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# Welcome

Dear Colleague,

2021 has once again been an exceptional and extremely challenging year for health professionals around the world. The Artery community is no exception; our international, professionally diverse network of members are working on the front line every day; developing new approaches and techniques to treat their patients.

In this challenging environment, we are very grateful for the continued support from members and colleagues across the world. We are very pleased to welcome colleagues from sister societies in North America (North American Artery), Latin America (LATAM Artery), Asia (Pulse of Asia) and Australia as well as our European network. By working together, we can continue to shape a better future for promoting the advancement of knowledge and dissemination of information concerning all aspects of arterial structure and function through the delivery of a dynamic, interactive, and inclusive conference.

We received a large number of high-quality abstracts for this year’s hybrid meeting, and we are grateful to all our presenters and invited speakers who have agreed to commit their time to provide an engaging and meaningful experience for everyone. Please take time to attend the poster sessions, read the abstracts, give constructive feedback and chat online with the presenters during the conference.

Our goal is that this year’s hybrid conference will continue to provide the valuable opportunities to develop and maintain professional networks, present new science and research and develop new partnerships. You can help us to achieve this with your full participation in the conference whether virtually or in person, by joining all the sessions on Thursday afternoon, Friday, and Saturday morning. Submit your questions on-line, get involved in the discussions on social media and join us on Saturday afternoon for a guided walk around Paris if you are able to!

The presentations will be available online on the Artery website after the conference to support continued discussion, encourage research and exchange of ideas.

We are very grateful to Servier, who have continued their support of the Society and through their generosity, the Artery leadership has been able to support the cost of attendance.

We look forward to welcoming everyone to Artery 2021 whether you are joining virtually or in person – we hope that you enjoy the experience!



**Professor Pierre Boutouyrie   
President, Artery**

# Instructions on how to Join the Virtual Conference

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| To sign into the event on the day, please [click here](https://login.swapcard.com/?redirect_url=https%3A%2F%2Fapp.swapcard.com) and enter the email address that you used to register for the Conference. Once you have done this, follow the instructions to activate your account. For further instructions on how to make the most of the system and for a short video, please [click here](https://conferencecollective.sharepoint.com/sites/ConferenceCollective/Shared%20Documents/Conference%20Collective/ARTERY/Virtual%20Conference%2020/Programme%20and%20Abstract%20Book%20-%20Online%20Only/:%20http:/www.arterysociety.org/artery-20-virtual-conference-platform-walkthrough). |

# Useful addresses for the in-person Conference

Hôpital Européen Georges Pompidou AP-HP, 20 Rue Leblanc, 75015 Paris, France

Closest stations :

**RER**: Pont du Garigliano - Hôpital Européen Georges Pompidou

**Metro**:Lourmel

# Functions

## Conference Dinner - Friday 22nd October

Please speak to a member of the team on the registration desk if you would like to purchase additional dinner tickets at €70.00 per person.

**DINNER VENUE**:

**Au Pied de Cochon**, 6 Rue Coquillière, 75001 Paris, France

**CLOSEST STATIONS**:

**RER**:Les Halles

**Metro** : Châtelet–Les Halles

## Walking Tour of Paris - Saturday 23rd October

You are invited to join us for a 2-hour walking tour of Paris on Saturday 23rd October at 14.30. The cost for joining the walking tour is €10.00 per person and places must be pre-booked. If you wish to participate, please speak to a member of the team on the registration desk.

# Artery 21 Scientific Committee

**ARTERY EXECUTIVE COMMITTEE**

|  |  |  |  |
| --- | --- | --- | --- |
| **President:** | **Professor Pierre Boutouyrie** | Paris | France |
| **Vice-President:** | **Professor Thomas Weber** | Wells | Austria |
| **Secretary:** | **Professor Chakravarthi Rajkumar** | Brighton | UK |
| **Treasurer:** | **Professor Alun Hughes** | London | UK |
| **Ordinary Members:** | **Professor Pedro Cunha**  **Dr Rosa Maria Bruno**  **Dr Tine Willum Hansen**  **Dr Bart Spronck** | Guimarães  Paris  Gentofte  New Haven | Portugal  France  Denmark  United States |
| **Chair of Young Investigator Committee:** | **Dr Bernhard Hametner** | Vienna | Austria |
| **Chair of Council:** | **Dr Dimitrios Terentes-Printzios** | Athens | Greece |
| **Digital Editor:** | **Dr Chloe Park** | London | UK |

**ARTERY ADVISORY BOARD**

|  |
| --- |
| **Professor John Cockcroft**, Cardiff, UK |
| **Professor Charalambos Vlachopoulos**, Athens, Greece |
| **Professor Kennedy Cruickshank**, London, UK |

**ARTERY COUNCIL MEMBERS**

The Artery members listed below join the Executive Committee members to form the full Council.

|  |  |
| --- | --- |
| **Chair of Artery Council:** | **Dr Dimitrios Terentes-Printzios**, Greece |
| **Council Members:** | **Professor Stéphane Laurent**, France  **Dr Gary Mitchell**, USA  **Dr Koen Reesink**, The Netherlands  **Professor Patrick Segers**, Belgium  **Professor James Sharman**, Australia  **Professor Siegfried Wassertheurer**, Austria  **Professor Ian Wilkinson**, UK  **Professor Reuven Zimlichman**, Israel |

**SECRETARIAT**

*The Conference Collective Ltd.*

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Mob: +44 (0) 7808089828  
Email: [Artery@conferencecollective.co.uk](mailto:Artery@conferencecollective.co.uk)   
Artery Society: [www.arterysociety.org](http://www.arterysociety.org)

# Programme

**PLEASE NOTE THAT ALL TIMES ARE CET**

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| **Times in CET** | **THURSDAY 21 OCTOBER 2021** |
| **15.30-16.00** | **Virtual Poster Viewing** |
| **16.00** | **Welcome Address**  Professor Pierre Boutouyrie, Artery President |
| **16.15-17.25** | **Oral Session 1**  Co-Chairs: Professor Alun Hughes, Dr Bart Spronck, Véronique Regnault |
| 1.1 Central pulse pressure in adolescence is more strongly associated with future cardiovascular health than peripheral pulse pressure  **Dr Chloe Park**, UCL |
| 1.2 New carotid stiffness population centiles in the young and association with measures of general and abdominal obesity  **Mrs Julia Büschges**, Robert Koch-institute |
| 1.3 Does sex and calibration influence cardiovascular risk prediction from central systolic blood pressure?  **Florence Lamarche**,Hôpital de Sacré-Cœur de Montréal |
| Discussion |
| 1.4 Ethnic variations in body composition may help to explain differences in arterial stiffness: a UK cross-sectional study in hypertension  **Dr Luca Faconti**, King's College London |
| 1.5 Central-to-peripheral pulse amplification and stiffness gradient determine dicrotic wave: Mediation by triphasic flow fluctuation  **Professor Junichiro Hashimoto**, Miyagi University of Education Medical Center |
| 1.6 Differences in systolic-diastolic distensibility indicate carotid wall viscosity in healthy controls, patients with hypertension and type 2 diabetes  **Dr Alessandro Giudici**, Maastricht University |
| 1.7 Acute effect of heat-not-burn versus standard cigarette smoking on arterial stiffness and wave reflections in young smokers  **Mrs Eleni Emmanouil** |
| Discussion |
| **17.25-17.45** | **Invited Lecture:** *Genetics, molecular mechanisms of rare vascular diseases, relations to arterial function*  **Professor Xavier Jeunemaitre**,Hôpital Européen Georges Pompidou, Paris  Co-Chairs: Professor Pierre Boutouyrie and Professor Thomas Weber |
| **17.45** | **Interactive virtual poster viewing** |

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| **Times in CET** | **FRIDAY 22 OCTOBER 2021** |
| **08.30-09.00** | **Virtual poster viewing** |
| **09.00-09.50** | **Oral Session 2**  Co-Chairs : Dr Chloe Park, Dr Dimitrios Terentes-Printzios, Dr Christopher Mayer |
| 2.1 Prediction of long-term outcomes by arterial stiffness and pressure wave reflections in patients with acute stroke: the Athens Stroke Registry  **Mrs Stamatia Samara**, Laiko General Hospital |
| 2.2 Respective roles of hemodynamic conditions and inflammatory status in the degradation of endothelial glycocalyx in adults.  **Dr Jeremy Lagrange**, INSERM |
| 2.3 Apha1A‐adrenoceptor-induced increased calcium influx and prostanoids unbalance promote carotid artery dysfunction in senescence-accelerated (SAMP8) female mice  **Dr Tiago Costa**, University of Sao Paulo |
| 2.4 Vascular Ageing Glossary: unifying language for knowledge diffusion  **Dr Elisabetta Bianchini**, Institute of Clinical Physiology, CNR |
| 2.5 Acute and long-term effects of aortic banding on central hemodynamics  **Professor Nikolaos Stergiopoulos** |
| **09.50-10.20** | **Break and Interactive virtual poster viewing** |
| **10.20-12.00** | **Young Investigator Awards**  Co-Chairs: Dr Johannes Baulmann, Dr Carmel McEniery, Professor Patrick Segers |
| 3.1 The aortic-femoral arterial stiffness gradient is blood pressure independent in older adults: an atherosclerosis risk in communities (ARIC) study  **Miss Jillian Poles,** University of North Carolina at Chapel Hill |
| 3.2 Arterial stiffness is associated with impaired orthostatic diastolic blood pressure reaction and increased central blood pressure: A prospective population-based study  **Dr Madeleine Johansson**, Lund University |
| 3.3 The effect of mRNA vaccine against COVID-19 on endothelial function and arterial stiffness  **Dr Dimitrios Terentes-Printzios**, First Department of Cardiology, Hippokration Hospital, Athens Medical |
| Discussion |
| 3.4 Early vascular ageing in patients with hypoparathyroidism  **Dr Saverio Fabbri**, University of Paris |
| 3.5 Associations of lower limb atherosclerosis and arteriosclerosis with cardiovascular risk factors and disease in older adults: the ARIC study  **Mrs Patricia Pagan Lassalle**, The University of North Carolina at Chapel Hill |
| 3.6 Developing a questionnaire on the knowledge and perceptions of people working with vascular ageing  **Ms Stavria Artemis**, Cyprus University of Technology |
| Discussion |
| 3.7 The VaSera heart-to-ankle pulse wave velocity is a nearly diastolic wave speed metric  **Mr Alessandro Giudici,** Maastricht University |
| 3.8 Antithrombotic therapy in secondary and tertiary prevention for peripheral arterial disease: a network meta-analysis.  **Dr Loes Willems**, Radboudumc |
| 3.9 Superior effect of community-based high-intensity interval exercise for reducing blood pressure and arterial stiffness in low-income older women  **Mrs Vanessa Amaral,** Unesp |
| 3.10 Evaluation of hemodynamic and vascular responses after a continuous exercise session of moderate intensity and high intensity intervals in individuals with normal and high normal blood pressure.  **Miss Sara Rodrigues**, Incor-fm-usp |
| **12.00-12.45** | ARTERY Annual Business Meeting |
| **12.45-13.45** | **Lunch and Virtual poster viewing** |
| **13.45-15.15** | **Symposium: COVID and arterial ageing**  Co-Chairs: Professor Pierre Boutouyrie, Professor Thomas Weber, Professor Alun Hughes |
| 4.1 SARS-CoV-2, ACE2 and endothelial signalling –implications in vascular inflammation  **Professor Rhian Touyz**, McGill University, Canada |
| 4.2 COVID19 vaccination-induced thrombosis  **Professor Dr Sabine Eichinger** |
| 4.3 Endothelial dysfunction, thrombosis and vascular properties  **Dr Véronique Regnault**, INSERM |
| 4.4 Long-term cardiovascular consequences of COVID-19: the CARTESIAN study  **Dr Rosa Maria Bruno**, INSERM |
| **15.15-15.45** | **Break and Interactive virtual poster viewing** |
| **15.45-16.45** | **YI Network Session**  Co-Chairs: Dr Bernhard Hametner, Dr Dimitrios Terentes-Printzios and Alessandro Guidici |
| 5.1 COST Action VascAgeNet  **Dr Elisabetta Bianchini**, Institute of Clinical Physiology, CNR |
| 5.2 **Dr Noemi Kiss**, Österreichischen Gesundheitskasse |
| 5.3 COST Action VascAgeNet  **Dr Andrie Panayiotou**, Cyprus University of Technology |
| 5.4 **Dr Richard Varadappa**, Academy of Oral Implantology |
| **16.45-17.15** | **YI Network Business meeting**  Chair: Dr Bernhard Hametner |
| **17.15-17.30** | **Comfort Break** |
| **17.30-19.00** | **Late Breaking News**  Co-Chairs: Professor Kennedy Cruickshank and Professor Luc van Bortel |
| 6.1 A new individual patient-data based meta-analysis on the predictive value of cfPWV  **Ms Holly Pavey**, Cambridge |
| 6.2 The Value of cfPWV for patients: publication bias and guidelines  **Professor Ian Wilkinson**, Cambridge |
| 6.3 SPARTE Study Results  **Professor Stéphane Laurent** |
| 6.4 Perspective for clinical routine & upcoming guidelines  **Professor Thomas Kahan**, Karolinska Institutet |
| 6.5 ARTERY Society recommendations for the use of pulse wave velocity in clinical routine  **Professor Athanase Protogerou, Professor Charalambos Vlachopoulos, Professor Thomas Weber** |
| Discussion |
| **19.00** | **Close** |
| **20.00** | **Conference Dinner** |

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| **Times in CET** | **SATURDAY 23 OCTOBER 2021** |
| **08.30-09.00** | **Virtual Poster Viewing** |
| **09.00-10.00** | **Debate: Is pulsatility essential for life?**  CON: **Dr William Cornwell**, CU Anschutz  PRO: **Dr Barry McDonnell**  Moderator: **Professor Christian Latrémouille**, Hôpital Européen Georges-Pompidou, Paris |
| **10.00-11.00** | **Oral Session 3**  Co-Chairs: Professor Chakravarthi Rajkumar, Dr Tine Hansen, János Nemcsik |
| 7.1 Pulse Wave Velocity for 24-hour Ambulatory Blood Pressure Monitoring  **Fabian Beutel MSc**, imec |
| 7.2 Intra-Operative Video-Based Measurement of Biaxial Strains of the Ascending Thoracic Aorta  **Shaiv Parikh Msc**, Maastricht University |
| 7.3 On the estimation of arterial compliance from carotid pressure waveform  **Ms Vasiliki Bikia**, École Polytechnique Fédérale De Lausanne |
| Discussion |
| 7.4 Assessing radiotherapy-induced carotid vasculopathy using ultrasound after unilateral irradiation  **Ms Judith Pruijssen**, Radboud University Medical Center |
| 7.5 Sublingual nitroglycerine ingestion is associated with an increase rather than decrease in brachial-artery retrograde blood flow in healthy human subjects  **Dr Smriti Badhwar**, All India Institute Of Medical Sciences, New Delhi |
| Discussion |
| **11.00-11.30** | **Break and Virtual poster viewing** |
| **11:30-12.00** | ***McDonald Lecture* Dr Carmel McEniery**, Churchill College, Cambridge.  Co-Chairs: Professor Pierre Boutouyrie and Professor Thomas Weber |
| **12:0-12.20** | ***Lifetime Achievement Award***  **Dr Gary Mitchell**, Cardiovascular Engineering, Inc.  Co-Chairs: Professor Pierre Boutouyrie and Professor Thomas Weber |
| **12:20-12.40** | ***Young Investigator Awards, Poster Awards, Oral awards and Research Exchange Grants***  **Professor Pierre Boutouyrie and Professor Thomas Weber**  **Dr Alessandro Giudici and Dr Bernhard Hametner** |
| **12:40-13.00** | **Artery 2022**  **Professor Patrick Lacolley**, INSERM  **Concluding remarks**  **Professor Pierre Boutouyrie**, **Professor Thomas Weber** and **Patrick Lacolley** |
| **13.00** | **Lunch** |

# Oral Presentations

1.1

**Central pulse pressure in adolescence is more strongly associated with future cardiovascular health than peripheral pulse pressure**

**Dr Chloe Park1**, Dr Siana Jones1, Dr Hannah Taylor1, Dr Laura Howe2, Professor Abigail Fraser2, Professor Nish Chaturvedi1, Professor Alun Hughes1

*1UCL, London, United Kingdom, 2Univeristy of Bristol, Bristol, United Kingdom*

1.2

**New carotid stiffness population centiles in the young and association with measures of general and abdominal obesity**

**Mrs. Julia Charlotte Büschges1,2**, Angelika Schaffrath Rosario1, Dr. Giselle Sarganas1,2, Dr. Anja Schienkiewitz1, Dr. Karsten Königstein3, Dr. Arno Schmidt-Trucksäss3, Dr. Hannelore Neuhauser1,2

*1Department of Epidemiology and Health Monitoring, Robert Koch-Institute, Germany, 2DZHK (German Centre for Cardiovascular Research), Germany, 3Department of Sport, Exercise and Health, Division Sports and Exercise Medicine, University of Basel, Basel, Siwtzerland*

1.3

**Does sex and calibration influence cardiovascular risk prediction from central systolic blood pressure?**

**Dr Florence Lamarche1**, Dr Mohsen Agharazii3, Dr Siegfried Wassertheurer4, Dr Bernhard Hametner4, Dr Annie-Claire Nadeau-Fredette2, Dr François Madore1, Dr Remi Goupil1

*1Hopital de Sacré-coeur de Montréal, Montreal, Canada, 2Hôpital Maisonneuve-Rosemont, Montreal, Canada, 3CHU de Québec, Quebec City, Canada, 4Austrian Institute of Technology, Vienna, Austria*

1.4

**Ethnic variations in body composition may help to explain differences in arterial stiffness: a UK cross-sectional study in hypertension**

***Dr Luca Faconti1****, Mr Ryan McNally1, Miss Bushra Farukh1, Professor Phil Chowienczyk1*

*1King's College London, London, United Kingdom*

1.5

**Central-to-peripheral pulse amplification and stiffness gradient determine dicrotic wave: Mediation by triphasic flow fluctuation**

**Prof. Junichiro Hashimoto1,2**, Dr. Kaname Tagawa1, Dr. Berend Westerhof3, Prof. Sadayoshi Ito2,4

*1Miyagi University of Education Medical Center, Sendai, Japan, 2Tohoku University Graduate School of Medicine, Sendai, Japan, 3Vrije Universiteit Amsterdam, Amsterdam, Netherlands, 4Katta General Hospital, Shiroishi, Japan*

1.6

**Differences in systolic-diastolic distensibility indicate carotid wall viscosity in healthy controls, patients with hypertension and type 2 diabetes**

**Mr Alessandro Giudici1**, Professor Carlo Palombo2, Mrs Michaela Kozakova3, Dr Carmela Morizzo2, Professor Giuseppe Penno3, Dr Giuli Jamagidze4, Mr Daniele Della Latta4,5, Professor Dante Chiappino4, Professor J. Kennedy Cruickshank6, Professor Ashraf W. Khir1

*1Brunel Institute for Bioengineering, Brunel University London, Uxbridge, United Kingdom, 2Department of Surgical, Medical, Molecular Pathology and Critical Area Medicine, University of Pisa, Pisa, Italy, 3Department of Clinical and Experimental Medicine, University of Pisa, Pisa, Italy, 4G. Pasquinucci Heart Hospital, G. Monasterio Foundation, Pisa, Italy, 5TeraRecon, Durham, USA, 6School of Life-Course/Nutritional Sciences, King's College, St. Thomas' & Guy's Hospitals, London, United Kingdom*

1.7

**Acute effect of heat-not-burn versus standard cigarette smoking on arterial stiffness and wave reflections in young smokers**

**Research Associate Eleni Emmanouil1**, MD Nikolaos Ioakeimidis1, MD Dimitrios Terentes-Printzios1, MD Ioanna Dima1, MD Konstantinos Aznaouridis1, Professor Dimitris Tousoulis1, Professor Charalambos Vlachopoulos1

*1Hypertension and Cardiometabolic Syndrome Unit and Smoking Cessation Unit, 1st Cardiology Department, Athens Medical School, Hippokration Hospital, Athens, Greece*

2.1

**Prediction of long-term outcomes by arterial stiffness and pressure wave reflections in patients with acute stroke: the Athens Stroke Registry**

**Mrs Stamatia Samara1,2**, Mrs Anastasia Vemmou3, Mrs Aikaterini Kyrkou3, Mr Christos Papamichael3, Dr Eleni Korompoki3, Dr George Ntaios4, Dr Efstathios Manios3, Dr Kimon Stamatelopoulos3, Dr Athanasios Protogerou2, Dr Konstantinos Vemmos3

*1Laiko General Hospital, Athens, Greece, 2Cardiovascular Prevention & Research Unit, Clinic & Laboratory of Pathophysiology, Department of Medicine, National and Kapodistrian University of Athens, Athens, Greece, 3Therapeutic Clinic, Department of Medicine, National and Kapodistrian University of Athens, Athens, Greece, 4Department of Internal Medicine, Faculty of Medicine, School of Health Sciences, University of Thessaly, Larissa, Greece, Larissa, Greece*

2.2

**Respective roles of hemodynamic conditions and inflammatory status in the degradation of endothelial glycocalyx in adults.**

**Phd Jeremy Lagrange1**, PharmD PhD Simon Toupance1, Arthur Thomas1, PhD Carlos Labat1, PhD Véronique Regnault1, MD PhD Athanase Benetos1, MD PhD Patrick Lacolley1

*1INSERM 1116, Vandoeuvre-lès-Nancy, France*

2.3

**Apha1A‐adrenoceptor-induced increased calcium influx and prostanoids unbalance promote carotid artery dysfunction in senescence-accelerated (SAMP8) female mice**

**Dr Tiago J. Costa1**, M.S. Paula R. Barros1, Dr Diego Ângelo Duarte1, M.S. Júlio A. da Silva-Neto1, Dr Renèe de Nazaré Oliveira-da-Silva2, Dr Rosangela A. Santos-Eichler2, Dr Eliana H. Akamine2, Dr Francesc Jiménez-Altayó3, Dr Ana Paula Dantas4, Dr Rita C. Tostes1

*1Department of Pharmacology, Ribeirão Preto Medical School, University of Sao Paulo, Brazil, 2Department of Pharmacology, Institute of Biological Science, University of Sao Paulo, , Brazil, 3Departament de Farmacologia, de Terapèutica i de Toxicologia, Facultat de Medicina, Institut de Neurociències, Universitat Autònoma de Barcelona, Spain, 4Laboratory of Experimental Cardiology, August Pi i Sunyer Biomedical Research Institute (IDIBAPS), Hospital Clinic Cardiovascular Institute, Spain*

2.4

**Vascular Ageing Glossary: unifying language for knowledge diffusion.**

Dr Peter Charlton1,2, Dr Rachel Climie3,4,5, Dr Christopher Clemens Mayer6, Dr Manasi Nandi7, Dr Arno Schmidt-Trucksäss8, Dr Patrick Segers9, Dr Dimitrios Terentes-Printzios10, **Dr Bianchini E. for VascAgeNet11**

*1The Department of Public Health and Primary Care, University of Cambridge, Cambridge, UK, 2Research Centre for Biomedical Engineering, City, University of London, London, UK, 3Menzies Institute for Medical Research, University of Tasmania, Hobart, Australia, 4Baker Heart and Diabetes Institute, Melbourne, Australia, 5Université de Paris, INSERM, U970, Paris Cardiovascular Research Center (PARCC), Paris, France, 6AIT Austrian Institute of Technology, Center for Health & Bioresources, Vienna, Austria, 7Faculty of life sciences and medicine, King’s Collège London., London, UK, 8MD. Division of Sports and Exercise Medicine, Department of Sport, Exercise and Health, Medical Faculty, University of Basel, Basel, Switzerland, 9Institute for Biomedical Engineering and Technology (IBiTech), Ghent University, Ghent, Belgium, 10First Department of Cardiology, Hippokration Hospital, Medical School, National and Kapodistrian University of Athens, Athens, Greece, 11Institute of Clinical Physiology, CNR, Pisa, Italy*

2.5

**Acute and long-term effects of aortic banding on central hemodynamics**

**Stamatia Pagoulatou1**, **Dionysios Adamopoulos2**, Vasiliki Bikia1, Georgios Rovas1, Nikolaos Stergiopulos1

*1Laboratory of Hemodynamics and Cardiovascular Technology, Lausanne, Switzerland, 2Department of Cardiology, Geneva University Hospitals, Geneva, Switzerland* – PRESENTED BY NIKOLAOS STERGIOPULOS

3.1

**The aortic-femoral arterial stiffness gradient is blood pressure independent in older adults: an atherosclerosis risk in communities (ARIC) study**

**Miss Jillian Poles1**, Mr. Keeron Stone2, Dr. Simon Fryer2, Dr. James Faulkner3, Dr. Michelle Meyer4, Dr. Kevin Heffernan5, Dr. Anna Kucharska-Newton6, Mr. Gabriel Zieff1, Mr. Craig Paterson2, Dr. Kunihiro Matsushita7, Dr. Timothy Hughes8, Dr. Hirofumi Tanaka9, Dr. Lee Stoner1

*1Department of Exercise and Sport Science, University Of North Carolina at Chapel Hill, Chapel Hill, United States, 2School of Sport and Exercise, University of Gloucestershire, Gloucester, United Kingdom, 3Department of Sport, Exercise & Health, University of Winchester, Winchester, United Kingdom, 4Department of Emergency Medicine, School of Medicine, University of North Carolina at Chapel Hill, Chapel Hill, United States, 5Department of Exercise Science, Syracuse University, Syracuse, United States, 6Department of Epidemiology, The Gillings School of Global Public Health, University of North Carolina at Chapel Hill, Chapel Hill, United States, 7Department of Epidemiology, Johns Hopkins Bloomberg School of Public Health, Baltimore, United States, 8Section of Gerontology and Geriatric Medicine, Department of Internal Medicine, Wake Forest School of Medicine, Winston Salem, United States, 9Department of Kinesiology and Health Education, The University of Texas at Austin, Austin, United States*

3.2

**Arterial stiffness is associated with impaired orthostatic diastolic blood pressure reaction and increased central blood pressure: A prospective population-based study**

**Dr. Madeleine Johansson1**, Prof. Peter M Nilsson1, Prof. Gunnar Engström1, Assoc Prof. Viktor Hamrefors1

*1Lund University, Malmö, Sweden*

3.3

**The effect of mRNA vaccine against COVID-19 on endothelial function and arterial stiffness**

**Dr. Dimitrios Terentes-Printzios1**, Dr. Vasiliki Gardikioti1, Dr. Eirini Solomou1, Mrs Elena Emmanouil1, Dr. Ioanna Gourgouli1, Dr. Panagiotis Xydis1, Mrs. Georgia Christopoulou1, Dr. Christos Georgakopoulos1, Dr Ioanna Dima1, Mrs Antigoni Miliou1, Dr. Georgios Lazaros1, Dr. Maria Pirounaki2, Prof. Konstantinos Tsioufis1, Prof. Charalambos Vlachopoulos1

*1First Department of Cardiology, Hippokration Hospital, Athens Medical, Athens, Greece, 2Second Department of Medicine, University of Athens, Medical School, Hippokration General Hospital, Athens, Greece, Athens, Greece*

3.4

**Early vascular ageing in patients with hypoparathyroidism**

**Mr Saverio Fabbri1,2**, Mr Pierre Boutouyrie1, Mr Hakim Kettab1, Mr Gérard Maruani1, Mr Pascal Houillier1, Ms Rosa Maria Bruno1

*1University of Paris, Paris, France, 2University of Perugia, Perugia, Italy*

3.5

**Associations of lower limb atherosclerosis and arteriosclerosis with cardiovascular risk factors and disease in older adults: the ARIC study**

**Patricia Pagan Lassalle1**, Keeron Stone2, Simon Fryer2, James Faulkner3, Michelle Meyer1, Kevin Heffernan4, Anna Kucharska-Newton1,5, Gabriel Zieff1, Craig Paterson2, Kunihiro Matsushita6, Timothy Hughes7, Hirofumi Tanaka8, Lee Stoner1

*1The University Of North Carolina At Chapel Hill, Chapel Hill, United States, 2University of Gloucestershire, Gloucestershire, United Kingdom, 3University of Winchester, Winchester, United Kingdom, 4Syracuse University, Syracuse, United States, 5University of Kentucky, Lexington, United States, 6Johns Hopkins, Baltimore, United States, 7Wake Forest, Winston Salem, United States, 8The University of Texas, Austin, United States*

3.6

**Developing a questionnaire on the knowledge and perceptions of people working with vascular ageing**

**Prof. Areti Triantafyllou1**, Ms Stavria Artemis Elia2, Chloe Park3, Rachel Climie4, Christopher C. Mayer5, Andrie G. Panayiotou2

*13rd Dep. of Internal Medicine, Aristotle University of Thessaloniki, Thessaloniki, Greece, 2Cyprus University Of Technology, Limassol, Cyprus, 3University College London, London, UK, 4BAKER HEART AND DIABETES INSTITUTE, Melbourne, Australia, 5AIT Austrian Institute of Technology GmbH, Vienna, Austria*

3.7

**The VaSera heart-to-ankle pulse wave velocity is a nearly diastolic wave speed metric**

**Mr Alessandro Giudici1,2**, Professor Ashraf W. Khir2, Professor Koen D. Reesink1, Professor Tammo Delhaas1, Professor Bart Spronck1,3

*1Department of Biomedical Engineering, CARIM School for Cardiovascular Diseases, Maastricht University, Maastricht, Netherlands, 2Biomedical Engineering Research Group, Brunel University London, Uxbridge, United Kingdom, 3Department of Biomedical Engineering, School of Engineering and Applied Science, Yale University, New Haven, USA*

3.8

**Antithrombotic therapy in secondary and tertiary prevention for peripheral arterial disease: a network meta-analysis.**

**Ms Loes Willems1**, Ms Dominique Maas1, Dr Michel Reijnen2, Dr Niels Riksen1, Dr Hugo Ten Cate3, Dr Rozemarijn Van der Vijver-Coppen1, Dr. Clark Zeebregts4, Dr. Gerjon Hannink1, Dr. Michiel Warlé1

*1Radboud University Medical Center, Nijmegen, The Netherlands, 2Rijnstate Hospital, Arnhem, The Netherlands, 3Maastricht University Medical Center, Maastricht, The Netherlands, 4University Medical Center Groningen, Groningen, The Netherlands*

3.9

**Superior effect of community-based high-intensity interval exercise for reducing blood pressure and arterial stiffness in low-income older women**

**Mrs. Vanessa Amaral1**, Mr Gabriel Zanini1, Ms Isabela Roque Marçal1, Miss Bianca Fernandes1, Mr. Lucas Bueno Gimenez1, Miss Fernanda Bianchi Souza1, Mr Gabriel Locato1, PhD Student Awassi Yuphiwa Ngomane1, Dr. Emmanuel Gomes Ciolac1

*1Universidade Estadual Paulista, Bauru, Brazil*

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**Evaluation of hemodynamic and vascular responses after a continuous exercise session of moderate intensity and high intensity intervals in individuals with normal and high normal blood pressure.**

**Miss Sara Rodrigues1**, Miss Renata Verardino1, Mr Marcel Costa1, Miss Valéria Costa-Hong1, Miss Maria Alves1, Mr Luiz Bortolotto1

*1InCor HC FM USP, São Paulo, Brazil*

7.1

**Pulse Wave Velocity for 24-hour Ambulatory Blood Pressure Monitoring**

**M.Sc. Fabian Beutel1,2**, B.Eng. Chaim Zax2, B.Eng. Jesse Kling2, B.Eng. Anthony van der Heijden2, Ph.D. Chris Van Hoof1,3, Ph.D. Evelien Hermeling2

*1KU Leuven, Leuven, Belgium, 2imec The Netherlands, Eindhoven, The Netherlands, 3imec, Leuven, Belgium*

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**Intra-Operative Video-Based Measurement of Biaxial Strains of the Ascending Thoracic Aorta**

**MSc Shaiv Parikh1**, MSc Berta Ganizada2, Mr. Gijs Debeij2, Dr. Ehsan Natour2, Prof. Dr. Jos Maessen2, Dr. Bart Spronck1, Prof. Dr. Leon Schurgers3, Prof. Dr. Tammo Delhaas1, Dr. Wouter Huberts1, Dr. Elham Bidar2, Dr. Koen Reesink1

*1Department of Biomedical Engineering, CARIM School for Cardiovascular Diseases, Maastricht University, Maastricht, Netherlands, 2Department of Cardiothoracic Surgery, Heart & Vascular Centre, Maastricht University Medical Centre, Maastricht, Netherlands, 3Department of Biochemistry, CARIM School for Cardiovascular Diseases, Maastricht University, Maastricht, Netherlands*

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**On the estimation of arterial compliance from carotid pressure waveform**

**Ms Vasiliki Bikia1**, Professor Patrick Segers2, Mr Georgios Rovas1, Ms Stamatia Pagoulatou1, Professor Nikolaos Stergiopulos1

*1École Polytechnique Fédérale De Lausanne, Lausanne, Switzerland, 2IBiTech, University of Ghent, Ghent, Belgium*

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**Assessing radiotherapy-induced carotid vasculopathy using ultrasound after unilateral irradiation**

**MD Judith Pruijssen1**, MD PhD Joyce Wilbers1, MD Ashwin Wenmakers1, MD PhD Jacqueline Loonen1, Prof Dr Chris de Korte1,2, Prof MD PhD Johannes Kaanders1, PhD Hendrik Hansen1

*1Radboud University Medical Center, Nijmegen, Netherlands, 2University of Twente, Twente, Netherlands*

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**Sublingual nitroglycerine ingestion is associated with an increase rather than decrease in brachial-artery retrograde blood flow in healthy human subjects**

**Dr Smriti Badhwar1**, Dr. Dinu Chandran1, Prof Ashok Jaryal1, Prof Rajiv Narang1, Prof Chetan Patel1, Prof Kishore Kumar Deepak1

*1All India Institute Of Medical Sciences, New Delhi, India*

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**Higher systolic blood pressure in females compared to males with similar brachial cuff systolic blood pressure: an effect mediated by height**

**Goupil R1** Abbaoui Y1, Lamarche F1, Nadeau-Fredette A2, Madore F1, Agharazii M3

2Hôpital Maisonneuve-Rosemont, 1Hopital de Sacré-Coeur de Montréal, 3CHU de Québec

*1 Hôpital du Sacré-Cœur de Montréal, Montréal, QC, Canada; 2 Hôpital Maisonneuve-Rosemont, Montréal, QC, Canada 3 CHU de Québec, Québec, QC, Canada*

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**N Nathan Adams1**, J Jillian Poles1, G Gabriel Zieff1, K Keeron Stone2, C Craig Paterson2, S Simon Fryer2, M Michelle L. Meyer1, L Lee Stoner1

*1University of North Carolina at Chapel Hill, Chapel Hill, United States, 2University of Gloucestershire, Gloucester, United Kingdom*

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**Analysis of wave intensity using non-invasive pressure waveform only: application to people with type 2 diabetes**

**Dr Kunihiko Aizawa1**, Prof. Alun D Hughes2, Dr Francesco Casanova1, Mr David M Mawson1, Dr Kim M Gooding1, Dr W David Strain1, Dr Phillip E Gates1, Prof. Isabel Gonçalves3,4, Prof. Jan Nilsson3, Prof. Faisel Kahn5, Prof. Helen M Colhoun6, Prof. Carlo Palombo7, Prof. Kim H Parker8, Prof. Angela C Shore1

*1NIHR Exeter Clinical Research Facility, University of Exeter Medical School, Exeter, United Kingdom, 2Institute of Cardiovascular Science, University College London, London, United Kingdom, 3Department of Clinical Sciences, Lund University, Malmö, Sweden, 4Department of Cardiology, Skåne University Hospital, Malmö, Sweden, 5Division of Systems Medicine, University of Dundee, Dundee, United Kingdom, 6Centre for Genomic and Experimental Medicine, University of Edinburgh, Edinburgh, United Kingdom, 7Department of Surgical, Medical, Molecular and Critical Area Pathology, University of Pisa, Pisa, Italy, 8Department of Bioengineering, Imperial College, London, United Kingdom*

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**Longitudinal changes in aPWV in Chronic Obstructive Pulmonary Disease**

**Mrs Omar AL Shezawi1,2**, Maggie Munnery2, Laura Watkeys2, John Cockcroft2, Nichola Gale1, Barry McDonnell2

1Cardiff University, Cardiff, UK, 2Cardiff Metropolitan University, Cardiff, UK

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**Dr Panagiota Anyfanti1**, Dr Anastasia Margouta1, Dr Antonios Lazaridis1, Dr Eleni Gavriilaki1, Dr Efi Yiannaki2, Dr Barbara Nikolaidou1, Dr Areti Triantafyllou1, Dr Elizabeth Lazaridou3, Dr Stella Douma1, Dr Aikaterini Patsatsi3, Dr Eugenia Gkaliagkousi1

*13rd Department of Internal Medicine, Papageorgiou Hospital, Aristotle University of Thessaloniki, Thessaloniki, Greece, 2Department of Hematology, Theagenion Cancer Center, Thessaloniki, Greece, 32nd Department of Dermatology and Venereology, General Hospital "Papageorgiou", Medical School Aristotle University of Thessaloniki, , Thessaloniki, Greece*

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**Males with abdominal aortic aneurysm have reduced left ventricle function**

**Mrs Ida Åström Malm1**, Dr Rachel De Basso1, Professor Jan Engvall2,3, Dr Peter Blomstrand1,4

*1Department of Natural Sciences and Biomedicine, School of Health and Welfare, Jönköping University, Jönköping, Sweden, 2Department of Clinical Physiology and Department of Health, Medicine and Caring Sciences, Linköping University, Linköping, Sweden, 3Center for Medical Image Science and Visualization, Linköping University, Linköping, Sweden, 4Department of Clinical Physiology, County Hospital Ryhov, Jönköping, Sweden*

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**Beat-to-beat variability of pulse transit time in invasive measurements may not pass ARTERY guidelines for validation**

**Johannes Baullmann1**,, Bart Spronck2, Cornelia Piper3, Siegfried Eckert3

*1 Praxis Dres. Gille/Baulmann, Keramikerstr. 61, D-53359 Rheinbach, Germany, 2 Department of Biomedical Engineering, CARIM School for Cardiovascular Diseases, Maastricht University, Maastricht, The Netherlands, 3 Herz- und Diabeteszentrum NRW, Universitätsklinik der Ruhr-Universität Bochum, Georgstraße 11, D-32545 Bad Oeynhausen, Germany*

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Professor Luiz Bortolotto1, **Dra Nadja Mendes1**, Ms Valeria Costa-Hong1, Dr Stefano Garzon1, Professor Pedro Lemos1

*1Instituto Do Coração, São Paulo, Brazil*

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**Ryan Reavette1**, Dr Anenta Ratneswaren2, Dr Ethan Rowland1, Shashank Adapa3, Albert Chang3, Dhruv Reddy3, Prof Jamil Mayet2, **Prof Peter Weinberg1**

*1Department of Bioengineering, Imperial College London, London, United Kingdom, 2National Heart and Lung Institute, Imperial College London, London, United Kingdom, 3Department of Medicine, Imperial College London, London, United Kingdom*

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**Mr James Cox1**, Dr Ahmad Qasem2, Dr Isabella Tan1, Emeritus Professor Alberto P. Avolio1, Dr Mark Butlin1

1Macquarie University, Sydney, Australia, 2CardieX-AtCor, Sydney, Australia

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**Mrs Michelle Cunha1**, Mrs Samanta Mattos1, Mrs Thayná Brum1, Mrs Marcia Klein1, Mr Mario Neves1

*1State University of Rio de Janeiro, Rio de Janeiro, Brazil*

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**Ms Samanta Mattos1**, Ms Michelle Cunha1, Medical Student Larissa Silva1, MD PhD Márcia Klein1, MD PhD Mario Neves1

*1State University Of Rio De Janeiro, Rio De Janeiro, Brazil*

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**Dr. Lyndsey DuBose1**, Dr. Kerry Hildreth1, Dr. Kerrie Moreau1

*1University Of Colorado Anschutz Medical Campus, Aurora, United States*

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**Dr Anna Filip1**, Dr hab Pawel Dbrzyn1

*1Nencki Institute Of Experimental Biology, Polish Academy Of Sciences, Warsaw, Poland, 3 Pasteur Street, Poland*

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**Professor Jan Filipovský1**, Professor Otto Mayer, Associate Professor Jitka Seidlerová, Doctor Július Gelžinský

*1Charles University Medical Faculty Pilsen, Czech Republic, Pilsen, Czech Republic*

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**Dr Catherine Fortier1**, Dr Antoine Fayol2, Dr Hakim Khettab1,2, Dr Rosa-Maria Bruno1,2, Professor Pierre Boutouyrie1,2

*1INSERM U970, Paris Cardiovascular Research Center (PARCC), Cellular molecular and physiological mechanisms of heart failure (Team 7), Paris, France, 2AP-HP, Pharmacology Unit, Hôpital Européen Georges Pompidou, Université de Paris, Paris, France*

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**Charles-antoine Garneau1**, Catherine Fortier1,2, Hasan Obeid1, Mathilde Paré1, Karine Duval1, Dr. Mohsen Agharazii1,3

*1CHU de Québec Research Center- Hôtel-Dieu de Québec Hospital, Québec, Canada, 2Paris Cardiovascular Research Center, INSERM U970, Paris, France, 3Division of Nephrology, Department of Medicine, Faculty of Medicine, Université Laval, Québec, Canada*

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**Ph.d. Benjamin Gavish1**

*1Yazmonit Ltd., Jerusalem, Israel*

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**Dr. Andrea Grillo1,8**, Dr. Filippo Scalise3, Dr. Lucia Salvi4, Dr. Isabella Tan5, Dr. Lorenzo De Censi6, Dr. Antonio Sorropago3, Dr. Giovanni Sorropago6, Dr. Francesco Moretti7, Dr. Matteo Rovina1, Prof. Bruno Fabris8, Prof. Renzo Carretta8, Prof. Alberto Avolio5, Prof. Gianfranco Parati2,6, Prof. Paolo Salvi2

*1Medicina Clinica, Azienda Sanitaria Universitaria Giuliano Isontina, Trieste, Italy, 2IRCCS Istituto Auxologico Italiano, Milano, Italy, 3Department of Interventional Cardiology, Policlinico di Monza, Monza, Italy, 4Arcispedale S. Maria Nuova, Cardiovascular Medicine, Reggio Emilia, Italy, 5Macquarie University, Department of Biomedical Sciences, Faculty of Medicine and Health Science, Sydney, Australia, 6Department of Medicine and Surgery, University of Milano-Bicocca, Milano, Italy, 7Policlinico San Matteo Foundation, University of Pavia, Department of Molecular Medicine, Pavia, Italy, 8Department of Medical, Surgical and Health Sciences, University of Trieste, Trieste, Italy*

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**Dr. Yvonne Hartman1**, Daniek Dinnissen1, Prof. Dr. Dick Thijssen1,2

*1Radboudumc, Nijmegen, Netherlands, 2Liverpool John Moores University, Liverpool, United Kingdom*

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**Dr Adrian Heald1**, Professor Simon George Anderson, Professor Yonghong Peng, Professor Martin Gibson, Dr Helene Fachim, Professor Bill Ollier

*1University Of Manchester, Salford, United Kingdom*

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**Dr Lee Hudson1**, Mr Daniel Jacobs1, Dr Hind Al-Khairulla1, Ms. Alicia Rapala1, Professor Russell Viner1, Dr Dasha Nicholls1, Professor Alun D Hughes1

*1Gos Ucl Institute Of Child Health, London, United Kingdom*

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Mr. V Raj1, Dr. P M Nabeel2, **Dr. Jayaraj Joseph1**

*1Indian Institute Of Technology Madras, Chennai, India, 2Healthcare Technology Innovation Centre, Indian Institute of Technology Madras, Chennai, India*

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**Dr. Kulin Dániel1,2**, Dr. Zsuzsanna Miklós1, Dr. Sandor Kulin1

*1Institute of Translational Medicine, Semmelweis University, Budapest, Hungary, 2E-Med4All Europe Ltd., Budapest, Hungary*

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*1"Iuliu Hațieganu" University Of Medicine And Pharmacy, Cluj-Napoca, Romania, 24th Medical Department, Cluj-Napoca, Romania, 3Dermatology Department, Cluj-Napoca, Romania, 4Department of Diabetes and Nutrtion, Cluj-Napoca, Romania*

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**Mr Kyrollos Louka1**, Mr James Cox1, Dr Isabella Tan1, Dr Alberto Avolio1, Mr Michael O'Rourke2, Dr Mark Butlin1

*1Macquarie University, Macquarie Park, Australia, 2University of New South Wales, Sydney, Australia*

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**Mr. Rahul Manoj1**, Mr. Kiran V Raj1, Dr. P M Nabeel2, Dr. Jayaraj Joseph1

*1Department of Electrical Engineering, Indian Institute Of Technology Madras, Chennai, India, 2Healthcare Technology Innovation Centre - IIT Madras, Chennai, India*

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**Mr. Rahul Manoj1**, Mr. V Kiran Raj1, Dr. P M Nabeel2, Dr. Jayaraj Joseph1

*1Department of Electrical Engineering, Indian Institute Of Technology Madras, Chennai, India, 2Healthcare Technology Innovation Centre - IIT Madras, Chennai, India*

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**Mr. João Luís Marôco1,2**, Mr Marco Pinto3, Dr. Helena Santa-Clara4, Dr. Bo Fernhall5, Dr. Xavier Melo1,2

*1Faculdade de Motricidade Humana – Universidade de Lisboa, Oeiras, Portugal, 2Ginásio Clube Português, Research & Development Department, GCP Lab, Lisboa, Portugal, 3Faculdade de Medicina da Universidade de Lisboa, Lisboa, Portugal, 4Centro Interdisciplinar de Estudo da Performance Humana, Faculdade de Motricidade Humana – Universidade de Lisboa, Oeiras, Portugal, 5College of Applied Health Sciences - University of Illinois at Chicago, Chicago, USA*

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MSc Martina Francesconi1, **MSc, PhD Maria Raffaella Martina2**, MSc Silvia Armenia1, MSc Andrea Buzzelli2, MD, PhD Gregorio Di Franco3, MSc Vincenzo Gemignani2, MSc, PhD Elisabetta Bianchini2, MD, PhD Rosa Maria Bruno4

*1Department of Clinical and Experimental Medicine, University of Pisa, Pisa, Italy, 2Institute of Clinical Physiology (IFC), National Research Council (CNR), Pisa, Italy, 3General Surgery Unit, Department of Translational Research and New Technologies in Medicine and Surgery, University of Pisa, Pisa, Italy, 4INSERM U970 Paris Cardiovascular Research Centre – PARCC, Université de Paris, and AP-HP, Pharmacology Unit, Hôpital Européen Georges Pompidou, Paris, France*

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**Identification of vascular damage in systemic sclerosis: results from a single centre cross-sectional study**

**Dr. Carolina Mazeda1**, Dr. Susana Silva1, Dr. Renata Aguiar1, Dr. Anabela Barcelos1, Dr. José Mesquita Bastos1

*1Centro Hospitalar Baixo Vouga, Aveiro, Portugal*

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**Dr. Carolina Mazeda1**, Dr. Susana Silva1, Dr. Renata Aguiar1, Dr. Anabela Barcelos1, Dr. José Mesquita Bastos1

*1Centro Hospitalar Baixo Vouga, Aveiro, Portugal*

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*1Heart Research, Murdoch Children's Research Institute, Parkville, Australia, 2Department of Paediatrics, University of Melbourne, Parkville, Australia, 3Department of Biomedical Engineering, University of Melbourne, Parkville, Australia, 4Department of Cardiology, Royal Children's Hospital, Parkville, Australia*

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**MD, Phd János Nemcsik1**, MD Dóra Batta1, MD Beáta Zita Kőrösi1, Helga Gyöngyösi1, Zsófia Nemcsik-Bencze1, MD, PhD Andrea László2, MD, PhD Orsolya Cseprekál1, MD, PhD András Tislér1

*1Semmelweis University, Budapest, Hungary, 2Jula/Schindler praxis, Nurenberg, Germany*

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**Virginia Nuckols1**, Amy Stroud1, Debra Brandt2, Lyndsey DuBose1, Mark Santillan2, Gary Pierce1,3

*1Department of Health and Human Physiology, Iowa City, United States, 2Department of Obstetrics and Gynecology, Iowa City, United States, 3Department of Internal Medicine, Iowa City, United States*

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*1University Laval, Quebec, Canada, 2CHU de Québec Research Center- L’Hôtel-Dieu de Québec Hospital, Quebec, Canada, 3INSERM, UMR-970, Paris Cardiovascular research Center, PARIS 15, France, 4Laboratory of Hemodynamics and Cardiovascular Technology, Swiss Federal Institute of Technology, Lausanne, Switzerland*

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**Mrs Anissa Benbia1**, Dr Magid Hallab2, Mrs Kornelia Eveilleau2, Dr Hasan OBEID2, Dr Imad Abi-Nasr2, Dr. Majid Tayyarah3, Pr. Georges Leftheriotis1

*1Service de Médecine Vasculaire, CHU de Nice – France, Nice, France, 2Service de Cardiologie, Clinique Bizet, Paris – France, Paris, France, 3Vascular Surgeon, Southern California Permanente Medical Group and Assistant Professor of Clinical Surgery, Loma Linda University School of Medicine, Southern California, USA, California, USA*

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**Elif Oztemiz1**, Prof. Dr. Soner Dogan2, Atakan Ayden2, Assoc. Prof. Bilge Guvenc Tuna1

*1Yeditepe University, Medicine Faculty, Biophysics Department, Istanbul/TURKEY, Istanbul, Turkey, 2 Yeditepe University, Medicine Faculty, Medicinal Biology Department, Istanbul, Turkey*

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**Ms Mathilde Paré1,3,4**, Mr. Marc-Antoine Roy3,4, Dre Catherine Fortier5,6, Ms Audrey Drapeau3,4, Ms Lawrence Labrecque3,4, Ms Karine Duval1, Dr. Patrice Brassard3,4, Dr. Mohsen Agharazii1,2

*1Division of Nephrology, Faculty of Medicine, Université Laval, Québec, QC, Canada, Québec, Canada, 2CHU de Québec Research Center, L’Hôtel-Dieu de Québec Hospital, Quebec, Canada, 3Research Center of the Institut Universitaire de Cardiologie et de Pneumologie de Québec, Québec, Canada, 4Department of kinesiology, Faculty of Medicine, Université Laval, Québec, Canada, 5INSERM, UMR-970, Paris Cardiovascular Research Center, 75015, Paris, France, 6AP-HP, Pharmacology Unit, Hôpital Européen Georges Pompidou, Université de Paris, Paris, France*

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**Smooth Muscle Cells express stronger traction forces in aortic thoracic aneurysms**

**Ms Claudie Petit1**, Mr Ali-Akbar Karkhaneh Yousefi1, Ms Olfa Ben Moussa1, Mr Jean-Baptiste Michel3, Mr Alain Guignandon2, Mr Stéphane Avril1

*1Mines Saint-Etienne, Université de Lyon, INSERM, U 1059 SAINBIOSE, F - 42023 Saint-Etienne, France, 2Université Jean Monnet, Université de Lyon, INSERM, U 1059 SAINBIOSE, F - 42023 Saint-Etienne, France, 3Laboratory for Translational Vascular Science, and Paris 7- Denis Diderot University, Xavier Bichat HospitalInserm UMR 1148, 75018 Paris, FRANCE*

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**Dr. Senol Piskin1**

*1Department of Mechanical Engineering, Istinye University, Zeytinburnu, Turkey*

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*2University of Split School of Medicine, 1University of Split Department of Health Studies*

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**Biomedical engineer Federica poli1**, Francesco Faita2, Silvia Armenia6, Michelangelo Mancuso5, Paolo Perrini5,6, Lorenzo Ghiadoni5, Mirco Cosottini4, Rosa Maria Bruno1,3

*1Paris Cardiovascular Research Center (PARCC)-INSERM UMR-970, Paris, France, 2Institute of Clinical Physiology, National Research Council, Pisa, Italy, 3AP-HP, Hôpital Européen Georges Pompidou, Université de Paris, Paris, France, 4Department of Translational Research and New Technologies in Medicine and Surgery, University of Pisa, Pisa, Italy, 5University of Pisa, Pisa, Italy, 6Azienda Ospedaliero Universitaria Pisana, Pisa, Italy*

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**Biomedical engineer Federica Poli1**, Catherine Fortier1, Hakim Khettab3, Francesco Faita2, Saverio Vitali4, Giacomo Aringhieri4, Lorenzo Ghiadoni5, Stefano Taddei5, Laurence Amar3, Aurelien Lorthioir3, Pierre Boutouyrie1,3, Rosa Maria Bruno1,3

*1Paris Cardiovascular Research Center (PARCC)-INSERM UMR-970 and Université de Paris, 75015, Paris, France, Paris, France, 2Institute of Clinical Physiology, National Research Council, Pisa, Italy, Pisa, Italy, 3AP-HP, Hôpital Européen Georges Pompidou, Université de Paris, Paris, France, Paris, France, 4Diagnostic and Interventional Radiology, University Hospital of Pisa, Pisa, Italy, Pisa, Italy, 5University of Pisa, Pisa, Italy, Pisa, Italy*

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**The Role of Blood Pooling during Prolonged Sitting on Cerebral Arterial Stiffness**

**Alexander Pomeroy1**, Katie Stanford1, Dr. Lee Stoner1

*1University Of North Carolina At Chapel Hill, Chapel Hill, United States*

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**Prof Igor Posokhov1**

*1Federal Medical Biophysical Center of Federal Medical Biological Agency, Moscow, Russian Federation*

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**Development of carotid shear wave elastography for plaque characterization in transverse imaging planes**

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*1Radboud university medical center, 2University Twente*

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**Comparison of artery wall motion-based vascular index with conventional carotid stiffness markers for detection of vascular ageing**

**Mrs R Arathy1**, Mr V Raj2, Dr P M Nabeel1, Dr Jayaraj Joseph2

*1Healthcare Technology Innovation Centre - IIT Madras, Chennai, India, 2Dept. of Electrical Engineering, Indian Institute of Technology Madras, Chennai, India*

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**Effect of the pharmacological reduction of heart rate by Ivabradine on arterial wall viscosity in young and middle-aged healthy subjects**

**Dr Frédéric Roca1**, Dr Michèle Iacob1, Mrs Caroline Thill1, Pr Jeremy Bellien1, Dr Robinson Joannides1

*1Rouen University Hospital, Rouen, France*

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**Evaluation of vascular and hemodynamic responses after a continuous exercise session of moderate intensity and high intensity intervals in individuals with normal blood pressure and pre-hypertension.**

**Miss Sara Rodrigues1**, Miss Renata Verardino1, Mr Marcel Costa1, Miss Valéria Costa-Hong1, Miss Maria Alves1, Mr Luiz Bortolotto1

*1InCor HC FM USP, São Paulo, Brazil*

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**Comparison of hemodynamic and vascular responses between a session of continuous moderate-intensity and high-intensity interval physical exercise in normotensive subjects.**

**Miss Sara Rodrigues1**, Miss Renata Verardino1, Mr Marcel Costa1, Miss Valéria Costa-Hong1, Miss Maria Alves1, Mr Luiz Bortolotto1

*1InCor HC FM USP, São Paulo, Brazil*

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**Comparison of vascular and hemodynamic responses between a continuous exercise session of moderate intensity and high intensity interval exercise in normotensive individuals.**

**Miss Sara Rodrigues1**, Miss Renata Verardino1, Mr Marcel Costa1, Miss Valéria Costa-Hong1, Miss Maria Alves1, Mr Luiz Bortolotto1

*1InCor HC FM USP, Sao Paulo, Brazil*

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**The aortic-femoral arterial stiffness gradient demonstrates good between-day reliability**

**Ms Jacklyn Rojas1**, Mr. Keeron Stone5, Dr. Simon Fryer5, Dr. James Faulkner2, Dr. Michelle Meyer1, Dr. Kevin Heffernan3, Gabriel Zieff1, Craig Peterson2, Dr Danielle Lambrick4, Dr Lee Stoner1

*1The University of North Carolina at Chapel Hill, Chapel Hill, United States, 2University of Winchester, Winchester, United Kingdom, 3Syracuse University, Syracuse, USA, 4University of Southampton, Southampton, UK, 5University of Gloucestershire, Gloucestershire, UK*

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**Evaluation of image-free wall tracking based measurement of low flow mediated arterial constriction in comparison to B mode imaging**

**Ms Sakshi Sen1**, Mr V Raj2, Dr P M Nabeel3, Dr Dinu S Chandran1, Dr Jayaraj Joseph2, Dr Kishore K Deepak1

*1Department of Physiology, All India Institute of Medical Sciences, New Delhi, India, 2Dept. of Electrical Engineering, Indian Institute of Technology Madras, Chennai, India, 3Healthcare Technology Innovation Centre - Indian Institute of Technology Madras, Chennai, India*

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**Preserved muscle extraction during maximal exercise in active breast cancer survivors.**

**Sara Sherman1**, Georgios Grigoriadis1,2, Bo Fernhall1, Tracy Baynard1

*1Integrative Physiology Lab, University of Illinois at Chicago, Chicago, United States, 2Department of Physical Therapy, Chicago, United States*

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**Accuracy of cuffless blood pressure estimation using photoplethysmography and tonometry from pulse transit time alone**

**Mrs Fatemeh Shirbani1**, Dr Isabella Tan1, Prof Alberto Avolio1, Dr Mark Butlin1

*1Macquarie University, Sydney, Australia*

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**Relationship between the parameters of aortic stiffness and nocturnal dipping status during antihypertensive therapy**

**Dr. Anna Torunova1**

*1Irkutsk State Medical Academy of Postgraduate Education – Branch Campus of the FSBEI FPE RMACPE MOH Russia, Irkutsk, Russian Federation*

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**The effect of renin-angiotensin system inhibitors on pulse wave velocity progression in essential hypertension patients: A 3.5-year follow-up study**

**MD Myrthe van der Bruggen1**, PhD Koen D. Reesink1, PhD Alessandro Maloberti2, MD, PhD Tammo Delhaas1, PhD Casper G. Schalkwijk3, MD, PhD Cristina Giannattasio2, MD, PhD Rosa Maria Bruno4, PhD Bart Spronck1

*1Department of Biomedical Engineering, CARIM School For Cardiovascular Diseases, Maastricht University, Maastricht, The Netherlands, 2School of Medicine and Surgery, Milano-Bicocca University, Milan and Cardiology 4, Niguarda Hospital, Milan, Italy, 3Department of Internal Medicine, CARIM School For Cardiovascular Diseases, Maastricht University, Maastricht, The Netherlands, 4French Institute of Health and Medical Research, Paris-Cardiovascular Research Center PARCC-INSERM, Paris, France*

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**Central Arterial Pressure: Validation of new cost-effective device against Sphygmocor**

**Dr. Valentina Vassilenko1,2,3**, Andreia Serrano1,2,3, Filipa Cardoso1,2,3, Dr. Pedro Cunha3,4,5

*1Nova School of Science and Technology, Nova University of Lisbon, Caparica, Portugal, 2NMT, S.A., Caparica, Portugal, 3Iberian Network on Arterial Structure, Central Hemodynamics and Neurocognition, , Portugal, 4Internal Medicine Department, Center for the Research and Treatment of Arterial Hypertension and Cardiovascular Risk, Guimarães—Centro Hospitalar do Alto Ave/Minho University, Guimarães, Portugal, 5Life and Health Science Research Institute (ICVS), School of Health Science, University of Minho, Braga, Portugal*

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**Perforator Arteries Identification: Comparison of Ultrasound Doppler Technology and Infrared Thermography**

**Dr. Valentina Vassilenko1,2**, Anna Poplavska1, Edivaldo Junior1,4, Dr. Diogo Casal3,4

*1Nova School of Science and Technology, Nova University of Lisbon, Portugal, 2Iberian Network on Arterial Structure, Central Hemodynamics and Neurocognition, Portugal, 3Plastic and Reconstructive Surgery Department and Burn Unit, Centro Hospitalar de Lisboa Central, Lisbon, Portugal, 4Anatomy Department, Nova Medical School- Nova University of Lisbon, Lisbon, Portugal*

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**Correlation of coronary artery calcium- and different cardiovascular risk score-based methods for the estimation of vascular age**

**Dr. Milan Vecsey-Nagy1**, Dr. János Nemcsik

*1Heart and Vascular Center of Semmelweis University, Budapest, Hungary*

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**Carotid artery reactivity to predict cardiovascular events in abdominal aortic aneurysm patients: Preliminary results**

**Msc. Jenske JM Vermeulen1,2**, PhD Suzanne Holewijn1, MD PhD, Prof Michel MPJ Reijnen1,3, PhD, Prof Dick TH Thijssen2

*1Department of surgery, Rijnstate, Arnhem, Netherlands, 2Department of Physiology, Radboud Institute for Health Sciences, Radboud University Medical Centre, Nijmegen, Netherlands, 3Multimodality Medical Imaging Group, Techmed Centre, University of Twente, Enschede, Netherlands*

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