

International Post-Graduation Program

Arterial Stiffness and Early Vascular Aging

4th Edition – 18th - 19th November, 2015.

Center for the Research and Treatment of Arterial Hypertension and Cardiovascular Risk, Internal Medicine Department, Guimarães – Centro Hospitalar do Alto Ave / Minho University. Portugal

Life and Health Sciences Research Institute (ICVS), School of Health Sciences, Minho University

ICVS/3B's - PT Government Associate Laboratory, Braga/Guimarães, Portugal

School of Health Sciences, University of Minho, Braga, PORTUGAL

1.Scope

This will be the fourth edition of this International Post Graduation Course. The main goal is to create a scientific forum on new aspects and concepts concerning cardiovascular risk evaluation and stratification, as well as discussing interactions between aspects of the cardiovascular and the central nervous system disease process. At the end of this course, all participants should:

- 1) Understand the concept of Arterial Stiffness and know its clinical applicability;
- 2) Know how to measure arterial stiffness markers (Pulse wave velocity and Central Blood Pressure) both theoretically and practically;
- 3) Identify subjects with Early Vascular Aging syndrome and be aware of its clinical implications;
- 4) To discuss the connection between brain and arterial aging,
- 5) To recognize the relationship between micro and macrovascular changes, cognitive decline and cerebrovascular disease;

- 6) Acquire technical skills in Pulse Wave Velocity, Central Blood Pressure and Carotid Evaluation (Intima/Media thickness evaluation and Carotid Doppler).
- 7) To apprehend new research perspectives in the field of cardiovascular research involving the brain and arterial disease.

2.Faculty

ORGANIZING COMMITTEE

Nuno Sousa, MD, PhD

- Director of the Integrated Masters in Medicine
Full Professor and Vice-President
School of Health Sciences, University of Minho
Braga, PORTUGAL

Pedro Cunha, MD

- Coordinator of the Hypertension and Kidney Disease Outpatient Clinic of the Centre for the Research and Treatment of Arterial Hypertension and Cardiovascular Risk, Internal Medicine Department - Guimarães Hospital/Centro Hospitalar do Alto Ave, Guimarães, PORTUGAL
- Life and Health Sciences Research Institute (ICVS), School of Health Sciences, University of Minho
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Jorge Cotter, MD, PhD

- Director of the Centre for the Research and Treatment of Arterial Hypertension and Cardiovascular Risk
- Director of Internal Medicine Department, Guimarães Hospital/Centro Hospitalar do Alto Ave. Guimarães, PORTUGAL
- Assistant Professor – School of Health Sciences, University of Minho
Braga, PORTUGAL
- Life and Health Sciences Research Institute (ICVS), School of Health Sciences, University of Minho
- ICVS/3B's - PT Government Associate Laboratory, Braga/Guimarães, Portugal

INVITED LECTURERS

Angelo Scuteri, MD, PhD

Scuola Specializzazione Geriatria
Universita' di Roma Tor Vergata
Roma, ITALY

Peter M Nilsson, MD, PhD

Department of Clinical Sciences
Lund University, University Hospital
Malmö, SWEDEN

Pierre Boutouyrie, MD, PhD

Pharmacologie, HEGP, APHP
Paris, FRANCE

Stephane Laurent, MD, PhD

Université René Descartes, Faculté de Médecine Paris V
Unité INSERM U970 – Physiology and pharmacology of large arteries
Pharmacologie, HEGP, APHP
Paris, FRANCE

3.Preliminary Program

November 17th - Arrival and accommodation in Braga

November 18th

9h00 – Post-Graduate Course/Opening Ceremony

9h. Pulse Wave Analysis (Prof. Pierre Boutouyrie)

- 1) Components of the pulse wave and associations with cardiovascular risk.
- 2) Ventricular – vascular dysfunction – clinical and treatment implications.
- 3) Research opportunities

10h30. Coffee Break

10h45. Central Blood Pressure (Prof. Stephane Laurent)

- 1) Systolic amplification and pulse pressure amplification: critical appraisal of its significance and clinical implications.
- 2) Response of central blood pressure to diverse drug treatments;
- 3) Treatment of elevated central blood pressure: are we there yet?
- 4) Research opportunities

12h15. Central Blood Pressure in a high stroke incidence area: a Portuguese experience. (Dr. Pedro Guimarães Cunha)

Afternoon of the 18th of November

- **14h – 20h.** Practical component of the Course (Hands on practice in PWV/Central Blood Pressure and Carotid Evaluation -3h00 of practice for each technique)
- **17h.** Coffee Break

November 19th

9h. Early Vascular Aging: non-pressure dependent components (Prof. Peter Nilsson)

- 1) Early Vascular Aging – Hemodynamic Aging Syndrome.
- 2) What fuels large artery damage, other than age and blood pressure?
- 3) Clinical practical implications;
- 4) Research opportunities.
- 5) **Dr. Elin Dybjer** - Cognition and glucose metabolism - evaluation of the Malmö Cohort

10h45. Coffee Break

11h. Pulse Wave Velocity – longitudinal evolution and interactions with blood pressure. (Prof. Angelo Scuteri)

- 1) Blood pressure and its relationship with arterial damage
- 2) Pulse Wave Velocity as a predictor of the development of hypertension
- 3) Longitudinal evaluation of pulse wave velocity and other central hemodynamic parameters
- 4) Research opportunities

Afternoon of the 19th of November

- **14h – 20h.** Practical component of the Course (Hands on practice in PWV/Central Blood Pressure and Carotid Evaluation -4h00 of practice for each technique)
- **17h.** Coffee Break