J.G.[17], Zaniqueli D.[17], Alvim R.O.[18], Silva A.B.T.[19], Pucci G.[20+21], Vaudo G.[20+22], D'Abbondanza M.[23], Battista F.[24], Pugh C.J.A.[25+26], McDonnell B.J.[25+26], Sinha M.D.[27], Rodrigues-Machado M.D.G.[28], Kelly A.[29], Skrzypczyk P.[30], Szyszka M.[30+31], Dharnidharka V.R.[32], Kulsum-Mecci N.[33], Litwin M.[34], Obrycki L.[34], Pac M.[34], Terentes-Printzios D.[35], Vlachopoulos C.[35], Cavero-Redondo I.[36], Alvarez-Bueno C.[36].
[1] Menzies Institute for Medical Research, University of Tasmania. [2] Heart Institute, Medical School, University of Pécs, Pécs, Hungary. [3] Department of Pediatrics, Albert Szent-Györgyi Medical School, University of Szeged, Szeged, Hungary. [4] Laboratorio de Investigación y Evaluación Biomédica en Reposo y Ejercicio (LIEBRE), School of Medicine, Republic University, Montevideo, Uruguay. [5] Centro Universitario de investigación, innovación y diagnóstico arterial, Facultad de Medicina, Universidad de la República, Uruguay. [6] Department of Clinical Sciences, Lund University, Malmö, Sweden. [7] Department of Cardiology, Skåne University Hospital, Malmö, Sweden. [8] Department of Sport, Exercise and Health, Division Sport and Exercise Medicine, University of Basel, Switzerland. [9] Instituto de Investigación en Ciencias de la Salud, UNICEN-CCT CONICET, Tandil, Provincia de Buenos Aires, Argentina. [10] Preventive Cardiology, Department of Pediatrics, Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio. [11] University of Cincinnati, Cincinnati, Ohio. [12] Hypertension in Africa Research Team (HART), MRC Unit for Hypertension and Cardiovascular Disease, North-West University, Potchefstroom, South Africa. [13] The George Institute for Global Health, University of New South Wales, Sydney, Australia. [14] Université de Paris Cité, INSERM, U970, Paris Cardiovascular Research Center (PARCC), Paris, France. [15] MRC Research Unit for Hypertension and Cardiovascular. Disease, North-West University, Potchefstroom, South Africa [16] Université Paris Cité, Service de Médecine interne, AP-HP, Hôpital européen Georges-Pompidou, Paris, France. [17] Department of Physiological Sciences, Federal University of Espírito Santo, Vitória, ES, Brazil. [18] Department of Physiological Sciences, Faculty of Medicine, Agostinho Neto University, Angola. [19] Federal University of Amazonas, Manaus, Brazil. [20] Department of Medicine and Surgery, University of Perugia, Perugia, Italy. [21] Unit of Internal and Translational Medicine, Terni University Hospital, Terni, Italy. [22] Unit of Internal Medicine, Terni University Hospital, Terni, Italy. [23] University of Perugia, Italy. [24] Sport and Exercise Medicine Division, Department of Medicine, University of Padova, Padova, Italy. [25] Centre for Cardiovascular Research, Innovation and Development, Cardiff Metropolitan University, Cardiff, UK. [26] National Cardiovascular Research Network, Wales. [27] King's College London, Department of Paediatric Nephrology, Evelina London Children's Hospital, London, UK. [28] School of Medical Sciences of Minas Gerais, Belo Horizonte,

	Brazil. [29] Division of Endocrinology and Diabetes, Children's Hospital of Philadelphia and Department of Pediatrics, University of Pennsylvania Perelman School of Medicine, Philadelphia, PA, United States. [30] Department of Pediatrics and Nephrology, Medical University of Warsaw, Poland. [31] Medical University of Warsaw, Poland. [32] The Washington University, St. Louis, MO, United States. [33] College of Medicine, University of Illinois. [34] Department of Nephrology, Kidney Transplantation and Hypertension, The Children's Memorial Health Institute, Warsaw, Poland. [35] Hypertension and Cardiometabolic Unit, First Department of Cardiology, Hippokration Hospital, Medical School, National and Kapodistrian University of Athens, Athens, Greece. [36] Universidad de Castilla-La Mancha.	
13.15 – 13.45	**Lunch**	Cafetería
13.45 – 14.45	**Poster Presentations**	Hall
14.45 – 15.45 14.45 – 15:05 15.05 – 15.25	**Session 4** **Co-chairs: Bart Spronck, University of Maastricht, The Netherlands, Christopher C Mayer, AIT Austrian Institute of Technology, Austria** **Career development lectures** Fine-tuning our understanding of exercise hemodynamics in health and disease **Denis J Wakeham, The University of Texas Southwestern Medical Center, Dallas, Texas, USA** One Size Doesn't Fit All: A Clinical Academic Pharmacist's Journey from Hypertension to Arterial Stiffness **Ryan MaNally, King's College London, United Kingdom**	Sala Chulià Campos
15.45 – 16.15	**Refreshments, exhibition and poster viewing**	Hall
16.15 – 17.30 16.15 – 16.40 16.40 – 17.30	**Session 5** **Co-chairs: Patrick Segers, Ghent University, Belgium, Rosa Maria Bruno, Université de Paris, France** **Invited lecture** The new ARTERY Guidelines on Arterial Stiffness **Athanase Protogerou, University of Athens, Greece** **Co-chairs: Karsten Königstein, Otto-von-Guericke University Magdeburg, Germany, Enrique Rodilla, Hospital de Sagunto, FISABIO / CEU University, Spain** **The place of chronic venous disease in the cardiovascular continuum** Title: Connections between chronic venous insufficiency and CV disease **Leonardo de Luca, Cardiology Unit of IRCSS San Matteo Foundation in Pavia, Italy** Title: Endothelial dysfunction and crhonic venous disease **Melina Vega de Céniga, Hospital de Galdakao-Usansolo (Bizkaia), Spain**	Sala Chulià Campos
17.30 – 17.45	**CARTESIAN Study - an update** **Chair: Pierre Boutouyrie, Université Paris Cité, France** **Rosa Maria Bruno, Université Paris Cité, France**	
17.45 – 18.00	**Session 6 AFTER CARTESIAN** **Co-chairs: Carmel McEniery, University of Cambridge, UK, Pedro Cunha, University of Minho, Portugal** **Lifetime Achievement Award Presentation** **Peter Nilsson, Lund University, Sweden**	
18.00 – 18.30	**ARTERY Annual Business Meeting**	Sala Chulià Campos
20.00 – 23.00	**Conference Dinner* and Awards Ceremony** * Dinner will be at each guest's own expense	Restaurante Duna

FRIDAY 17 OCTOBER 2025

Time	Title	Location
09.00 – 09.45	**Session 7** **Co-chairs: Elisabetta Bianchini, Italian National Research Council (CNR), Italy, Christopher C Mayer, AIT Austrian Institute of Technology, Austria** **ARTERY/VascAgeNet roundtable: Vascular ageing: in search of the key criteria for translation to practice** Working Group 1: Knowledge Exchange WG **Rachel Climie, Univ. of Tasmania, Australia / Cédric Neutel, Univ. of Maastricht, The Netherlands** Working Group 2: Technological Innovation WG **Dimitrios Terentes-Printzios, National and Kapodistrian University of Athens, Greece** Working Group 3: Clinical Research and Practice WG **Giacomo Pucci, University of Perugia, Italy, Rosa Maria Bruno, Université de Paris, France** Roundtable Q&A	Sala Chulià Campos
09:45 – 10:45	**Session 8** **Co-chairs: Fernando Martínez, Universidad de Valencia, Spain, Agne Laucyte-Cibulskiene, Lund University, Sweden** **Diabetes, antidiabetic treatment and Arterial Haemodynamics** Mechanisms of arterial damage in diabetes **Martijn Brouwers, University of Maastricht, The Netherlands** Bariatric Surgery, GLP1-ra and arterial haemodynamics **Diego Moriconi, University of Pisa, Italy** Effect of iSGLT2 on arterial stiffness **Michael Doumas, Aristotle University of Thessaloniki, Greece**	Sala Chulià Campos
10.45 – 11.15	**Coffee break**	Hall
11.15 – 12.15	**Session 9** **Co-chairs: Giacomo Pucci, University of Perugia, Italy, Dimitrios Terentes-Printzios, National and Kapodistrian University of Athens, Greece** **Aldosterone in Micro and Macrocirculation** Beyond primary aldosteronism: role of aldosterone in pathophysiology of primary hypertension and CV risk **Silvia Monticone, University of Turin, Italy** New drugs and in aldosterone metabolism and arterial hemodynamics. **Jose Antonio García Donaire, Hosp. Clínico San Carlos Madrid, Spain** Antialdosterone treatment: impact on micro- and macrocirculation **Eugenia Gkaliagkousi, Thessaloniki, Greece**	Sala Chulià Campos
12.15 – 13.15 12.15 – 12.55	**Session 10** **Co-chairs: Rachel Climie, Univ. of Tasmania, Australia, Cédric Neutel, Univ. of Maastricht, The Netherlands** **Open Abstracts – ORAL SESSION 3** **3.01 A biomechanical model for maladaptation of large elastic arteries in hypertension, aging and connective tissue disease** Yousof M.A. Abdel-Raouf[1], Lauranne Maes[1,2], Nele Famaey[2], Mathias Peirlinck[3], Patrick Sips[4], Julie De Backer[4,5], Patrick Segers[1]. [1]Institute of Biomedical Engineering and Technology – BioMMedA, UGent, Gent, Belgium. [2]Biomechanics Section, Department of Mechanical Engineering, KU Leuven, Leuven, Belgium. [3]Department of Biomechanical Engineering, Delft University of Technology, Delft, the Netherlands. [4]Center for Medical Genetics Ghent, Department of Biomolecular Medicine, UGent, Gent, Belgium. [5]Department of Cardiology, Ghent University Hospital, Gent, Belgium. **3.02 Symmetric Projection Attractor Reconstruction (SPAR) Derives Novel Cardiovascular**	Sala Chulià Campos

	Biomarkers of Inflammation Severity from Arterial Pulse Waveforms Jenny Venton[1], Miquel Serna Pascual[1], Carolyn Lam[1], Philip J. Aston[2], Manasi Nandi[1]. [1]Faculty of Life Sciences and Medicine, King's College London, London, United Kingdom. [2]Department of Mathematics, University of Surrey, United Kingdom. **3.03 Arterial remodelling in response to "60 days" head-down bed rest- Analysis through a novel constitutive modelling framework for in vivo applications** Alessandro Giudici[1,2], Karen Barche[3,4], Umit Gencer[3,4], Hakim Khettab[3,4], Elie Mousseaux[3,4], Carole Leguy[5,6], Tammo Delhaas[1], Rosa Maria Bruno[3,4], Bart Spronck[1,7], Pierre Boutouyrie[3,4] [1]Department of Biomedical Engineering, Cardiovascular Research Institute Maastricht (CARIM), Maastricht University, Maastricht, the Netherlands. [2]GROW Institute of Oncology and Reproduction, Maastricht University, Maastricht, the Netherlands. [3]Université Paris Cité, INSERM U970, Paris Cardiovascular Research Centre—PARCC, Paris, France. [4]Hôpital Européen Georges Pompidou, Assistance Publique-Hôpitaux de Paris, Pharmacology and Hypertension and Radiology Units, Paris, France. [5]Department of Cardiovascular Engineering, Institute of Applied Medical Engineering, Helmholtz Institute, Medical Faculty, RWTH Aachen University, Aachen, Germany. [6]Institute of Measurement Engineering and Sensor Technology, University of Applied Sciences Ruhr West, Mülheim an der Ruhr, Germany. [7]Macquarie Medical School, Faculty of Medicine, Health and Human Sciences, Macquarie University, Sydney, Australia. **3.04 Exercise blood pressure indexed to workload provides insight into pathological versus physiological hypertensive response to exercise** Siana Jones[1], Scott T. Chiesa[1], Martin G. Schultz[2], Alun D. Hughes[1]. [1]Unit for Lifelong Health and Ageing, University College London. [2]Menzies Institute for Medical Research, University of Tasmania, Hobart, Australia.	
13.00 – 13.15	**Poster Storm 2** **P.75 Investigating the lowest threshold of vascular benefits from LDL-cholesterol lowering with a PCSK9 mAB inhibitor (alirocumab) in healthy volunteers – INTENSITY-LOW study** Domonkos Cseh[1], Paul J. Cacciottolo[1,2], Michalis S. Kostapanos[3], Annette Hubsch[1], Holly Pavey[1,4], Simon Bond[4], Kaisa M. Mäki-Petäjä[1], Ian B. Wilkinson[1,4], Carmel M. McEniery[1], Joseph Cheriyan[1,2,4]. [1]Division of Experimental Medicine and Immunotherapeutics, Department of Medicine, University of Cambridge, Cambridge, United Kingdom. [2]Cambridge University Hospitals NHS Foundation Trust, Cambridge, United Kingdom. [3]Lipid Clinic, Cambridge University Hospitals NHS Foundation Trust, Cambridge, United Kingdom. [4]Cambridge Clinical Trials Unit, Cambridge University Hospitals NHS Foundation Trust, Cambridge, United Kingdom. **P.76 The role of gasdermins in atherosclerotic plaque destabilization: harmless helpers or cellular saboteurs?** Michelle Zurek[1], Aydın Bölük[2], Uma Thanigai Arasu[2], Mari Taipale[2], Melissa Van Praet[1], Lynn Roth[1], Minna Kaikkonen-Määttä[2], Guido De Meyer[1], Wim Martinet[1]. [1]Laboratory of Physiopharmacology, University of Antwerp, Universiteitsplein 1, 2610 Antwerp, Belgium. [2]A. I. Virtanen Institute for Molecular Sciences, University of Eastern Finland, Neulaniementie 2, 70211 Kuopio, Finland. **P.77 Novel in vitro scalable arterial pulsatile flow model for biodegradation testing of uncoated and coated metallic bioresorbable stents** Andreas Fischbach[1], Raquel Rosillo[1], Dennis Bünte[1], Christelle Briere[1], Fabian Schmidt[2], Adalbert Kovacs[3], Christoph Hehrlein[1]. [1]Department of Cardiology and Angiology, University Heart Center, Laboratory of Biomedical Engineering, University of Freiburg, Germany. [2]Optimed Medizinische Instrumente GmbH, Ferdinand-Porsche-Straße 11, 76275 Ettlingen, Germany. [3]Limedion GmbH, Am Schäferstock 2–4, 68163 Mannheim, Germany. **P.78 Haemodynamic impact of hip bending and overstenting in the common femoral artery, A phantom based study** Adam Geale[1], Jordi Alastruey[1], Pablo Lamata[1], Hany Zayed[2]. [1]School of Biomedical Engineering & Imaging Sciences, King's College London, UK. [2]Department of Vascular Surgery, Guy's and St. Thomas' NHS Foundation Trust, London, UK. **P.79 Hypertension-detection using image-based analysis of arterial tonometry waveforms** Sara Vardanega[1], Patrick Segers[2], Philip Aston[3,4], Ernst Rietzschel[5], Jordi Alastruey[1], Manasi Nandi[6]. [1]School of Biomedical Engineering and Imaging Sciences, King's College London, London, UK. [2]Institute of Biomedical Engineering and Technology, Ghent University, Ghent, Belgium. [3]National Physical Laboratory, Teddington, UK. [4]School of Mathematics and Physics, University of Surrey, Guildford, UK. [5]Department of Cardiovascular Diseases, Ghent	

	University Hospital, Ghent, Belgium. [6]School of Cancer and Pharmaceutical Sciences, King's College London, London, UK. **P.80 Should we track changes or absolute values? In vivo assessment of an AI-based approach for cardiac output monitoring** Ramin Mohammadi[1], Lydia Aslanidou[1], Vincent-Morier Genoud[12], Nikolaos Stergiopulos[1]. [1]Laboratory of Hemodynamics and Cardiovascular Technology, EPFL, Switzerland. [2]Artificial Intelligence in Medical Imaging, ARTORG Center for Biomedical Engineering Research, University of Bern, Switzerland. **P.81 Too clean to be true - Lessons from synthetic versus in vivo data** Lydia Aslanidou[1], Patrick Segers[2], Ernst R. Rietzchel[3], Nikolaos Stergiopulos[1]. [1]LHTC, IBI-STI, EPFL, Switzerland. [2]BioMMeda, IBiTech, Ghent University, Belgium. [3]Department of Internal Medicine, Ghent University and Ghent University Hospital, Belgium. **P.82 Vascular health measures and associations with cardio-metabolic biomarkers in children stratified by risk factor prevalence** Tshepang Molawa[1], Ruan Krugera[2], Gontse Mokwatsia[1,2]. [1]Hypertension in Africa Research Team, Faculty of Health Sciences, North-West University, Potchefstroom, South Africa. [2]SAMRC Extramural Unit for Hypertension and Cardiovascular Disease, North-West University, Potchefstroom, South Africa. **P.83 Using radiomic biomarkers of vascular aging from the carotid artery wall for cardiovascular risk stratification** Gladwin Joywin Melitus[1], Maryam Jadoon[1], Federica Poli[1], Pierre Boutouyrie[1,2], Hakim Khettab[2], Dahirou-Ousmane Sam[1], Elisabetta Bianchini[3], Francesco Faita[3], Xavier Jouven[1], Jean Philippe Empana[1], Rosa Maria Bruno[1,2]. [1]INSERM U970 Team 3, Paris Cardiovascular Research Centre – PARCC, Université Paris Cité. [2]AP-HP, Pharmacology Unit, Hôpital Européen Georges Pompidou, Paris, France. [3]Institute of Clinical Physiology, Italian National Research Council (CNR), Pisa, Italy. **P.84 Abnormal reflected waves modulated by heart rate predict posterior wall hypertrophy in patients with repaired coarctation of the aorta** Marina Vaccari[1], Laura E. Maldonado[1], Claudio G. Moros[1], Angela Sardella[1], Miriam Romo[1], César A. Romero[2]. [1]Hospital de Niños Ricardo Gutiérrez, Buenos Aires, Argentina. [2]Hospital Privado Universitario de Córdoba, Córdoba, Argentina.	Sala Chulià Campos
13.15 – 13.45	**Lunch**	Cafetería
13.45 – 14.45	**Poster Presentations**	Hall
14.45 – 15.15	**Session 11** **McDonald Lecture** **Co-chairs: Carmel McEniery, University of Cambridge, UK, Pedro Cunha, University of Minho, Portugal** **Thomas Weber, Klinikum Wels-Grieskirchen, Wels, Austria**	Sala Chulià Campos
15.15 – 16.30 15.15 – 15.35 15.35 – 16.30	**Session 12** **Co-chairs: Pierre Boutouyrie, Université de Paris, France, Nikos Stergioipoulos, National Technical University of Athens, Greece** **Invited lecture** Update on basic science and pressure dependence of arterial stiffness **Bart Spronck, Maastricht University, The Netherlands** **Open Abstracts – ORAL SESSION 4** **4.01 Effects of stringent fluid management on hemodynamic parameters in dialysis patients** Christopher C Mayer[1], [1]AIT Austrian Institute of Technology, Center for Health & Bioresources, Medical Signal Analysis, Vienna, Austria. **4.02 Sex-specific contribution of vascular stiffness and baroreflex sensitivity to central blood pressure** Smriti Badhwar[1], [1]Paris Cardiovascular Research Centre (PARCC), INSERM, U970, Paris, France.	Sala Chulià Campos

	4.03 The influence of ethnicity and antihypertensive medications on arterial stiffness Anna Hernandez Rubio[1], [1]School of Cardiovascular and Metabolic Medicine & Sciences, King's College London, UK. **4.04 Radial wall radiomic signature of Systemic Sclerosis** Maryam Jadoon[1], [1]Université Paris Cité, Inserm, PARCC, F-75015 Paris, France. **4.05 Mast Cell-Driven Plaque Instability Is Attenuated by Atorvastatin and Cromolyn Sodium in ApoE-/-Fbn1C1039G+ Mice** Leonardo Martin[1], [1]Department of Pharmaceutical Sciences, Laboratory of Physiopharmacology, University of Antwerp, Antwerp, Belgium.	
16.30 – 17.00	**Closing remarks and Preview of ARTERY26** **Carmel McEniery, University of Cambridge, UK** **Enrique Rodilla, FISABIO / CEU University, Spain** **Pedro Cunha, University of Minho, Portugal** **Ana Jeroncic, University of Split, Croatia**	

A-Z General Information

ABSTRACTS

Abstracts for ARTERY25 are available to download from the ARTERY website: **https://www.arterysociety.org/**
Accepted oral and poster abstracts will also be published in a future issue of the Society's Journal, ARTERY Research.

AWARDS AND PRIZES

The Awards Ceremony will take place during the Conference Dinner on Thursday 16 October. Prizes will be awarded for Best Young Investigator Presentation, Career Development Lecture, Neutral Data and Best Poster.

BADGES

Name badges must be worn at all times throughout the conference. For reasons of security delegates not wearing a name badge may be denied access to scientific sessions.

EXHIBITION

Please ensure you take time to visit and support the companies exhibiting at ARTERY25.

LUNCH & REFRESHMENTS

Refreshment breaks will be served in the Exhibition area situated in the Illustrious Official College of Physicians of Valencia's Hall. Lunch will be served in the Illustrious Official College of Physicians of Valencia's Cafeteria.

MOBILE/CELL PHONES & ELECTRONIC DEVICES

As a courtesy to speakers and other delegates, please ensure that mobile/cell phones, tablets, and other electronic devices are switched to silent during sessions. Filming during sessions is not permitted.

PHOTOGRAPHY

The Committee will be taking photographs throughout the meeting for use on the ARTERY website and in other publications. If you do not wish to be photographed, please let the Secretariat staff know by visiting the Registration Desk.

POSTERS

Posters will be displayed throughout the event in the Exposition Area and the moderated sessions are allocated on the following days:

Thursday 16 October 2025 – 13.45-14.40
Moderated Poster Session I: Clinical & Pathophysiology
Moderated Poster Session I: Experimental & Lifestyle
Moderated Poster Session I: Methodologies
Moderated Poster Session I: Vascular Ageing
Friday 17 October 2025 – 13.45 – 14.40
Moderated Poster Session II: Clinical & Pathophysiology
Moderated Poster Session II: Experimental & Lifestyle
Moderated Poster Session II: Methodologies
Moderated Poster Session II: Vascular Ageing

All posters will be moderated and visited by judges during the above listed times. All poster presenters are encouraged to be at their posters during the time of their moderated presentation. We regret that any presenters not at their posters during these sessions may not be eligible for an award.

MOUNTING AND REMOVAL OF POSTERS

All submitted posters will be displayed throughout the duration of the event, regardless of arrival time. There will be no division by sessions or days. Posters may be mounted starting Thursday 16 October at 09:00 and must be removed by Friday 17 October at 15:45.

QUESTIONS TO SPEAKERS

During discussion periods, delegates who wish to pose a question should raise their hand clearly and wait to be acknowledged by the Chairperson. Please do not ask a question until you have been given a microphone.

REGISTRATION DESK

The conference organisers will be located at the Registration Desk and will be pleased to assist you with queries throughout the conference.
The Registration Desk will be open at the following times:
Wednesday 15 October: 08.00 – 18.45
Thursday 16 October: 08.00 – 18.30
Friday 17 October: 08.00 – 17.00

SPEAKER PREVIEW

All invited speakers and oral presenters are required to submit their presentation slides at the earliest opportunity, and no later than two sessions before their scheduled talk. Upon arrival, please inquire at the Registration Desk to be directed to the audio-visual technician, who will assist with checking your presentation and ensuring compatibility with the available equipment.

VENUE INFORMATION

The Illustrious Official College of Physicians of Valencia
Av. de la Plata, 34, Quatre Carreres, 46013 València,
Email: technicalsecretary@artery25.com

COMPLIANCE AND CONTINUING MEDICAL EDUCATION (CME)

ARTERY25 has been approved by FARMAINDUSTRIA and the CVS/e4ethics Team. This approval applies for Fundación Fenin, MedTech Europe and the European Federation of Pharmaceutical Industries Associations (EFPIA). Accreditation has been requested by the European Accreditation Council for Continuing Medical Education (EACCME®), an institution of the European Union of Medical Specialists (UEMS), and the Escuela Valenciana de Estudios en Salud (EVES).

CONFERENCE DINNER

Thursday 16 October – 20.00 - 23.00 (Meeting point: main entrance ICOMV 19:55)
The Conference Awards Dinner will be held at Restaurante Duna, Paseo Pintor Fco. Lozano, s/n, 46012 Valencia.
Dinner will be at each guest's own expense

INSTITUTIONAL SUPPORT

We wish to extend our sincere gratitude to these entities, whose support has been indispensable to the successful organization of ARTERY25.

ARTERY

Association for Research into Arterial Structure and Physiology

ARTERY 26

24 - 25 September 2026

Split, Croatia, confirmed as ARTERY26 hosts.

www.arterysociety.org

Oral presentations

YOUNG INVESTIGATOR AWARD – ORAL SESSION 1

1.01 MICROVASC Study - Assessing Early Vascular Aging and Feasibility of Measuring Arterial Stiffness Via Pulse Wave Velocity During a Parabolic Flight Campaign

Karen Barchetti[1,2], Audrey Derobertmasure[1,2,3], Serena Zanelli[4], Smriti Badhwar[1], Stéphanie Chhun[5], Marie Beauvalet[1], Raphael Couronné[1], Rosa-Maria Bruno[1,2,3], Louise-Laure Mariani[6], Pierre Boutouyrie[1,2,3].
[1]INSERM UMRS 970, Paris Cardiovascular Research Centre – PARCC, Paris, France. [2]Université Paris Cité, Faculté de Médecine, Paris, France. [3]Assistance Publique Des Hôpitaux De Paris, Hôpital Européen Georges Pompidou, Clinical Pharmacology Unit and DMU CARTE, Université Paris Cité, Paris France. [4]Axelife, Paris, France. [5]Laboratory of Immunology and DMU BIOPHYGEN, Georges Pompidou European Hospital and Necker-Enfants Malades Hospital, AP-HP, Paris, France; Université Paris-Cité, INEM, Inserm U1151, Paris, France. [6]Départements de neurologie et de pharmacologie médicale, CIC Neurosciences, Hôpital Pitié-Salpêtrière, AP-HP, Institut du Cerveau ICM, Sorbonne Université, INSERM, Paris, France.

1.02 A comparison between constitutive and non-constitutive wall models in capturing pressure–diameter relationships along the aortic length

Mobina Izadpanah[1], Lydia Aslanidou[2], Cindy van Loo[1], Jordi Alastruey[3], Ramin Shahbad[4], Majid Jadidi[4], Tammo Delhaas[1], Bart Spronck[1,5], Alessandro Guidici[1,6].
[1]Department of Biomedical Engineering, Cardiovascular Research Institute Maastricht (CARIM), Maastricht University, Maastricht, The Netherlands. [2]Laboratory of Hemodynamics and Cardiovascular Technology (LHTC), École Polytechnique Fédérale de Lausanne, Lausanne, Switzerland. [3]School of Biomedical Engineering and Imaging Sciences, Department of Digital Twins for Healthcare, King's College London, London, United Kingdom. [4]Department of Biomechanics, University of Nebraska Omaha, Omaha, NE, United States. [5]Macquarie Medical School, Faculty of Medicine, Health and Human Sciences, Macquarie University, Sydney, NSW, Australia. [6]GROW Institute for Oncology and Reproduction, Maastricht University, Maastricht, The Netherlands.

1.03 Assessment of cerebral arterial stiffness in multistage renal disease model a numerical study

Obeid Hasan[1,2], Bikia Vasiliki[3,4], Addour Saliha[1], Stergiopulos Nikos[3], Agharazii Mohsen[1,2].
[1]CHU de Québec Research Center – L'Hôtel-Dieu de Québec Hospital, Québec City, Québec, Canada. [2]Division of Nephrology, Department of Medicine, Faculty of Medicine, Université Laval, Québec City, Québec, Canada. [3]Byers Center for Biodesign, Stanford University, Stanford, CA, USA. [4]Laboratory of Hemodynamics and Cardiovascular Technology, Swiss Federal Institute of Technology, Lausanne, Switzerland.

1.04 The impact of nocturnal ambulatory blood pressure measurements on the autonomic nervous system

Johanna N.A. Bergmans[1], Maartje H. Hoogeveen[1], Jesse D. Quadt[1,2], Marion Barbeau[1], Fabian Beutel[1], Evelien Hermeling[1].
[1]imec The Netherlands, Eindhoven, The Netherlands. [2]Eindhoven University of Technology, Eindhoven, The Netherlands.

YOUNG INVESTIGATOR AWARD – ORAL SESSION 2

2.01 Basal autophagy activation attenuates aortic stiffness in a mouse model of elastic fibre fragmentation

Van Praet M., Jacobs C., Neutel C.H.G., Roeyen E., Wesley C., Guns P.J., De Meyer G.R.Y., Martinet W. and Roth L.
Laboratory of Physiopharmacology, University of Antwerp,Belgium.

2.02 Exogenous Methylglyoxal supplementation reduces arterial stiffening and vascular dysfunction in a mouse model of type 2 diabetes

Margarita G. Pencheva[1,2], Philippe Vangrieken[1,3], Koen W.F. van der Laan[2], Alessandro Giudici[2,4], Petra Niessen[1], Jean L.J.M. Scheijen[1], Peter Leenders[3,5], Maria Soledad Fernandez Alfonso[6], Bart Spronck[2,7], Koen D. Reesink[2], Casper G. Schalkwijk[1].
[1]Department of Internal Medicine, Cardiovascular Research Institute Maastricht (CARIM), Maastricht University, Maastricht, the Netherlands. [2]Department of Biomedical Engineering, Cardiovascular Research Institute Maastricht (CARIM), Maastricht University, Maastricht, the Netherlands. [3]Department of Pharmacology and Toxicology, Cardiovascular Research Institute Maastricht (CARIM), MHeNs, School for Mental Health and Neuroscience, Maastricht University, Maastricht, the Netherlands. [4]GROW Research Institute for Oncology and Reproduction, Maastricht University, Maastricht, the Netherlands. [5]Department of Biochemistry, Cardiovascular Research Institute Maastricht (CARIM), Maastricht University, Maastricht, the Netherlands. [6]Department of Pharmacology, Pharmacognosy and Botany, Pluridisciplinary Institute, Complutense University of Madrid, Madrid, Spain. [7]Macquarie Medical School, Faculty of Medicine, Health and Human Sciences, Macquarie University, Sydney, Australia.

2.03 Machine Learning-Based Classification of Fetal Growth Restriction Using Ultrasound aortic Diameter Waveforms

Fatma Alimahomed[1], Marietta Charakida[2], Tanvi Mansukhani[2], Mengxing Tang[3], Peter H. Charlton[4], Kirsten Christensen-Jeffries[1], Jordi Alastruey[1].

[1]School of Biomedical Engineering & Imaging Sciences, Faculty of Life Sciences & Medicine, King's College London, St Thomas' Hospital, London, UK. [2]Harris Birthright Research Centre for Fetal Medicine & Department of Cardiovascular Imaging, School of Biomedical Engineering & Imaging Sciences, King's College London, London, UK, St Thomas' Hospital, London, UK. [3]Department of Bioengineering, Faculty of Engineering, Imperial College London, London, UK. [4]Department of Public Health and Primary Care, University of Cambridge, Cambridge, UK.

2.04 Cost-effectiveness of screening for arterial stiffness in individuals with elevated blood pressure

Cédric H.G. Neutel[1], Alessandro Giudici[1], Smriti Badhwar[2], Tammo Delhaas[1], Giacomo Pucci[3], Mickaël Hiligsmann[4], Rosa Maria Bruno[2,5], Bart Spronck[1,6,7].

[1]Department of Biomedical Engineering, Cardiovascular Research Institute Maastricht (CARIM), Maastricht University, Maastricht, the Netherlands. [2]Paris Cardiovascular Research Centre, INSERM, Paris, France. [3]Unit of Internal and Translational Medicine, Terni Hospital – Department of Medicine and Surgery, University of Perugia, Italy. [4]Department of Health Services Research, CAPHRI Care and Public Health Research Institute, Maastricht University, Maastricht, the Netherlands. [5]Assistance Publique Hôpitaux de Paris, Hôpital Européen Georges Pompidou, Paris, France. [6]Department of Biomedical Engineering, School of Engineering & Applied Science, Yale University, New Haven, Connecticut, USA. [7]Macquarie Medical School, Faculty of Medicine, Health and Human Sciences, Macquarie University, Sydney, New South Wales, Australia.

OPEN ABSTRACTS – ORAL SESSION 3

3.01 A biomechanical model for maladaptation of large elastic arteries in hypertension, aging and connective tissue disease

Yousof M.A. Abdel-Raouf[1], Lauranne Maes[1,2], Nele Famaey[2], Mathias Peirlinck[3], Patrick Sips[4], Julie De Backer[4,5], Patrick Segers[1].

[1]Institute of Biomedical Engineering and Technology – BioMMedA, UGent, Gent, Belgium. [2]Biomechanics Section, Department of Mechanical Engineering, KU Leuven, Leuven, Belgium. [3]Department of Biomechanical Engineering, Delft University of Technology, Delft, the Netherlands. [4]Center for Medical Genetics Ghent, Department of Biomolecular Medicine, UGent, Gent, Belgium. [5]Department of Cardiology, Ghent University Hospital, Gent, Belgium.

3.02 Symmetric Projection Attractor Reconstruction (SPAR) Derives Novel Cardiovascular Biomarkers of Inflammation Severity from Arterial Pulse Waveforms

Jenny Venton[1], Miquel Serna Pascual[1], Carolyn Lam[1], Philip J. Aston[2], Manasi Nandi[1].

[1]Faculty of Life Sciences and Medicine, King's College London, London, United Kingdom. [2]Department of Mathematics, University of Surrey, United Kingdom.

3.03 Arterial remodelling in response to "60 days" head-down bed rest- Analysis through a novel constitutive modelling framework for in vivo applications

Alessandro Giudici[1,2], Karen Barche[3,4], Umit Gencer[3,4], Hakim Khettab[3,4], Elie Mousseaux[3,4], Carole Leguy[5,6], Tammo Delhaas[1], Rosa Maria Bruno[3,4], Bart Spronck[1,7], Pierre Boutouyrie[3,4]

[1]Department of Biomedical Engineering, Cardiovascular Research Institute Maastricht (CARIM), Maastricht University, Maastricht, the Netherlands. [2]GROW Institute of Oncology and Reproduction, Maastricht University, Maastricht, the Netherlands. [3]Université Paris Cité, INSERM U970, Paris Cardiovascular Research Centre—PARCC, Paris, France. [4]Hôpital Européen Georges Pompidou, Assistance Publique-Hôpitaux de Paris, Pharmacology and Hypertension and Radiology Units, Paris, France. [5]Department of Cardiovascular Engineering, Institute of Applied Medical Engineering, Helmholtz Institute, Medical Faculty, RWTH Aachen University, Aachen, Germany. [6]Institute of Measurement Engineering and Sensor Technology, University of Applied Sciences Ruhr West, Mülheim an der Ruhr, Germany. [7]Macquarie Medical School, Faculty of Medicine, Health and Human Sciences, Macquarie University, Sydney, Australia.

3.04 Exercise blood pressure indexed to workload provides insight into pathological versus physiological hypertensive response to exercise

Siana Jones[1], Scott T. Chiesa[1], Martin G. Schultz[2], Alun D. Hughes[1].

[1]Unit for Lifelong Health and Ageing, University College London. [2]Menzies Institute for Medical Research, University of Tasmania, Hobart, Australia.

OPEN ABSTRACTS – ORAL SESSION 4

4.01 Effects of stringent fluid management on heamodynamic parameters in dialysis patients

Christopher C. Mayer[1], Luis Naar[2,3], Bernhard Hametner[1], Sebastian Mussnig[2], Simon Krenn[4,2], Stefan Orter[1], Joachim Beige[5], Siegfried Wassertheurer[1], Manfred Hecking[2,3,5].

[1]AIT Austrian Institute of Technology, Center for Health & Bioresources, Medical Signal Analysis, Vienna, Austria. [2]Medical University of Vienna, Center for Public Health, Department of Epidemiology, Vienna, Austria. [3]Medical University of Vienna, Department of Medicine III, Division for Nephrology and Dialysis, Vienna, Austria. [4]IUVABIT e.U., Vienna, Austria. [5]Kuratorium for Dialysis and Transplantation e.V. (KfH), Neu-Isenburg, Germany.

4.02 Sex-specific contribution of vascular stiffness and baroreflex sensitivity to central blood pressure

Smriti Badhwar[1,2], Pierre Boutouyrie[1,2], Marie-Cécile Périer[1], Nicolas Danchin[3], Cédric Lemogne[3], Xavier Jouven[1], Jean-Philippe Empana[1], Rosa-Maria Bruno[1,2].

[1]Paris Cardiovascular Research Centre (PARCC), INSERM, U970, Paris, France. [2]Assistance publique hôpitaux de Paris (APHP), Paris, France. [3]Investigations Précliniques de Paris (IPC), Paris, France.

4.03 The influence of ethnicity and antihypertensive medications on arterial stiffness

Anna Hernández-Rubio[1,2], Lisa Giusti[1,3], Ryan McNally[4], Bushra Farukh[1], Phill Chowienczyk[1], Carmel M. McEniery[5], Ian Wilkinson[5], Luca Faconti[1].

[1]School of Cardiovascular and Metabolic Medicine & Sciences, King's College London, UK. [2]Germans Trias i Pujol Research Institute, Barcelona, Spain. [3]Università di Pisa, Italy. [4]King's Health Partners, London, UK. [5]Division of Experimental Medicine and Immunotherapeutics, University of Cambridge, UK.

4.04 Radial wall radiomic signature of Systemic Sclerosis

Maryam Jadoon[1], Areti Triantafyllou[1], Kim Dahan[2], Federica Poli[1], Hakim Khettab[2], Gonçalo Boleto[3], Yannick Allanore[3,4], Pierre Boutouyrie[1,2], Rosa Maria Bruno[1,2].

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4.05 Mast Cell-Driven Plaque Instability Is Attenuated by Atorvastatin and Cromolyn Sodium in ApoE-/-Fbn1C1039G+ Mice

Leonardo Martin[1], Gabriel Bueno[2], Lynn Roth[1], Ilze Bot[3], Guido R.Y. De Meyer[1].

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Posters

MODERATED POSTER SESSION 1 – CLINICAL & PATHOPHYSIOLOGY

P.01 A Natural and novel strategy against intermittent claudication: evidence from a One-Year Intervention with Vitexin (Crataegus oxycantha and Vitamin K2 (MK7)

Rosi Gianluigi, Ceccaroni[1].
[1]Rosi Vascular Center (Perugia – Italy).

P.02 Determinants of elastic and stiffening components of pulse pressure based on 24-hour ambulatory blood pressure monitoring

János Nemcsik[1], Johanna Takács[2], Dénes Páll[3,4], Zsófia Kekk[1], Zsófia Jósvai[1], Péter Torzsa[1], Dorottya Pásztor[7], Akos Koller[5,6], Zoltán Járai[7,8].
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P.03 Association between systolic blood pressure and daily step count in individuals with heart failure. The ExICFep clinical trial and RedExAP

Iris Otero-Luis[1], Alicia Saz-Lara[1], Iván Cavero-Redondo[1], Carla Geovanna Lever-Megina[1], Irene Martínez-García[1], Óscar Martínez-Cifuentes[1], Samuel López-López[1], Nerea Moreno-Herraiz[1].
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P.04 The association between triglyceride-glucose index and carotid stiffness

Miriana Ardagna, Graziana Fumarola, Stefano Turchetti, Paolo Scurti, Elisabetta Ponzuoli, Federica Piani, Claudio Borghi, Davide Agnoletti (presenting Author).
Cardiovascular Internal Medicine, Department of Medical and Surgical Sciences, University of Bologna, Italy.

P.05 Genetic Risk for Coronary Artery Disease and Subclinical Cardiovascular Risk in the Young

Scott T Chiesa, Siana Jones, and Alun D Hughes
Department of Population Science and Experimental Medicine, Institute of Cardiovascular Science, UCL, London, UK

P.06 The impact of kidney function on arterial stiffness in COVID-19 survivors: an analysis from CARTESIAN Study.

Diego Moriconi[1], Simona Bílková[2]; Jeremy Bellien[3]; Luca Faconti[4]; Catherine Fortier[5]; Jan Filipovský[2]; Lorenzo Ghiadoni[1]; Andrea Grillo[6]; Bernhard Hametner[7]; Alun Hughes[8]; Ignatios Ikonomidis[9]; Dr Agne Laucyte-Cibulskiene[10]; Mai Tone Lonnebakken[11]; Maria Rosa Bernal López[12]; Christopher Mayer[13]; Maria Lorenza Muiesan[14]; Rogério Toshiro Passos Okawa[15]; Anna Paini[14]; Chakravarthi Rajkumar[16]; Bart Spronck[17–18]; Dimitrios Terentes-Printzios[19]; Yeşim Tunçok[20]; Luca Zanoli[21]; Thomas Weber[22]; Pierre Boutouyrie[23]; Rosa Maria Bruno[23] and the CARTESIAN investigators.
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P.07 Non-invasive Predictors of Central Parameters and Clinical Outcomes in Heart Failure - A Systematic Review.

V. Victoria Dahmen, X. Xinyue Hu, C. Carmel McEniery, I. Ian Wilkinson, S. Spoorthy Kulkarni
Experimental Medicine and Immunotherapeutics, University of Cambridge

P.08 Childhood Intelligence and the Emergence of Cardiovascular Risk Factors Across Adolescence

Jocelyn Shih, Siana Jones, Alun D Hughes, and Scott T Chiesa.
Institute of Cardiovascular Science, University College London, London, UK.

P.09 Sex-specific differences in endothelial dysfunction in COVID19 survivors - Insights from the CARTESIAN Study

Dahirou Ousmane Sam[1,2], Smriti Badhwar[1,2], Catherine Fortier[14], Jeremy Bellien[3], Lorenzo Ghiadoni[4], Alvaro N Gurovich[15], Bernhard Hametner[5], Alun D. Hughes[6], Ignatios Ikonomidis[7], Agne Laucyte-Cibulskiene[16], Christopher C. Mayer[5], Maria Lorenza Muiesan[8], Chakravarthi Rajkumar[9], Carlos Ramos Becerra[10], Bart Spronck[11,12], Dimitrios Terentes-Printzios[13], Pierre Boutouyrie[1,2], Rosa Maria Bruno[1,2] and the CARTESIAN investigators.
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P.10 A fluid-solid interaction study on the impact of false lumen aortic side branch in Type-B aortic dissection

Amith Balasubramanya[1], Markus U. Wagenhäuser[2], Nele Famaey[3], Joris Degroote[4], Patrick Segers[1].
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P.11 Preliminary results of the central hemodynamics, blood pressure and cognition – CEREBRO study

D. Diogo Caetano[1,2], F. Filipa Gonçalves[2,3,4], I. Isabel Vila[3], R. Raquel Barros[5], H. Hugo Couto[6], P. Pedro Guimarães Cunha[1,2,3,4,5], J. Jorge Cotter[1,2,3,4,5].
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MODERATED POSTER SESSION 1 – EXPERIMENTAL & LIFESTYLE

P.12 The impact of healthy motion seating on lower-limb blood flow and blood pressure response to simulated long-haul air

Jane Lewis[1,2], Barry J. Mcdonnell[1,2], Mark Butlin[3], Edward Johnston[1,4], Amira Tairi[5], Thomas Griffiths[1,4], Gisele Bentley[3], Peter Sykes[1], Keeron Stone[1,2].
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P.13 Systolic blood pressure measurement in five fingers of one hand simultaneously

Arie M. van Roon, Anne I. van Gessel, Sakia C. van de Zande, Jesse R. Capelle, Douwe J. Mulder
University Medical Center Groningen, division of Vascular Medicine, The Netherlands

P.14 Evoked responses of heart rate and blood pressure to standing up

Anne I. van Gessel, Arie M. van Roon, Sonja L. van Ockenburg, Reinold O.B.Gans, Mark PM Harms, Douwe J.Mulder
University Medical Center Groningen, division of Vascular Medicine, The Netherlands

P.15 Agreement between sustained shear flow mediated slowing and sustained shear flow-mediated dilation

Keeron Stone[1,2], Barry Mcdonnell[1,2], Thomas Griffiths[1,3], Thomas Griffiths[1,2], Abbie Williams[1,2], Chris Pugh[1,2], Simon Fryer[4], Gabriel Zeiff[5], Aiden J Chauntry[6], Craig Paterson[7], Lee Stoner[6,8].
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P.16 Effect of combined exercise on the association between social determinants of health and pulse wave velocity: the exic-fep clinical trial and mujer-eva project

Nerea Moreno-Herraiz[1], Alicia Saz-Lara[1], Iván Cavero-Redondo[1], Iris Otero-Luis[1], Carla Geovanna Lever-Megina[1], Irene Martínez-García[1], Óscar Martínez-Cifuentes[1], Samuel López-López[1].
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MODERATED POSTER SESSION 1 – METHODOLOGIES

P.17 The pressure waveform sampling interval is not a direct indicator of accuracy in transit time measurements

Bart Spronck[1,2], Gabriëlle van Heteren[1,3], Jilke Nooijen[1,3], Carlo Palombo[4,5], Carmela Morizzo[4], Michaela Kozakova[6], Tammo Delhaas[1], Alessandro Giudici[1,7].
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P.18 Radiomics-Based Phenotyping of Vascular Patterns in Carotid Artery wall

Maryam Jadoon[1], Federica Poli[1], Pierre Boutouyrie[1,2], Hakim Khettab[2], Gladwin Joywin-Melitus[1], Dahirou-Ousmane Sam[1], Elisabetta Bianchini[3], Francesco Faita[3], Xavier Jouven[1], Jean Philippe Empana[1], Rosa Maria Bruno[1,2].
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P.19 Fitting of pulse wave velocity versus lumen diameter using local estimations

J. Orera, J. Murillo Castarlenasa.
Instituto de Investigación en Ingeniería de Aragón, University of Zaragoza, C. de Mariano Esquillor Gómez, s/n, Zaragoza, 50018, Spain.

P.20 Resistance trained young men exhibit enhanced carotid vasoreactivity during the cold pressor test

Ian Hornby-Foster[1,2], Cory T. Richards[1], Aimee L. Drane[3], Freya M. Lodge[4], Michael Stembridge[1,5], Rachel N. Lord[1,5], Hannah Davey[1,6], Zaheer Yousef[4], Keeron Stone[1,5], Barry J McDonnell[1,5], Christopher J. A. Pugh[1,5].
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P.21 Comparative analysis of techniques assessing human dorsal hand vein compliance – linear variable differential transformer technique and the VV device

Xinyue Hu.
Experimental Medicine and Immunotherapeutics, University of Cambridge.

P.22 Comparison of tonometer- and ultrasound-based pulse wave analysis

Stefan Orter[1,2], Elisabetta Bianchini[3], Siegfried Wassertheurer[1], Smriti Badhwar[4,5], Bernhard Hametner[1], Sara Sinceri[3,6], Martin Bachler[1], Lorenzo Ghiadoni[7], Pierre Boutouyrie[45], Giacomo Aringhieri[7], Mirko Cosottini[7], Daniela Guarino[7], Francesco Faita[3], Vincenzo Gemignani[3,6], Rosa Maria Bruno[4,5], Christopher C. Mayer[3].
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P.23 Detecting vascular damage by measuring arterial stiffness in a hemodynamic manner

Sanam Khataei[1,2], Kaveh Jafari[1,2], Catherine Fortier[1,3], Emy Philibert[1,2], Elizabeth de Rico[1,2], Bart Spronck[4], Alessandro Guidici[4], Hasan Obeid[1,2], Saliha Addour[12], Emmanuel Bujold[56], Rémi Goupil[7], Mohsen Agharazii[1,2].
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P.24 Beat-to-beat blood pressure variability accounts for a component of observed interarm differences in blood pressure

Vaidehi S. Desai[1], Isabella Tan[1,2], Junli Zuo[3], Alberto P. Avolio[1], Karen C. Peebles[4], Mark Butlin[1].
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P.25 Prevalence of Reverse Amplification Using a Type II Device in Hong Kong Community-Based Populations

Shuqi Wang, Samuel YS Wong, Benjamin HK Yip, Eric KP Lee.
Jockey Club School of Public Health and Primary Care, The Chinese University of Hong Kong.

P.26 Assessing endothelial function using photoplethysmography data

Pitkäkangas M.Sc, Pauli Ohukainen PhD, Aleksi Rantanen M. Sc, Hannu Koivisto M. Sc, Olli Heikkinen M.Sc, Julia Kosonen M.Sc, Heli. Koskimäki PhD (Tech).

MODERATED POSTER SESSION 1 – VASCULAR AGEING

P.27 Association between A body shape index and carotid plaque prevalence in a primary prevention cohort

Egidija Rinkuniene[2], Ignas Badaras[2], Vilma Dženkevičiūtė[1], Alma Čypienė[2], Jolita Badariene[2].
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P.28 Cognitive frailty and arterial stiffness – findings from the FRAXI study

Ekow Mensah[1], Frances-Ann Kirkham[1], Abigail Whyte[2], Pietro Ghezzi1, Khalid Ali[1], Sandra Sacre[1], Chakravarthi Rajkumar[1].
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P.30 Life-course systolic blood pressure trajectories and their determinants- longitudinal insights from the MRC National Survey of Health and Development

Tsz Ching Tam, Gaby Captur, Nish Chaturvedi, Alexander Labeit, Andrew Wong, Alun Hughes.
Department of Population Science and Experimental Medicine, University College London.

P.31 Behind the Numbers- Exploring the impact of age and calibration method on diurnal variations in 24-hour central ambulatory blood pressure

Gisele J. Bentley[1], Shikai Yu[2], Barry J. McDonnell[3,4], Alberto Avolio[5], Ian B. Wilkinson[1], Carmel M. McEniery[1].
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P.32 Distinct haemodynamic phenotypes associated with training type predict elevated systolic blood pressure in youth

Abbie Williams[1,2], Keeron Stone[1,2], Rachel Lord[1,2], Michael Stembridge[1,2], Ian B. Wilkinson[3], Carmel M. McEniery[3], John R. Cockcroft[1], Chris J. Pugh[1,2], Barry J. McDonnell[1,2].
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P.33 Effect of high intensity interval training on the association between social determinants of health and change in arterial stiffness in patients with heart failure: the ExIC-Fep clinical trial and RedExAP

Alicia Saz-Lara, Iván Cavero-Redondo, Iris Otero-Luis, Irene Martínez-García, Nerea Moreno-Herraiz, Óscar Martínez-Cifuentes, Carla Geovanna Lever-Megina, Samuel López-López.

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MODERATED POSTER SESSION 2 – CLINICAL & PATHOPHYSIOLOGY

P.34 Analysis of the Relationship Between Skin Autofluorescence and Echocardiographic Parameters in Patients with Heart Failure with Preserved Ejection Fraction According to Sex: The ExIC-FEp Clinical Trial and MUJER-EVA Project

Irene Martínez García, Iván Cavero-Redondo, Alicia Saz-Lara, Carla Geovanna Lever-Megina, Nerea Moreno Herráiz, Iris Otero Luis, Óscar Martínez-Cifuentes, Samuel López-López.
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P.35 Drug repurposing as a method of increasing efficiency

Nerea Moreno-Herraiz, Alicia Saz-Lara, Iván Cavero-Redondo, Iris Otero-Luis, Carla Geovanna Lever-Megina, Irene Martínez-García, Óscar Martínez-Cifuentes, Samuel López-López.
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P.36 Sex differences in central arterial pressure and waveform indices - Myofit46

Bernhard Hametner[1], Martin Bachler[1], Debbie Falconer[2], Stefan Orter[1], Emma Martin[2], Matthew Webber[2], Haytham Shah[2], Christopher C. Mayer[1], Gabriella Captur[23], Siegfried Wassertheurer[1], Alun Hughes[2].
[1]AIT Austrian Institute of Technology, Center for Health & Bioresources, Medical Signal Analysis, Vienna, Austria. [2]University College London, Unit for Lifelong Health & Ageing, London, United Kingdom. [3]ICC Unit, Royal Free London, UK.

P.37 Autonomic nervous system imbalance and increased pulse wave reflection in normotensive offspring of parents with hypertension

Mario Fritsch Neves, Michelle Rabello Cunha, Samanta Mattos, Fabiano Serfaty, Wille Oigman.
State University of Rio de Janeiro - Department of Clinical Medicine.

P.38 A Flexible Framework for Harmonizing ICU Waveform and Clinical Data from MIMIC-III

Vincent Morier-Genoud[1,2], Lydia Aslanidou[2], Raphael Sznitman[1], Nikos Stergiopulos[2].
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P.39 Changes in stiffness indices during a single hemodialysis session in end-stage renal disease population: a systematic review and meta-analysis

Clément Vachey[12], Aurélie Dufour[13], Maghalie Carrière-Dussault[14], Norah Zola[1], Mathilde Paré[1], Hasan Obeid[1], Sarah O'Connor[56], Mohsen Agharazii[13], Catherine Fortier[14].
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P.40 Haemodynamic analysis of endovascular repair of abdominal aortic aneurysms

Eason Rangarajan[1], Kawal Rhode[1], Said Abisi[2], Jordi Alastruey[1].
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P.41 The index and middle fingers are most affected by cold-induced ischemia in Raynaud's phenomenon: a retrospective multi-group analysis of digital ischemic patterns

Jesse Cappelle[1], Arie Roon van[1], Udo Mulder[1].
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P.42 What Have We Learned from the ARCADIA-POL Study?

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P.43 The Youth Vascular Consortium and reference intervals for central systolic blood pressure and augmentation index in young people

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M[34+35], Rodrigues-Machado M.D.G.[36], Kelly A[37], Litwin M[38], Obrycki L[38], Pac M[38], Terentes-Printzios D[39], Vlachopoulos C[39], Saladini F[40], Palatini P[41], Vriz O[42].
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MODERATED POSTER SESSION 2 – EXPERIMENTAL & LIFESTYLE

P.44 Increased large artery stiffness is associated with reduced microvascular glycocalyx thickness in older adults

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P.45 Interleukin-6 is better associated with frailty than C-reactive protein – findings from the FRAXI study

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P.46 Relationship between arterial stiffness body composition and fat distribution in the general population

Kaveh Jafari[1], Saliha Addour[1], Catherine Fortier[1], Didace Ndalla Landou[1], Bernhard Hametner[2], Siegfried Wassertheurer[2], Rémi Goupil[3], Mohsen Agharazii[1].
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P.47 Peripheral artery disease haemodynamics assessment using one-dimensional blood flow modelling

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P.48 Sex-Specific Associations Between Social Determinants of Health and Vascular Responses to a High-Fat Meal

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MODERATED POSTER SESSION 2 – METHODOLOGIES

P.49 Doppler Ultrasound Measurement of Central Artery Elasticity and Stiffness

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P.50 A Physical Role for Arterial Morphology in Pulse Wave Reflection and Hypertension

Trevor Tucker[1].
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P.51 Calibrating arterial networks via inverse-adjoint methods

L. Sánchez Fuster[1], J. Murillo Castarlenas[1], J. L. Gracia Lozano[2].
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P.52 Non-invasive central pressure estimation using physics-informed neural networks

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P.53 A novel cardiac threshold during aerobic exercise: Definition of the individual cardiac contraction threshold (iCarT) and its relation to peripheral vascular function in healthy young adults

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P.54 Comparison of C Pulse and SC Devices for Non-Invasive Estimation of Central Blood Pressure and Aortic Pulse Wave Indices

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P.55 Modelling skeletal muscle haemodynamics during incremental exercise using Near-infrared Spectroscopy

Ella Chawla[1], Jinchen Li[2], Alexandra Jamieson[1], Lamis Alghamdi[1], Andrea George[1], Hubin Zhao[2], Alun D. Hughes[1], Siana Jones[1].
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P.56 Triboelectric Nanogenerator Force Sensor for Cardiovascular Monitoring_Ran Yan_KCL

Ran Yan, Eason Rangarajan, Jingyuan Hong, Aristide Mathieu, Zhouyang Xu, Michele Orini, Rachel Clough, Gerald Carr-White, Kawal Rhode and Jordi Alastruey.
King's College London.

P.57 The Use of Artificial Intelligence in Estimating Arterial Stiffness A Scoping Review

Alexander Soussani[1], Ola El Zein[1], Souha Fares[1], Christopher Mayer[2], Bernhard Hametner[2], Rosa-Maria Bruno[3], Lara Afesh[1], Houry Puzantian[1].
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MODERATED POSTER SESSION 2 – VASCULAR AGEING

P.58 Associations Between Neighborhood Disadvantage and Arterial Stiffness: Findings from the DEpICT Study in Cyprus

Galatia Photiou[1], Nicos Middleton[2], Demosthenis B. Panagiotakos[3], Andrie G. Panayiotou[1].
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P.59 Neuro-endocrine markers and arterial stiffness in young adults with masked hypertension: the African-PREDICT study

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P.60 Physical Activity and Arterial Stiffness in Elderly Men with and Without Abdominal Aortic Aneurysm Baseline Results from the Oral and Vascular Health Study

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P.61 Lifestyle behaviours and vascular parameters in women: an umbrella review. The MUJER-EVA Project

CG. Lever-Megina, A. Saz-Lara, I. Cavero-Redondo, I. Otero-Luis, N. Moreno-Herraiz, I. Martínez-García, O. Martínez-Cifuentes, S. López-López.
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P.62 Escapers from complications or death despite high pulse wave velocity in the elderly – why are they protected

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P.63 Advanced glycation end products, arterial stiffness and cardiovascular mortality in chronic kidney disease

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P.64 Vascular Ageing in People with Serious Mental Illness (SMI): Pulse Wave Velocity Reveals Hidden Cardiovascular Risk Component

Adrian Heald[1], Karen Barchetti[2], Magdalena Nasadowska[3], Sangeeth Veluchumy[1], Siobhan Behan McCabe[3], Aran Gillespie[3], J. Martin Gibson[1], Simon Anderson[4], Michael Crawford[3], Pierre Boutouyrie[2].
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POSTER STORM 1

P.65 Associations between pulse pressure amplification and inflammation in young adults according to body composition: The African-PREDICT study

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P.66 Comparative effect of dialysate calcium doses on arterial stiffness in dialysis patients: A network meta-analysis

Óscar Martínez-Cifuentes[1], Irene Martínez-García[1], Nerea Moreno-Herraiz[1], Iris Otero-Luis[1], Samuel López-López[1], Carla Geovanna Lever-Megina[1], Iván Cavero-Redondo[1], Alicia Saz-Lara[1].
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P.67 Calciprotein particles impair autophagic flux in human aortic endothelial and smooth muscle cells in vitro

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P.68 Endogenous bradykinin in perivascular adipose tissue: role on arterial function in early chronic kidney disease

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P.69 Dual-channel ultrasound sensor for pulse wave velocity and blood pressure estimation a proof-of-concept study

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P.70 Dual-wavelength optical investigation of the microcirculation and macrocirculation

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P.71 Deep learning-based segmentation of the carotid artery

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P.72 In-vivo estimation of blood pressure with commercial ultrasound devices

Ana Belen Amado-Rey[1,2], Elisabetta Bianchini[3], Christopher C. Mayer[4], Bernhard Hametner[4], Vincenzo Gemignani[5], Thomas Stieglitz[1,2,6].
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P.73 Evaluation of calibration methods for blood pressure estimation from 24-hour pulse wave velocity data

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P.74 Determining reference values for pulse wave velocity in youth lessons learned in harmonising data

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POSTER STORM 2

P.75 Investigating the lowest threshold of vascular benefits from LDL-cholesterol lowering with a PCSK9 mAB inhibitor (alirocumab) in healthy volunteers – INTENSITY-LOW study

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P.76 The role of gasdermins in atherosclerotic plaque destabilization: harmless helpers or cellular saboteurs?

Michelle Zurek[1], Aydın Bölük[2], Uma Thanigai Arasu[2], Mari Taipale[2], Melissa Van Praet[1], Lynn Roth[1], Minna Kaikkonen-Määttä[2], Guido De Meyer[1], Wim Martinet[1].
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P.77 Novel in vitro scalable arterial pulsatile flow model for biodegradation testing of uncoated and coated metallic bioresorbable stents

Andreas Fischbach[1], Raquel Rosillo[1], Dennis Bünte[1], Christelle Briere[1], Fabian Schmidt[2], Adalbert Kovacs[3], Christoph Hehrlein[1].
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P.78 Haemodynamic impact of hip bending and overstenting in the common femoral artery, A phantom based study

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P.79 Hypertension-detection using image-based analysis of arterial tonometry waveforms

Sara Vardanega[1], Patrick Segers[2], Philip Aston[3,4], Ernst Rietzschel[5], Jordi Alastruey[1], Manasi Nandi[6].
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P.80 Should we track changes or absolute values? In vivo assessment of an AI-based approach for cardiac output monitoring

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P.81 Too clean to be true - Lessons from synthetic versus in vivo data

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P.82 Vascular health measures and associations with cardio-metabolic biomarkers in children stratified by risk factor prevalence

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P.83 Using radiomic biomarkers of vascular aging from the carotid artery wall for cardiovascular risk stratification

Gladwin Joywin Melitus[1], Maryam Jadoon[1], Federica Poli[1], Pierre Boutouyrie[1,2], Hakim Khettab[2], Dahirou-Ousmane Sam[1], Elisabetta Bianchini[3], Francesco Faita[3], Xavier Jouven[1], Jean Philippe Empana[1], Rosa Maria Bruno[1,2].
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P.84 Abnormal reflected waves modulated by heart rate predict posterior wall hypertrophy in patients with repaired coarctation of the aorta

Marina Vaccari[1], Laura E. Maldonado[1], Claudio G. Moros[1], Angela Sardella[1], Miriam Romo[1], César A. Romero[2].
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LATE BREAKERS

P.85 Implementing Home Blood Pressure Monitoring in Kidney Care in Southern Sweden

Heléne Severin[1], Agne Laucyte-Cibulskiene[1,2], Anders Christensson[1,2].
[1]Department of Nephrology, Lund University, Skane University Hospital, Malmö, Sweden. [2]Department of Clinical Sciences Malmö, Lund University, Malmö, Sweden.

P.86 Prevalence of untreated hypertension and its correlation with cardiovascular risk factors in middle-aged Lithuanian adults, from 2009-2022

Vaida Šileikienė[1], Jolita Badarienė[1], Emilija Šeštokaitė[1], Roma Puronaitė[2], Vilma Dženkevičiūtė[1], Silvija Gimžauskaitė[1], Egidija Rinkūnienė[1].
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P.87 Undiagnosed and untreated hypertension in Lithuanian men aged 40-54 years: prevalence and cardiometabolic risk profile

Vaida Šileikienė[1], Jolita Badarienė[1], Emilija Šeštokaitė[1], Roma Puronaitė[2], Vilma Dženkevičiūtė[1], Silvija Gimžauskaitė[1], Egidija Rinkūnienė[1].
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P.88 Psychosocial and Behavioral Modulators of Vascular Dysfunction in People Living with HIV: A Cross-Sectional Study

Cesar A. Romero[1], Alvaro Alonso[2], Cecile D. Lahiri[3].
[1]Renal Division, Department of Medicine, Emory University, Atlanta, GA, USA. [2]Department of Epidemiology, Rollins School of Public Health, Emory University, Atlanta, GA, USA. [3]Division of Infectious Diseases, Department of Medicine, Emory University, Atlanta, GA, USA.

P.89 Association of 24-hour ambulatory monitoring of pressure wave reflections with hypertension mediated organ damage: the SAFAR Study

Fotios Karachalias[1], Nikolaos Kakaletsis[2], Elpida Athanasopoulou[1], Panagiotis Kanatas[1], Christina Damoulari[1], Chrysovalantis Vergadis[3], Thomas Weber[4], Athanase D Protogerou[1], Antonios A Argyris[1].
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P.90 Towards virtual populations: sex-specific modelling of arterial pulse waves

Natali van Zijl[1], Ye Li[1], Phil Chowienczyk[1], Jordi Alastruey[1].
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P.91 Novel hypertension phenotypes based on cross-classification of 24-hour brachial and aortic systolic blood pressure

Elpida Athanasopoulou[1], Prof. Thomas Weber[2], Prof. James E. Sharman[3], Siegfried Wassertheurer[4], Prof. Mohsen Agharazii[56], Prof. Sola Aoun Bahous[7], Prof. Jose R. Banegas[8], Ronald K. Binder[2], Prof. Jacques Blacher[9], Prof. Andréa Araujo Brandao[10], Kathrin Danninger[2], Prof. Peter Fitschak[11], Prof. Cristina Giannattasio[12], Prof. Eugenia Gkaliagkousi[13], Annelise Machado Gomes de Paiva[14], Ass. Prof. Auxiliadora Graciani[8], Bernhard Hametner[4], Carlo Hamm[15], Prof. Piotr Jankowski[16], Fotios Karachalias[1], Prof. Kazuomi Kario[17], Prof. Anastasios Kollias[18], Antonios Lazaridis[13], Prof. Yan Li[19], Alessandro Maloberti[12], Christopher C. Mayer[4], Prof. Barry J. McDonnell[20], Carmel M. McEniery[21], Prof. Marco Antonio Mota-Gomes[10], Prof. Maria Lorenza Muiesan[22], János Nemcsik[23], Anna Paini[22], Sabine Perl[24], Prof. Gary L. Pierce[25], Daniel Piskorz[26], Ass. Prof. Giacomo Pucci[27], Prof. Eva Reininghaus[28], Prof. Bernd Reininghaus[28], Adj. Prof. Enrique Rodilla Sala[29], Prof. Aletta E. Schutte[3031], Prof. Petros P. Sfikakis[1], Prof. Alejandro de la Sierra[32], Prof. George S. Stergiou[18], Dimitrios Terentes-Printzios[33], Prof. Charalambos Vlachopoulos[33], Lisa J. Ware[34], Prof. Ian B. Wilkinson[21], Ass. Prof. Yi Zhang[35], Prof. Athanase D. Protogerou[1], Antonis Argyris[1].
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P.92 Prevalence and awareness of asymptomatic peripheral arterial disease in high-risk patients: a pilot prospective cross-sectional study

Shahed Patwarya[1], Ali Shabub[2], Dave Veerasingam[1,3].
[1]School of Medicine (BMA), University of Galway, Ireland. [2]Portiuncula University Hospital, Ballinasloe, Galway, Ireland. [3]Division of Surgery, Galway University Hospitals, Ireland.

P.93 Associations between white coat hypertension, frailty, and arterial stiffness: findings from the c-FRAIL study

Megan Wright[1], Ekow Mensah[1,3], Jane Masoli[2], Sandra Sacre[3], Michael Okorie[1,3], Chakravarthi Rajkumar[1,3].
[1]University Hospitals Sussex NHS Foundation Trust, Brighton, UK. [2]Department of Clinical and Biomedical Sciences, Faculty of Health and Life Sciences, University of Exeter, Exeter, UK. [3]Department of Clinical and Experimental Medicine, Brighton & Sussex Medical School, University of Brighton and University of Sussex, Brighton BN1.

P.94 Orthostatic hypotension is associated with frailty and not arterial stiffness in community dwelling older adults ≥ 65years – analysis of the c-FRAIL study.

Ekow Mensah[1,3], Megan Wright[3], Jane Masoli[2], Sandra Sacre[1], Michael Okorie[1,3], Chakravarthi Rajkumar[1,3].
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P.95 Skin blood flow in response to graded cycling in type 1 diabetic children compared to healthy controls

Ivana Potočnik[1], Jakob Jesih[1], Tadej Bačelino[2], Klemen Dovč[2], Nejka Potočnik[1].
[1]Institute of Physiology, Medical Faculty, University of Ljubljana, Slovenia. [2]Department of Paediatric Endocrinology, Diabetes and Metabolic Diseases, University Children's Hospital, University Medical Centre Ljubljana, Slovenia.

P.96 A Low-Cost Wearable for Reliable Blood Pressure Measurement: Reducing the White-Coat Effect and Improving Hypertension Diagnosis

Valentina Vassilenko[1,6], Juan F. Muñoz-Torrero[2,6], Sergio Rico[3,6], Enrique Rodilla[4,6], Pedro Cunha[5,6].
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P.97 Contactless blood pressure estimation from radar signals through pulse waveform analysis and machine learning

Laura Miro[1,2,3], Ruochen Wu[4], Albert Aguasca[4], Antoni Broquetas[4], Cosme Garcia[5], Oriol Estrada[2,3], Montse Najar[1].
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P.98 Carotid Intima-Media Thickness and Type 2 Diabetes as Predictors of Cardiovascular Events and Mortality in Middle Age

Vilma Dženkevičiūtė[1], Tadas Adomavičius[1], Egidija Rinkuniene[2], Jolita Badariene[2].
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P.99 Intima-media Thickness and Arterial Hypertension: Risk Indicators for Cardiovascular Disease and All-Cause Mortality in Middle-Aged Adults

Tadas Adomavičius[1], Egidija Rinkuniene[2] ,Jolita Badariene [2],Vilma Dženkevičiūtė[1].
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P.100 The Impact of TAVR on valvular and ventricular function and arterial stiffness in patients with aortic stenosis

Simina Mariana Moroz[1,2], Silvia Luca[2,4], Mirela Baba[2,3], Maria Alina Lupu[9,10], Horea Feier[4,5,6], Daniel Florin Lighezan[1,7], Ioana Mozos[3,8].
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P.101 Integration of Information Systems in the Optimized Management of Arterial Hypertension (EpISIMOH) using the concept of vascular age in the TOGETHER-Trial

Llanos Cuenca[1], José Manuel Ventura-Cerdá[2], Begoña Martínez-Salvador[3], Enrique Rodilla[4,5].
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SCHEDULE: Industry Practical Workshops

WEDNESDAY 15 OCTOBER 2025

8:00-8:15	**Welcome & Registration, Meet the Attendees**	
8:15-12:30	**Group 1: Industry Practical Workshops (8 rotating groups, 5 -7 persons/group)**	
TBD	8:15-8:45	**Applanation Tonometry cfPWV (Cardiex®)**
	8:45-9:15	**Oscillometric baPWV (Microlife®)**
	9:15-9:45	**Carotid Distensibility (Esaote®)**
	9:45-10:15	**Flow Mediated Dilation FMD, IMT, plaques (Quipu®)**
10:15-10:30	**Coffee Break**	
TBD	10:30-11:00	**Central Blood Pressure (Customed®)**
	11:00-11:30	**Beat-to-beat PWV (Somnomedics®)**
	11:30-12:00	**Simulating renal denervation (Medtronic®)**
	12:00-12:30	**Suprasystolic rhythm strip measurements (Uscom®)**
12:30-13:00	**Session 1: Dialogue Between Basic Science and Clinics**	
Sala Chulià-Campos	12:30-12:45	**Why are Basic Questions in Physiology Necessary?** RM Bruno
	12:45-13:00	**FMD, from clinical nihilizm to advanced knowledge** A Januszewicz
13:00-14:00	**Lunch (Restaurant ICOMV)**	
14:00-14:30	**Session 2: Chances to Engage in Arterial Hemodynamics**	
Sala Chulià-Campos	14:00-14:15	**VascAgeNet for Translation to Practice** E Bianchini / CC Mayer
	14:15-14:30	**Future Activities of ARTERY** P Cunha
14:30-18:45	**Group 2: Industry Practical Workshops (8 rotating groups, 5 -7 persons/group)**	
TBD	14:30-15:00	**Applanation Tonometry cfPWV (Cardiex®)**
	15:00-15:30	**Oscillometric baPWV (Microlife®)**
	15:30-16:00	**Carotid Distensibility (Esaote®)**
	16:00-16:30	**Flow Mediated Dilation FMD, IMT, plaques (Quipu®)**
16:30-16:45	**Coffee break**	
TBD	16:45-17:15	**Central Blood Pressure (Customed®)**
	17:15-17:45	**Beat-to-beat PWV (Somnomedics®)**
	17:45-18:15	**Simulating renal denervation (Medtronic®)**
	18:15-18:45	**Suprasystolic rhythm strip measurements (Uscom®)**
18:45-19:30	**Young Investigators´ Meeting** C Neutel	
21:00	**Dinner (Bar Bukowski) *** Dinner will be at each guest's own expense	

TBD: To be determined.

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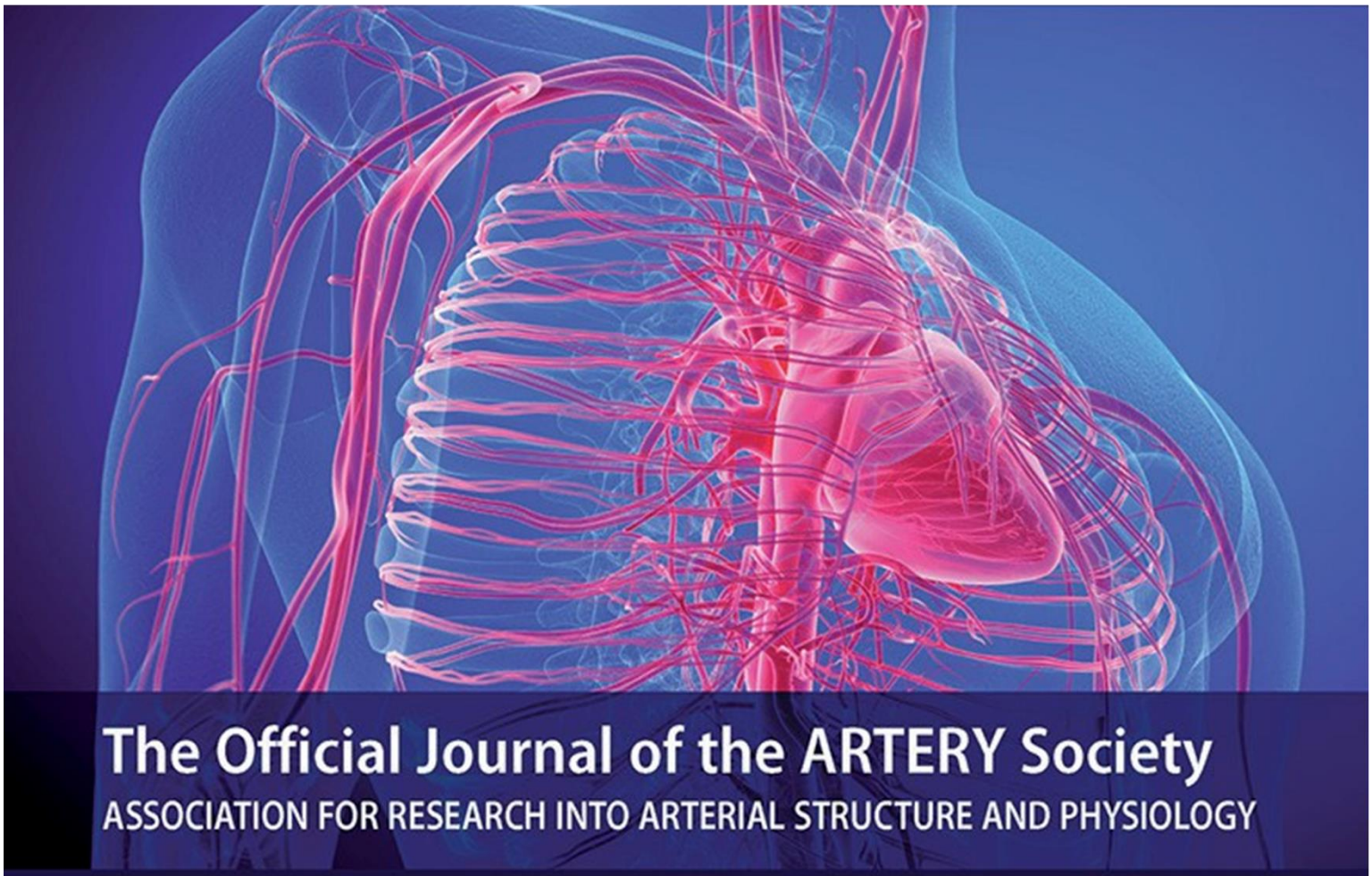
Notes

Notes



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