

# International Post-Graduation Program

## Arterial Stiffness and Early Vascular Aging

**6th Edition – 15th - 17th November, 2017.**

*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 sixth 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**

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

#### **Pedro Cunha, MD, PhD**

- 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, Guimarães, PORTUGAL
- Assistant Professor of the School of Medicine, University of Minho, Braga, PORTUGAL
- Life and Health Sciences Research Institute (ICVS), School Medicine, University of Minho
- ICVS/3B's - PT Government Associate Laboratory, Braga/Guimarães, Portugal

#### **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 Guimarães, PORTUGAL
- Assistant Professor of the School of Medicine, University of Minho, Braga, PORTUGAL
- Life and Health Sciences Research Institute (ICVS), School Medicine, 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 Medecine Paris V  
Unité INSERM U970 – Physiology and pharmacology of large arteries  
Pharmacologie, HEGP, APHP  
Paris, FRANCE

## 3. Preliminary Program

### November 15<sup>th</sup>

9h00 – Post-Graduate Course/Opening Ceremony

#### **9h. Measuring Central Blood Pressure (Prof. Pierre Boutouyrie)**

- 1) Validation of devices.
- 2) Measurement protocol, Valid Measurements and Clinical Significance.
- 3) Research opportunities

#### **10h30. Coffee Break**

#### **10h45. Non-Hemodynamic components of vascular Aging (Prof. Peter Nilsson)**

- 1) Large artery changes in Diabetes Mellitus
- 2) Large Artery changes in Metabolic Syndrome and Obesity;
- 3) Clinical practical implications;
- 4) Research opportunities.

#### **12h15 Research Projects – presentation and discussion with the faculty**

#### **13h. Lunch**

**14h – 18h.** Practical component of the Course (Hands on practice in PWV/Central Blood Pressure and Carotid Evaluation -4h00 of practice for each technique)

#### **16h. Coffee Break**

### November 16<sup>th</sup>

#### **9h. New perspectives in cardiovascular disease treatment and prevention (Prof. Stephane Laurent)**

- 1) Arterial Stiffness as a therapeutic target;
- 2) New drugs under development / developed for cardiovascular disease prevention;
- 3) Super Normal vs Early Vascular Aging;
- 4) Research opportunities.

#### **10h30. Coffee Break**

#### **10h45. Impact of Arterial Aging on Early and Late Stages of Brain Damage. (Prof. Angelo Scuteri)**

- 1) Cognitive Decline and dementia – the role of arterial aging;
- 2) Structural brain changes and arterial aging;
- 3) Early detection of Cognitive decline in hypertensive patients;
- 4) Research opportunities

**12h15. Central Hemodynamics and Cognitive Function (Prof. Pedro Guimarães Cunha)**

**13h. Lunch**

**14h – 18h.** Practical component of the Course (Hands on practice in PWV/Central Blood Pressure and Carotid Evaluation -4h00 of practice for each technique)

**16h.** Coffee Break

## **November 17<sup>th</sup>**

**9h. Arterial Stiffness and Early Vascular Aging in the Iberian Peninsula**

- 1) **The Guimarães/Vizela Study.** Prof. Pedro Guimarães Cunha (Minho University, Portugal)

**10h30. Coffee Break**

**10H45. Arterial Stiffness and Early Vascular Aging in the Iberian Peninsula**

**12h. Iberian Network on Central Hemodynamics and Arterial Structure**

**13h. Lunch**