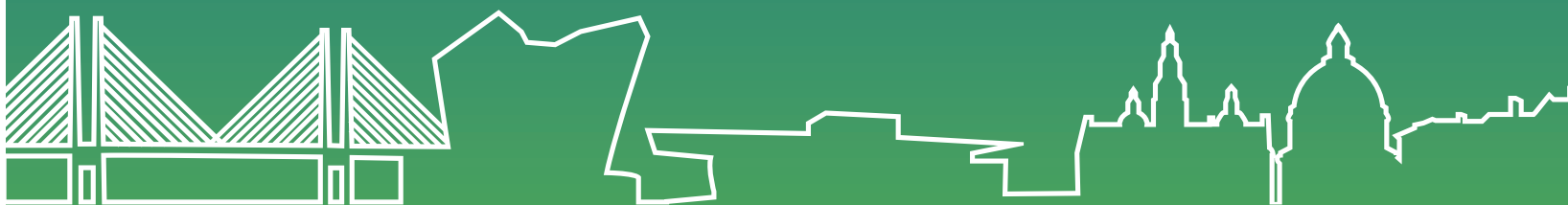


ARTERY 16



13-15 October 2016
Scandic Hotel
Copenhagen, Denmark
www.arterysociety.org

Final Programme

J O I N
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N O W

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.

■ **WHY BECOME A MEMBER OF ARTERY?**

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.

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Supported by an unrestricted educational grant
from **Servier**



ARTERY 16

Scientific Organisers

ARTERY EXECUTIVE COMMITTEE

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Vice-President	Professor J Kennedy Cruickshank	UK
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SECRETARIAT

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ARTERY Society: www.arterysociety.org



Welcome

Dear Colleague

It is our pleasure to welcome you to Copenhagen for ARTERY 16.

Denmark has a strong research capacity within the field of arterial structure and function. The Danish Research Society has made an extensive effort to organise research within this field by establishing the Danish Working Group on Arterial Stiffness under the Danish Hypertension Society. This working group has attracted young researchers in Denmark and has become a valued network for exchanging knowledge and establishing new collaborations both on a national and international level.

ARTERY 16 follows on from the previous series of highly successful ARTERY meetings, which have established a tradition in the field. ARTERY 16 will cover topics related to large artery structure and function through keynote lectures, abstract presentations and practical demonstrations. This year, emphasis will be given to special populations.

We are keen to support young researchers, who represent nearly half of the presenters of free communications, and invited lectures. Building on the success of previous meetings, we are delighted to announce that we have again received a high number of abstracts this year, dealing with clinical research, experimental studies, epidemiology, biomechanical, methodological and imaging research related to large artery structure and function.

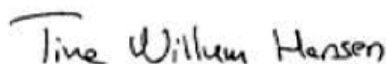
As in previous years we strongly encourage all attendees to engage in scientific debate and critique with presenters and colleagues during the sessions. Once again the Society will provide prestigious prizes for the best oral presentation by a young investigator and best poster. This year the Career Development Lectures will be given by Jonathan Mynard, Thomas van Sloten and Simone Theilade. All awards will be presented during the Conference Dinner on Friday evening. All presented abstracts will be published in the official journal of the Society – ARTERY Research, later in the year.

On behalf of the Society we would like to thank Servier who has made this event possible through an unrestricted educational grant and also our sponsors and exhibitors: Alam Medical, Atcor Medical, BPLab, IEM GmbH and UNEX Corporation.

We hope you enjoy the meeting and scientific discussions.



Professor Charalambos Vlachopoulos
President of ARTERY



Dr Tine Willum Hansen
Chair, Local Organising Committee, ARTERY 16

Programme Overview

	Thursday 13 October 2016	Friday 14 October 2016	Saturday 15 October 2016
08.00		Refreshments, Poster & Exhibition 08.00 – 08.30	Refreshments, Poster & Exhibition 08.00 – 08.30
		Special Guest Lecture: Professor Hannele Yki-Järvinen 08.30 – 09.00	Debate: Microvascular Disease Dr Christian Ott and Professor Jan A Staessen 08.30 – 09.30
09.00		Oral Session III 09.00 – 10.30	Invited Lecture: Dr Gervaise Loirand 09.30 – 10.00
10.00		Refreshments, Poster & Exhibition 10.30 – 11.05	Oral Session V 10.05 – 11.05
11.00		Invited Lecture: Professor Nikos Stergiopoulos 11.05 – 11.35	Refreshments, Poster & Exhibition 11.05 – 11.45
	Registration & Light Lunch 11.30 – 12.30	Focused Update: Dr James Sharman 11.35 – 11.50	McDonald Lecture: Dr Gary Mitchell 11.45 – 12.15
12.00		Satellite Symposium <i>Organised in collaboration with Servier</i> 11.50 – 12.50	Lifetime Achievement Award 12.15 – 12.30
12.30	Welcome Address 12.30 – 12.45		Concluding Remarks 12.30 – 12.40
	Opening Lecture: Professor Michael J Mulvany 12.45 – 13.15	Lunch, Poster & Exhibition 12.50 – 14.00	Light Lunch 12.40
13.00	Special Guest Lecture: Professor Jean Sebastien Silvestre 13.15 – 13.45		
	Oral Session I 13.45 – 14.15	Focus Lectures: Professor Andreas Kjær and Dr Kaisa Maki-Petaja 14.00 – 15.00	
14.00	Refreshments, Poster & Exhibition 14.15 – 14.45		
	Invited Lecture: Professor Lars Melholt Rasmussen 14.45 – 15.15	Oral Session IV 15.05 – 16.35	
15.00	Career Development Lectures 15.15 – 16.15		
16.00	Refreshments, Poster & Exhibition 16.15 – 16.45	Poster Session II Refreshments & Exhibition 16.35 – 17.35	
17.00	Oral Session II 16.45 – 17.55	ARTERY Annual Business Meeting 17.35	
18.00	Poster Session I 17.55 – 18.55		
	Welcome Networking Reception Scandic Copenhagen Hotel 18.30	Conference Dinner, Moltkes Palæ 19.30	
19.00			

A-Z General Information

ABSTRACTS

Abstracts for ARTERY 16 are available to download from the ARTERY website www.arterysociety.org/our-activities/our-conference/artery-16-abstracts/, and on the conference app.

Accepted oral and poster abstracts will also be published in the December 2016 issue of the Society's Journal, ARTERY Research.

CONFERENCE APP

The ARTERY 16 Conference App is available to download free from all 4 app stores (App Store – Apple, Google Play – Android, Windows App Store and Blackberry App Store). Search ARTERY16.

ACCREDITATION

Accreditation from The European Board for Accreditation in Cardiology (EBAC) has been approved for CPD. Details of the points awarded will be updated on site and available from the website post conference.

Delegates wishing to claim CPD Accreditation should sign the Attendance Register on each day they attend.

AWARDS AND PRIZES

The Awards Ceremony will take place during the Conference Dinner on Friday 14 October. Prizes will be awarded for Best Young Investigator Presentation, Career Development Lecture, Best Poster and Best Paper submitted to ARTERY Research over the past year.

BADGES

Name badges must be worn at all times throughout the meeting. For reasons of security delegates not wearing a name badge will be denied access to Scientific Sessions.

CLOAKROOM

An unmanned cloakroom is available on the lower ground floor. Delegates may also store luggage with the hotel concierge on Thursday and Saturday.

EXHIBITION

Please ensure you take time to visit and support the companies exhibiting at ARTERY 16. Further information about the sponsors and exhibitors are available via the conference App.

INTERNET ACCESS

Wi-Fi is provided free of charge for all participants. Please visit the registration desk for log in details.

LUNCH & REFRESHMENTS

Catering stations are located in the exhibition area. Lunch will be provided for all participants on Thursday, Friday and Saturday.

A-Z General Information CONT.

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. Photography and filming during sessions is not permitted.

POSTERS

Posters will be displayed throughout the event but dedicated sessions are allocated on the following days:

Thursday 13 October - 17.55 - 18.55

Poster Session I

Special Populations I
Special Populations II
Clinical Science I
Basic science and imaging
Modelling, special techniques and interventions I

Friday 14 October - 16.35 - 17.35

Special populations III
Clinical science II
Clinical therapeutics
Epidemiology
Modelling, special techniques and interventions II

All Poster presenters are asked to attend their poster during the allocated sessions to talk to fellow delegates.

MOUNTING & REMOVAL OF POSTERS

All posters should be mounted by 16.30 on Thursday 13 October.
All posters must be removed by 13.00 on Saturday 15 October.

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:

Thursday 13 October: 10.30 - 20.00

Friday 14 October: 08.00 - 18.15

Saturday 15 October: 08.00 - 13.00

SPEAKER PREVIEW

All oral presenters should meet with the audio-visual technician in the speaker preview room at the earliest opportunity and at the very latest two hours before the start of the session in which the presentation will take place. This is in order to hand over and check their presentations and ensure they are happy with the equipment available for their talk.



Social Programme

WELCOME NETWORKING RECEPTION

Thursday 13 October

18.30 – 20.00

Scandic Copenhagen Hotel

A Welcome Networking Reception and buffet supper will take place on Thursday 13 October from 18.30–20.00 at the Scandic Copenhagen Hotel. This is a great opportunity to catch up with colleagues and old friends and make new acquaintances.

This will be followed by an evening at Tivoli Gardens, Copenhagen's famous amusement park and pleasure garden. The park opened in 1843 and is the second-oldest operating amusement park in the world. Every autumn Tivoli Gardens is transformed into an enchanted Halloween universe full of witches, pumpkins and lanterns.

Tickets to this event are included in the registration fee.

CONFERENCE DINNER

Friday 14 October

19.30 – late

Moltkes Palæ, Queen Cross Street 1, 1302 Copenhagen

The Conference Dinner takes place on Friday 14 October at Moltkes Palæ.

Moltke's Palace was originally built in 1702 and was later enlarged in 1878 and 1932 respectively. The building has served a myriad of purposes over its time-honoured history, namely as a home for nobles, merchants, a dowager queen, a Danish prime minister and an array of upper class personages. Today, Moltke's Palace has been lovingly and thoroughly restored.

Moltke's Palace is located in the heart of old Copenhagen within walking distance from Amalienborg Palace, Kongens Have, Kongens Nytorv and Nyhavn

Tickets should be booked and prepaid in advance. If you wish to purchase a ticket please speak to a member of staff at the Registration Desk who can advise about availability.

A coach service will be organised from the official ARTERY hotels to the dinner venue and will return after the event.

Charity Partners/Exhibitors

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Servier is involved in research and development, manufacture and marketing of ethical pharmaceuticals. It is a private, independent pharmaceutical company.

Cardiovascular diseases represent the most important therapeutic area for Servier. In this area, the Company has developed different drugs for the treatment of hypertension, heart failure, and cardiac ischemia, such as Coversyl (perindopril), Natrilix SR (indapamide), fixed-combination antihypertensives such as Preterax (perindopril/indapamide), Coveram (perindopril/amlodipine), Triplixam (perindopril/amlodipine/indapamide), Natrixam (indapamide/amlodipine), Procoralan (ivabradine), and Vastarel MR (trimetazidine).

Satellite Symposium organised in collaboration with Servier: Friday 14 October at 11.50.

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ARTERY 17

12-14 October 2017
Pisa, Italy
www.arterysociety.org

Abstract Submission
Deadline: 23 June 2017

Early Bird Registration
Deadline: 11 August 2017

Scientific Programme

THURSDAY 13 OCTOBER 2016

11.30 Registration, Poster viewing and light lunch

12.30 **Welcome address**

12.45 **Opening Lecture**

Remodelling small arteries and PhD training: a journey

Professor Michael J Mulvany, *Aarhus University, Aarhus, Denmark*

13.15 **Special Guest Lecture**

Stem cell therapy for cardiovascular diseases

Professor Jean Sebastien Silvestre, *INSERM, Paris, France*

13.45 **Oral Session I**

1.1 Diabetes and central blood pressure in coronary patients

Professor Piotr Jankowski, *Department of Cardiology, Interventional Electrophysiology and Hypertension Jagiellonian University Medical College, Krakow, Poland*

1.2 How does obesity influence arterial stiffness in asymptomatic adults?

Dr Bela Benczur, *Hetyenyi Geza County Hospital, Dept. of Cardiology, Szolnok, Hungary*

1.3 Central pressures and wave reflections are independently associated with major adverse cardiovascular events in men with erectile dysfunction

Mr Nikitas Skliros, *1st Cardiology Department, Hippokration Hospital, Athens Medical School, Athens, Greece*

14.15 Refreshments, Poster and Exhibition viewing

14.45 **Invited Lecture**

Arterial proteomics: Lessons in relation to stiffness, aneurysms, diabetes and other conditions

Professor Lars Melholt Rasmussen, *Odense University Hospital, Odense, Denmark*

15.15 **Career Development Lectures**

Wave potential: a unified model of arterial waves, reservoir phenomena and their interaction

Dr Jonathan Mynard, *Murdoch Childrens Research Institute, Victoria, Australia*

Vascular dysfunction: at the heart of cardiovascular disease, cognitive impairment and depressive symptoms

Dr Thomas van Sloten, *Maastricht University, Maastricht, The Netherlands*

Arterial inflammation, blood pressure and central hemodynamics - the ABC of diabetic angiopathy

Dr Simone Theilade, *Steno Diabetes Center, Gentofte, Denmark*

16.15 Refreshments, Poster and Exhibition viewing



16.45 Oral Session II

2.1 The relative importance of central and brachial blood pressure in predicting cardiovascular events: an individual participant meta-analysis of prospective observational data from 22,433 subjects

Dr Carmel McEniery, *University of Cambridge, UK*

2.2 Central-to-peripheral diastolic blood pressure attenuation in healthy adolescent and the effects of heart rate. The MACISTE study

Dr Giacomo Pucci, *Department of Medicine, University of Perugia; Perugia, Italy*

2.3 Determinants of inappropriately high pulse wave velocity in hypertensive patients: a retrospective cross-sectional cohort study

Dr Rosa Maria Bruno, *Department of Clinical and Experimental Medicine, University of Pisa, Italy*

2.4 Sodium consumption, central and peripheral blood pressure, and food habits in a population of healthy adolescents. The MACISTE study

Dr Francesca Battista, *Department of Medicine, University of Perugia, Perugia, Italy*

2.5 The effect of renal denervation on central blood pressure and arterial stiffness in treatment resistant essential hypertension: a substudy of a randomized sham-controlled double-blinded trial (the ReSET trial)

Dr Christian D. Peters, *Department of Renal Medicine, Aarhus University Hospital, Aarhus, Denmark*

2.6 The RhoA exchange factor Arhgef1 contributes to pulmonary arterial hypertension

Dr Gervaise Loirand, *INSERM UMR 1087, CNRS UMR 6291 - l'Institut du Thorax, Nantes, France*
Université de Nantes, France, INSERM UMR 999, LabEx LERMIT, Centre Chirurgical Marie Lannelongue, Le Plessis-Robinson, France

2.7 Non-invasive evaluation of end systolic left ventricular elastane according to pressure-volume curve modelling during ejection in arterial hypertension

Professor Pierre Fesler, *Department of Internal Medicine - CH, Montpellier, France*

17.55 Poster Session I

Special Populations I
Special Populations II
Clinical Science I
Basic science and imaging
Modelling, special techniques and interventions I

18.30 Welcome Networking Reception

Scandic Copenhagen Hotel
followed by an evening at Tivoli Gardens

Scientific Programme

FRIDAY 14 OCTOBER 2016

08.00 Refreshments, Poster and Exhibition viewing

08.30 Special Guest Lecture

Why does non-alcoholic fatty liver disease (NAFLD) contribute to cardiovascular outcomes?

Professor Hannele Yki-Järvinen, *University of Helsinki, Helsinki, Finland*

09.00 Oral Session III – Young Investigator

3.1 Reducing arterial stiffness independently of BP: Proof of concept? CAVI, PWV and cardiac data in the 6-month VaSera trial

Dr Charlotte Mills, Dr Luca Faconti, *King's College London, UK*

3.2 Variability in mean arterial pressure and diastolic blood pressure from central to peripheral large arteries: relevance to arterial physiology and estimated central blood pressure

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

3.3 Discovery of a new blood pressure phenotype from invasive central-to-peripheral recordings: implications for brachial cuff accuracy and cardiovascular risk assessment

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

3.4 Wave intensity analysis provides novel insights into pulmonary hypertension

Dr Junjing Su, *Department of Biomedicine, Aarhus University, Aarhus, Denmark*

3.5 Non-invasive us-based wave intensity analysis in mice

Dr Nicole Di Lascio, *Institute of Life Science, Scuola Superiore Sant'Anna, Pisa, Italy*

3.6 Longitudinal changes in aortic reservoir function independently predict declining renal function among healthy individuals

Dr Rachel Climie, *Menzies Institute for Medical Research, Hobart, Australia*

3.7 Arterial stiffness for the early prediction of pre-eclampsia compared with clinical characteristics, uterine artery Doppler indices, and angiogenic biomarkers

Ms Kim Phan, *McGill University, Montreal, Canada*

3.8 Can arterial wave augmentation in young adults explain variability of cardiovascular risk in ethnic minorities?

Dr Luca Faconti, *Cardiovascular and Social Epidemiology Groups, Diabetes and Nutritional Sciences Division, King's College London, London, UK*

3.9 Associations of blood pressure throughout childhood with left ventricle mass in adolescence

Dr Chloe Park, *University College London, London, UK*

10.30 Refreshments, Poster and Exhibition viewing

11.05 Invited Lecture

Constituent based modelling of arterial wall mechanics

Professor Nikos Stergiopoulos, *École Polytechnique Fédérale De Lausanne, Lausanne, Switzerland*

11.35 Focused Update

Validation of non-invasive central blood pressure devices: a consensus approach

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

11.50 **Satellite Symposia** organised in collaboration with **Servier**
Protecting arteries against hypertension and dyslipidemia



12.50 Lunch, Poster and Exhibition viewing

14.00 **Focus Lectures**

Molecular imaging in arterial disease

Professor Andreas Kjær, *University of Copenhagen and Rigshospitalet, Copenhagen, Denmark*

Arterial stiffness in inflammatory disease

Dr Kaisa Maki-Petaja, *University of Cambridge, Cambridge, UK*

15.00 Comfort Break

15.05 **Oral Session IV**

4.1 TNF- antagonists improve arterial stiffness in patients with rheumatoid arthritis: a meta-analysis

Dr Georgios Georgiopoulos, Dr Dimitrios Terentes-Printzios, *Peripheral Vessels Units, 1st Cardiology Department, Hippokration Hospital, Athens Medical School, Athens, Greece*

4.2 Withdrawal of statins therapy in patients after carotid endarterectomy associated with increasing risk of significant restenosis

Ms Olga Tereshina, *Samara State Medical University, Samara, Russia*

4.3 Electronic cigarette smoking increases aortic stiffness in young smokers

Dr Dimitrios Terentes-Printzios, *Peripheral Vessels Units, 1st Cardiology Department, Hippokration Hospital, Athens Medical School, Athens, Greece*

4.4 Arterial phenotype modulation and regulation of vascular fibrosis in mice by conditional inactivation of integrin α v subunit in vascular smooth muscle cells

Mrs Ekaterina Belozertseva, *INSERM UMR_1116, Nancy, France*

4.5 U-shaped relationship of reservoir pressure to cardiovascular events in patients with heart failure with reduced ejection fraction

Ms Stephanie Parragh, *AIT Austrian Institute of Technology GmbH, Health & Environment Department, Biomedical Systems, Vienna, Austria*

4.6 Beat-by-beat assessment of cardiac afterload using aortic PU loop - a pilot study

Mr Arthur Le Gall, *Hopital Lariboisiere, Paris, France*

4.7 Measurement of arterial stiffness using a connected bathroom scale: calibration against Sphygmocor

Professor Pierre Boutouyrie, *Inserm U970, Université Paris Descartes, HEGP, Paris, France*

4.8 Increased cardiac workload in the upright posture in male subjects: non-invasive hemodynamics in men versus women

Mrs Pauliina Kangas, *University of Tampere, Tampere, Finland*

4.9 Proportional pressure relations in the pulmonary arterial system

Professor Nico Westerhof, *VU University Medical Center, Amsterdam, The Netherlands*

16.35 **Poster Session II**, Refreshments and Exhibition viewing

Special populations III

Clinical science II

Clinical therapeutics

Epidemiology

Modelling, special techniques and interventions II

17.35 **ARTERY Annual Business Meeting** – open to all ARTERY Members

19.30 **Conference Dinner**

Moltkes Palæ

Scientific Programme

SATURDAY 15 OCTOBER 2016

08.00 Refreshments, Poster and Exhibition viewing

08.30 **Debate**

PRO: Microvascular disease precedes the development of hypertension

Dr Christian Ott, *University of Erlangen, Erlangen, Germany*

CON: Microvascular disease always trails hypertension

Professor Jan A Staessen, *University of Leuven, Leuven, Belgium*

09.30 **Invited Lecture**

G proteins with clinical perspectives in vascular diseases

Dr Gervaise Loirand, *Université de Nantes, Cedex, France*

10.00 Comfort Break

10.05 **Oral Session V**

5.1 Mild reduction of glomerular filtration rate is associated with increased systemic vascular resistance independent of changes in cardiac autonomic tone

Professor Ilkka Porsti, *Tampere University Hospital, Tampere, Finland*

5.2 An associated with Familial Hemiplegic Migraine Type 2 mutation in the alpha-2 isoform Na,K-ATPase disturbs vascular responses in mouse brain

Dr Vladimir Matchkov, *Aarhus University, Aarhus, Denmark*

5.3 Reversibility of arterial stiffness after kidney transplantation: systematic review and meta-analysis

Dr Mohsen Agharazii, *Centre de Recherche du CHU de Quebec, Division of Nephrology, Faculty of Medicine, Department of Medicine and Social and Preventive Medicine, Université Laval, Quebec, Canada*

5.4 High PWV is associated with nano-scale changes in the medial layer of the internal mammary artery

Dr Riaz Akhtar, *University of Liverpool, UK*

5.5 Age-dependent telomere attrition, short telomeres and atherosclerosis

Dr Simon Toupance, *INSERM UMRS 1116, Université de Lorraine, Nancy, France*

5.6 Cardiovascular consequences of extreme prematurity: a follow-up from the EPICure Study

Dr Carmel McEniery, *University of Cambridge, UK*

11.05 Refreshments, Poster and Exhibition viewing

11.45 **McDonald Lecture**

Forward and Reflected Waves and Cardiovascular Disease

Dr Gary Mitchell, *Cardiovascular Engineering, Inc, Norwood, Massachusetts, USA*

12.15 **Lifetime Achievement Award**

presented to Professor Luc Van Bortel, *Emeritus Professor Clinical Pharmacology and Pharmacotherapy, Heymans Institute of Pharmacology, Ghent University, Belgium*

12.30 **Concluding Remarks and Close of Conference**

12.40 Light lunch



Posters

POSTER SESSION I – SPECIAL POPULATIONS I

6.1 Peripheral artery disease and central hemodynamic modification

Dr Gabriel Dimitrov, *Research Center on Vascular Diseases and Angiology Unit, University of Milan, Italy*

6.2 Impact of diabetes on arterial stiffness

Professor Rogerio Toshio Passos Okawa, *State University of Maringa, Maringa, Brazil*

6.3 Arterial stiffness is associated with low-density non-calcified coronary plaques in patients with type 2 diabetes and healthy controls

Mr Kristian L. Funck, *Department of Internal Medicine and Endocrinology, Aarhus University Hospital, Aarhus, Denmark*

6.4 Large and small artery crosstalk in patients with type 2 diabetes

Jonathan Mathias Baier, *Department of Endocrinology and Internal Medicine, Aarhus University Hospital, Aarhus, Denmark*

6.5 Association between increased arterial stiffness and HbA1c and LDL cholesterol level in type 2 diabetes patients

Dr Ilona Hegyi, Dr Terez Szabo, Dr Eszter Szele, Dr Istvan Vasas, *Kardirex Healthcare Centre, Győr, Hungary*

6.6 Aortic-brachial stiffness mismatch in patients with arterial hypertension and type 2 diabetes mellitus

Dr Ekaterina Starostina, Dr Elena Troitskaya, *Peoples' Friendship University of Russia, Moscow, Russia*

6.7 First evidence of pulsatile pressure interaction between the macro-vasculature and micro-vasculature: proof-of-concept by association with kidney dysfunction among patients with type 2 diabetes

Dr Rachel Climie, *Baker IDI Heart and Diabetes Institute, Melbourne, Australia*

6.8 The relationship between diastolic function and central hemodynamics in diabetic hypertensive patients

Dr Davide Agnoletti, *Department of Internal Medicine, Sacro Cuore Hospital, Negrar, Italy*

6.9 Antiplatelet and vascular effects of aspirin in healthy persons and patients with type 2 diabetes

Ms Liv Vernstroem Hald, *Aarhus University Hospital, Aarhus, Denmark*

6.10 Peripheral sensory neuropathy and vascular angiogenic factors in type 2 diabetes patients in Ghana

Dr Kwame Yeboah, *University of Ghana, Accra, Ghana*

POSTER SESSION I – SPECIAL POPULATIONS II

7.1 The detrimental effects of live firefighting on arterial function in firefighters

Mr Alexander Rosenberg, *University of Illinois at Chicago, USA*

7.2 Poor sleep quality related to worse vascular function in individuals with multiple sclerosis

Dr Thessa Hilgenkamp, *University of Illinois at Chicago, USA; University of Illinois at Urbana-Champaign, USA*

7.3 Assessment of blood pressure and heart rate variability in Multiple Sclerosis

Professor Alberto Avolio, *Macquarie University, Sydney, Australia*

7.4 Higher carotid strain in individuals with Down Syndrome at rest and during hypovolemic sympathoexcitation

Mr Sang Ouk Wee, *University of Illinois at Chicago, USA*

7.5 Retinal vessel responses to flickering light provocation in a cohort of black and white teachers: the SABPA study

Dr Wayne Smith, *North-West University, Potchefstroom, South Africa*

7.6 The difference in glutathione peroxidase activity on arteries of a bi-ethnic population: The SABPA study

Professor Johannes van Rooyen, *North-West University, Potchefstroom, South Africa*

7.7 The effect of marine n-3 polyunsaturated fatty acids on cardiac autonomic and hemodynamic function in patients with psoriatic arthritis: a randomised, double-blind, placebo-controlled trial

Dr Salome Kristensen, *Aalborg University Hospital, Aalborg, Denmark*

7.8 Arterial stiffness and systemic inflammation in COPD patients

Dr Renata Marietta Bocskei, *Semmelweis University Department of Pulmonology, Budapest, Hungary*

7.9 Carotid artery stiffness is associated with CT-measured lung air-trapping in COPD patients and controls independent of age, blood pressure and smoking history

Dr Gary Pierce, *University of Iowa, Iowa City, USA*

Posters CONT.

7.10 Aortic stiffness and Body Mass Index (BMI) in Chronic Obstructive Pulmonary Disease (COPD)

Dr Nicola Gale, *Cardiff University, Cardiff, UK*

POSTER SESSION I - CLINICAL SCIENCE I

8.1 Arterial stiffness, blood pressure and cardiac output study

Dr Suzanne Holewijn, *Rijnstate Hospital, Arnhem, Netherlands*

8.2 Withdrawn by author

8.3 Quantifying heart and arterial contributions to central blood pressure in systole

Mr Samuel Vennin, *King's College London, UK*

8.4 Diurnal changes in central pressure and pulse wave parameters in healthy subjects

Dr Bernhard Hametner, *AIT Austrian Institute of Technology, Health & Environment Department, Vienna, Austria*

8.5 Hemodynamics during intra- and interdialytic periods depend on ultrafiltration volume

Dr Christopher Mayer, *AIT Austrian Institute of Technology GmbH, Vienna, Austria*

8.6 Aerobic fitness level and peripheral arterial compliance - the role of autonomic nervous system tone

Nejka Potocnik, *Medical Faculty, Institute of Physiology, University of Ljubljana, Slovenia*

8.7 Changes in cardiac function but not structure in healthy subjects with premature vascular ageing

Dr Oscar Mac Ananey, *School of Biological Science, Dublin Institute of Technology, Dublin, Ireland*

8.8 Sympathetic vasoconstrictor response to lower body negative pressure in young obese adults: the preliminary finding

Ms Kanokwan Bunsawat, *University of Illinois at Chicago, Chicago, USA*

8.9 Reduction in myocardial wall stress and delayed myocardial relaxation during exercise

Dr Haotian Gu, *King's College London, UK*

8.10 Brachial artery flow-mediated dilatation: different patterns of wall shear rate increase during reactive hyperaemia

Dr Kunihiko Aizawa, *Diabetes and Vascular Medicine Research Centre, NIHR Exeter Clinical Research Facility, University of Exeter Medical School, Exeter, UK*

8.11 Cardio-ankle vascular index and carotid-femoral pulse wave velocity are closely associated with chronological age

Professor C Rajkumar, *Brighton and Sussex Medical School, UK, Brighton and Sussex University Hospitals Trust, UK*

POSTER SESSION I - BASIC SCIENCE AND IMAGING

9.1 Ultrasound characterization of cardiovascular alterations in young ob/ob mice

Dr Nicole Di Lascio, *Institute of Life Science, Scuola Superiore Sant'Anna, Pisa, Italy;*

9.2 Deletion of chromosome 9P21 noncoding cardiovascular risk interval in mice induces a prothrombotic phenotype

Dr Patrick Lacolley, Dr Veronique Regnault, *1.UMR-S1116, Vandoeuvre-les-Nancy, France*

9.3 Functional aortic changes induced by a high salt diet

Miss Kathleen Connolly, *University of Cambridge, UK*

9.4 Evolution of cardiac function and metabolism during aging in a murine animal model of obesity

Miss Delphine Lambert, *INSERM U1116, Vandoeuvre-les-Nancy, France*

9.5 Coagulation control by the RhoA pathway and the exchange factor Arhgef1

Miss Camille Rouillon, *UMR S 1116 Defaillance Cardiovasculaire Aigue et Chronique, Nancy, France*

9.6 Ventricular volume and arterial flow during preload reduction: an MRI study

Miss Sandra Neumann, *University of Bristol, UK*

9.7 Thoracic aorta PWV assessment by using 4D flow in MRI

Dr Gilles Soulat, *INSERM U970 PARCC HEGP Université Paris Descartes, Sorbonne, Paris, France*



9.8 Near Infrared Spectroscopy (NIRS) can detect improvements in arterial function following 6-months of marathon training

Ms Siana Jones, *University College London, UK*

9.9 Flow-mediated slowing as a novel method for the non-invasive assessment of endothelial function

Miss Amedra Basgaran, *Department of Experimental Medicine and Immunotherapeutics, University of Cambridge, UK*

9.10 Structural and functional arterial abnormalities in fibromuscular dysplasia are in the continuum of hypertension: an imaging and biomechanical study

Ms Louise Marais, *INSERM U970, Paris Cardiovascular Research Center, Paris, France*

9.11 Vascular phenotyping by means of very high-resolution ultrasound imaging: a feasibility analysis

Dr Rosa Maria Bruno, *Department of Clinical and Experimental Medicine, University of Pisa, Italy*

POSTER SESSION I – MODELLING, SPECIAL TECHNIQUES AND INTERVENTIONS I

10.1 Optimal automated unobserved office blood pressure protocol to detect hypertension: only 10-minutes and four readings may be needed

Mr Myles Moore, *Menzies Institute for Medical Research, Hobart, Australia; 2.Royal Hobart Hospital, Hobart, Australia*

10.2 Effects of inter-arm differences of brachial systolic blood pressure on the derivation of aortic systolic pressure

Professor Alberto Avolio, *Macquarie University, Sydney, Australia*

10.3 Use of MicroLife BP watch is a feasible approach to determine inter-arm blood pressure differences in a clinical setting

Dr Christoffer Krogager, *Aarhus University Hospital, Aarhus, Denmark*

10.4 Comparison of blood pressure variability calculated from peripheral and derived aortic blood pressure

Professor Alberto Avolio, *Macquarie University, Sydney, Australia*

10.5 Comparison of arterial stiffness assessed by popmetre with arterial stiffness assessed by applanation tonometry: a clinical study

Mr Hasan Obeid, *Paris Descartes University, Paris, France*

10.6 Variation of the asymptotic diastolic pressure with different fitting techniques in healthy humans

Mr Nicola Pomella, Dr Madalina Negoita, *Brunel University, London, UK*

10.7 Non-invasive estimation of central systolic pressure: a comparison between radial artery tonometry and a new direct central blood pressure estimation method (DCBP)

Professor Denis Chemla, *Assistance Publique Hopitaux de Paris, France*

10.8 Systolic aortic pressure derived from different calibration methods in the general population

Dr Siegfried Wassertheurer, *Austrian Institute of Technology, Vienna, Austria*

10.9 Arterial stiffness index beta and cardio-ankle vascular index inherently depend on blood pressure, but can be readily corrected

Mr Bart Spronck, *Department of Biomedical Engineering, CARIM School for Cardiovascular Diseases, Maastricht University, Maastricht, The Netherlands*

10.10 Hemodynamic correlates of the left ventricular mean ejection pressure: a carotid tonometry study

Dr Mathieu Jozwiak, *Assistance Publique Hopitaux de Paris, Paris, France; Alam Medical, Vincennes, France*

POSTER SESSION II – SPECIAL POPULATIONS III

11.1 Endothelial function is impaired in women who had pre-eclampsia

Professor Christian Delles, *University of Glasgow, UK*

11.2 Coronary artery disease topography in relation to rheology of the peripheral small arteries in middle aged erectile dysfunction men

Dr Athanasios Angelis, Dr Nikolaos Ioakimidis, Professor Charalampos Vlachopoulos, *Hippokration University Hospital, 1st Department of Cardiology, Athens, Greece*

11.3 Atheromatosis and endothelial response of the small peripheral arteries: a peritoneal dialysis versus hemodialysis patients mismatch

Dr Athanasios Angelis, Dr Nikolaos Ioakimidis, Professor Charalampos Vlachopoulos, *Hippokration University Hospital, 1st Department of Cardiology, Athens, Greece*

Posters CONT.

11.4 Relationship between inflammatory cytokines and aortic stiffness in patients with chronic kidney disease

Dr Mohsen Agharazii, *Centre de Recherche du CHU de Quebec, Division of Nephrology, Faculty of Medicine, Université Laval, Quebec City, Canada*

11.5 Differences of heart rate variability and augmentation index between dialysis and post-dialysis periods in patients with end-stage renal disease

Mr Stefan Hagmair, *AIT Austrian Institute of Technology GmbH, Vienna, Austria;*

11.6 The aortic-to-brachial stiffness gradient and aortic reservoir-excess pressure in a dialysis population

Dr Mohsen Agharazii, *Centre de Recherche du CHU de Quebec, Division of Nephrology, Faculty of Medicine, Université Laval, Quebec City, Canada;* *Menzies Institute for Medical Research, University of Tasmania, Australia*

11.7 Aortic calcium score affects non-invasively obtained estimates of central blood pressure in patients with advanced chronic kidney disease

Dr Rasmus K. Carlsen, *Department of Renal Medicine, Aarhus University Hospital, Aarhus, Denmark;*

11.8 Aortic systolic blood pressure is no longer marker of the arterial stiffness in stable patients with heart failure with reduced ejection fraction

Mr Evgeny Tyukhmenov, Professor Svetlana Villevalde, *RUDN University, Moscow, Russia*

11.9 Parameters of arterial stiffness have independent prognostic value in stable patients with heart failure with reduced ejection fraction

Mr Evgeny Tyukhmenov, Professor Svetlana Villevalde, *RUDN University, Moscow, Russia*

11.10 Arterial elastance is associated with central blood pressure and arterial peripheral resistance in patients with heart failure with reduced ejection fraction

Mr Evgeny Tyukhmenov, Professor Svetlana Villevalde, *RUDN University, Moscow, Russia*

POSTER SESSION II - CLINICAL SCIENCE II

12.1 Evaluation of acute effects of coffee consumption on arterial stiffness in healthy adult people using an oscillometric device

Dr Pedro Forcada¹, Dr Dario Echeverry², ¹*Instituto De Investigaciones Cardiológicas, Buenos Aires, Argentina;* ²*Laboratorio Funcion Vascular Instituto De Cardiología F. De Medicina, Bogota, Colombia*

12.2 High pulse wave velocity is associated with increased visit-to-visit systolic blood pressure variability in controlled arterial hypertension

Dr Elena Troitskaya, Professor Yulia Kotovskaya, *Peoples' Friendship University of Russia, Moscow, Russia*

12.3 24 hour ambulatory blood pressure monitoring and pulse wave velocity patterns in Kenyan adolescents

Dr Anthony Etyang, ¹*KEMRI-Wellcome Trust Research Programme, Kilifi, Kenya;* ²*London School of Hygiene and Tropical Medicine, London, UK;* ³*African Population and Health Research Centre, Nairobi, Kenya;* ⁴*King's College, London, UK*

12.4 Local carotid stiffness: relationship with wall-to-lumen ratio of retinal arterioles

Dr Anna Paini, *Dept. of Internal Medicine, University of Brescia, Italy*

12.5 Impaired regulation of arterial wall viscosity during changes in blood flow in essential hypertensive patients

Dr Michele Iacob, *Department of Pharmacology, Rouen University Hospital, Rouen, France*

12.6 The role of neuronal nitric oxide synthase in young adults

Ms Jessica Middlemiss, *University of Cambridge, UK*

12.7 The relationship between functional arterial response and circulating biomarkers of patients with fibromuscular dysplasia

Dr Thi-Phuong-Nhung Hoang¹, Professor Pierre Boutouyrie⁴, ¹*University Paris Descartes, Paris, France;* ⁴*Department of Genetics and Hypertension Unit, Paris, France*

12.8 Ventricular-arterial uncoupling does not depend on arterial elastance after myocardial infarction

Dr Elena Zharikova, Professor Svetlana Villevalde, *Peoples Friendship University of Russia, Moscow, Russia*

12.9 Ventricular arterial coupling in isometric handgrip test in untreated hypertensive patients

Zhanna Kobalava, *Peoples' Friendship University of Russia, Moscow, Russia*



12.10 Reduced ventricular-arterial coupling as an early marker of cardiovascular remodeling in hypertensive men

Professor Zhanna Kobalava, *Peoples' Friendship University of Russia, Moscow, Russia*

12.11 Sarcopenia and Vascular Risk in a Healthy Elderly UK Population (BRAVES study)

Professor C Rajkumar, *Brighton and Sussex University Hospitals NHS Trust, Brighton, UK*

POSTER SESSION II – CLINICAL THERAPEUTICS

13.1 The effects of alpha 1-adrenoceptor-blockade and angiotensin converting enzyme-inhibition on indices of aortic stiffness measured by an oscillometric single cuff method in hypertension: the doxazosin ramipril study

Dr Andreas Jekell, *Karolinska Institutet, Department of Clinical Sciences, Danderyd Hospital, Stockholm, Sweden*

13.2 Effects on vascular structure and function of single at1r blockade or its combination with CCB, diuretics or their triple association

Dr Pedro Forcada, *Instituto De Investigaciones Cardiológicas Uba, Buenos Aires, Argentina*

13.3 Sacubitril/valsartan therapy is associated with decrease of arterial elastance in stable patients with heart failure with reduced ejection fraction

Professor Zhanna Kobalava, *Peoples' Friendship University of Russia, Moscow, Russia*

13.4 Sacubitril/valsartan therapy is associated with decrease of pulse wave velocity in stable patients with heart failure with reduced ejection fraction

Professor Zhanna Kobalava, *Peoples' Friendship University of Russia, Moscow, Russia*

13.5 Ventricular-arterial coupling during treatment with bisoprolol and bisoprolol/amlodipin in hypertensive patients

Professor Zhanna Kobalava, *Peoples Friendship University of Russia, Moscow, Russia*

13.6 Switching to bisoprolol/amlodipine fdc eliminates adverse effect of a beta-blocker on aortic pulse pressure augmentation

Professor Zhanna Kobalava, *Peoples Friendship University of Russia, Moscow, Russia*

13.7 Renal denervation in treatment resistant hypertension: effects on coronary flow reserve and forearm dilation capacity. A randomized, double-blinded, SHAM-controlled clinical trial

Dr Morten Engholm, *Department of Cardiology, Aarhus University Hospital, Aarhus, Denmark*

13.8 Ventriculo-vascular interactions and the arterial Windkessel: new insights from cardiovascular magnetic resonance imaging before and after renal denervation

Dr Giovanni Biglino, *School of Clinical Sciences, University of Bristol, UK*

13.9 The effect of rosuvastatin added to a standard antihypertensive therapy on arterial stiffness in patients with uncontrolled hypertension

Miss Anna Torunova, *State Medical Academy for Postgraduate and Continuing Education, Irkutsk, Russia*

13.10 Impact of the glycemic control status on the 2-year progression of the arterial stiffness in add-on a dipeptidyl peptidase 4 inhibitor treatment

Professor Hirofumi Tomiyama, *Tokyo Medical University, Tokyo, Japan*

13.11 Effects of dapagliflozin on early alterations of the micro- and macrocirculation

Dr Christian Ott, *Department of Nephrology and Hypertension, Friedrich-Alexander University of Erlangen-Nuernberg, Erlangen, Germany*

POSTER SESSION II – EPIDEMIOLOGY

14.1 Mechanism of age-related increases in pulse pressure: longitudinal follow-up of the Twins UK Cohort

Dr Ye Li, *King's College London, UK*

14.2 Longitudinal change in vascular structure and function over a 5 year period in Twins UK Cohort

Dr Marina Cecelja, *Kings College London, UK*

14.3 Ideal cardiovascular health is inversely associated with increased carotid-femoral pulse wave velocity in italian adolescents. The Maciste Study

Dr Giacomo Pucci, *Department of Medicine, University of Perugia, Italy*

14.4 A positive family history of diabetes is associated with arterial stiffness: The Malmo Diet Cancer Study

Dr Mikael Gottsater, *Lund University, Malmö, Sweden*

14.5 Levels of angiopoietin-like-2 are positively associated with aortic stiffness and mortality after kidney transplantation

Dr Mohsen Agharazii, *Centre de Recherche du CHU de Quebec, Division of Nephrology, Faculty of Medicine, Université Laval, Quebec City, Canada*

Posters CONT.

14.6 Relationship between 24-hour blood pressure variability and 24-hour central arterial pressure, pulse wave reflection and stiffness in hypertensive patients

Dr Stefano Omboni, *Italian Institute of Telemedicine, Solbiate Arno, Italy*

14.7 Hyaluronan is associated with aortic stiffening in healthy subjects

Dr Kaisa Maki-Petaja, *University of Cambridge, UK*

14.8 Vascular abnormalities related with obesity

Dr Pedro Forcada, *Instituto De Investigaciones Cardiológicas Uba, Buenos Aires, Argentina*

14.9 Increased arterial stiffness predicts less recovery of left ventricular systolic function after myocardial infarction

Dr Elena Zharikova, Professor Svetlana Villevalde, *Peoples Friendship University of Russia, Moscow, Russia*

14.10 Increased central pressure augmentation is associated with reduced sleep duration in individuals exposed to aircraft noise pollution: the SERA-CV study

Dr Rosa Maria Bruno, *University of Pisa, Italy*

14.11 Total arterial compliance as a risk factor for organ damage in hypertension

Dr Dimitrios Terentes-Printzios, *1st Department of Cardiology, Hippokration Hospital, Athens Medical School, Athens, Greece*

POSTER SESSION II - MODELLING, SPECIAL TECHNIQUES AND INTERVENTIONS II

15.1 Analysis of three statistical methods to predict the presence of carotid atheromatous plaques

Mr Mathieu Collette, *Groupe ESAIP, Saint Barthelemy d'Anjou, France*

15.2 Estimates of arterial stiffness and central blood pressure in patients with type 2 diabetes: A comparison of SphygmoCor and Arteriograph

Dr Christoffer Krogager, *Aarhus University Hospital, Aarhus, Denmark; Regional Hospital Silkeborg, Denmark*

15.3 Arterial stiffness recordings with pOpmetre in a general primary care population: the IPC cohort

Mr Hasan Obeid, *Pharmacological Department, G.Pompidou Hospital, Paris, France*

15.4 Measuring arterial stiffness with pOpmètre® in cardiac rehabilitation program

Mr Hasan Obeid, *Paris Descartes University, Paris, France*

15.5 Association of a new surrogate of total arterial compliance with left ventricular mass: the SAFAR study

Professor Athanase Protogerou, *Cardiovascular Prevention & Research Unit, Department of Pathophysiology; Medical School, National and Kapodistrian University of Athens, Greece*

15.6 Influence of the pressure measuring site for velocity/pressure loops

Dr Jona Joachim, *St. Louis-Lariboisière-Fernand Widal University Hospitals, Department of Anaesthesiology & Intensive Care, Paris, France*

15.7 Study of wave dynamics of an extra-aortic counterpulsation device in a one-dimensional computer model of the arterial system

Dr Dimitrios Georgakopoulos, *Sunshine Heart Inc, Eden Prairie MN, USA*

15.8 An extended one-dimensional arterial network model for the simulation of pressure and flow in upper and lower limb extremities

Mr Hasan Obeid, *Ghent University, Ghent, Belgium*

15.9 Modelling arterial pulse pressure from heart rate during sympathetic activation

Dr Berend Westerhof, *Academic Medical Center, Amsterdam, Netherlands*

15.10 Form factor of the femoral artery: an invasive study

Dr Mathieu Jozwiak, *Assistance Publique Hopitaux de Paris, France*

15.11 Towards noninvasive cardiac catheterization

Mr Maarten Heusinkveld, *CARIM School for Cardiovascular Diseases, Maastricht University, Maastricht, Netherlands*



Notes



*Individualized
solutions
for individual
needs*



Newly diagnosed
hypertensive patient



Older hypertensive
patient



Hypertensive patients at any stage
of the disease



Hypertensive patient
with diabetes



Hypertensive
patient with
hypercholesterolemia



Hypertensive patient
with CAD

