



The Amsterdam International Medical Summer School  
21<sup>st</sup> Edition

# Diabetes and the Metabolic Syndrome

From bench to bedside

**Date July 4 – 30, 2010**



# The Amsterdam International Medical Summer School 21<sup>st</sup> edition

Welcome,

The Amsterdam International Medical Summer School (**AIMSS**) is an annual event, organized by the Academic Medical Center University of Amsterdam (AMC-UvA) in cooperation with the Amsterdam Maastricht Summer University for advanced students and recent graduates in Medicine, Biology, Health Sciences and Physiology with a basic knowledge of biomedical and clinical sciences.

The AIMSS offers you the opportunity to live and study in international surroundings and to meet students from all over the world.

This year the AIMSS will organize the Summer School **Diabetes and the Metabolic Syndrome** from bench to bedside.

The Summer School will take place from July 4 until 30, 2010 in the Academic Medical Center, Amsterdam.

The course of this Summer School consists of hands-on training in laboratory research combined with lectures on selected subjects concerning the following topics:

- Obesity
- Insulin sensitivity
- Blood pressure regulation
- Brain and metabolism
- Insulin delivery
- (glyco) lipid metabolism
- Glycocalyx
- Dyslipidemia
- Stress hyperglycemia

Lecturers are internationally known experts of the AMC-UvA and other centers in The Netherlands.

In addition to the academic program many other activities will be organized. You can enjoy a lively social and cultural program in and outside Amsterdam.

We hope to welcome students from all over the world in Amsterdam as a participant in our Summer School 2010.

We will do our best to make your stay both useful and enjoyable.

Professor L.J. Gunning-Schepers, MSc, PhD  
Dean

Members of the Program Committee

Chair: Mireille Serlie MD, PhD

(Department of Endocrinology and Metabolism)

Professor Eric Stroes MD, PhD

(Department of Vascular Medicine)

Professor Arthur Verhoeven PhD

(Department of Medical Biochemistry)

Hans de Vries MD, PhD

(Department of Internal Medicine)

Ina ten Have (International Office).



# The Amsterdam International Medical Summer School

## Scientific program

### Introduction

Obesity poses a major health threat to our society. Its rising prevalence results in a worldwide increase in associated health problems such as cardiovascular diseases and diabetes mellitus type 2 (DM2). In addition to psychological factors, the etiology of obesity results from a disrupted complex interplay between eating behaviour, energy intake, energy expenditure and metabolic handling of nutrients. The metabolic and vascular consequences may result in atherosclerosis, vascular dysfunction, insulin resistance, DM2, hypertension and dyslipidemia. These biological changes are mediated via peripheral mediators but also via neuronal pathways originating in the brain. Unraveling the mechanisms and development of targeted strategies for prevention and treatment are major challenges for current and future researchers around the world.

This year, the AMC Summer School offers students the unique opportunity to actively participate in ongoing research through a four-week introduction program into the exciting scientific world of metabolism and vascular medicine.

The first week of the program will cover the field of regulation and dysregulation of glucose metabolism. The etiology and current concepts of obesity-induced insulin resistance will be discussed. Methods for a detailed glucose metabolism measurement will be demonstrated and data from translational research will be presented.

The second week will be devoted to therapy for DM2 and stress hyperglycemia. The various treatment modalities, the importance of glucose variability and the recent suggestion of carcinogenicity of insulin analogues will be covered. The treatment of hyperglycemia in the intensive care unit has recently become controversial. Current insights will be presented.

The third week of the program will deal with the recent notion that a disturbed glyco(sphingo)lipid metabolism may be one of the mechanisms leading from obesity to insulin resistance and DM2. Evidence for this notion from in vitro and in vivo models will be discussed.

In the fourth week we will focus on the interaction between lipids and the vessel wall. The vessel wall, as the final common target for atherogenesis, has a wide armamentary to protect against atherogenesis, amongst which endothelial function and endothelial glycocalyx. The relevance of these endothelial protective pathways, the impact of risk factors on these pathways and the basic science behind these pathways will be discussed. In addition, hands-on exposure to the various measuring methods will be given.



# The Amsterdam International Medical Summer School

## General information

### Course profile

The duration of the course is four weeks from July 4 – 30, 2010.

Introduction and registration on Sunday afternoon July 4, 2010.

At the end of the course a certificate will be issued to those participants who have completed the course and have fulfilled their presentation.

### Applicant profile

The participant should be an advanced student in e.g. Medicine, Biology or Health Sciences and Psychology, with knowledge of biomedical and clinical sciences and recent graduates.

Number of participants: maximum 30 students.

### Course language

The course language will be English.

### Venue

The course will take place in the AMC, Meibergdreef 15, 1105 AZ Amsterdam, The Netherlands.

The AMC can be reached in 25 minutes from Central Station Amsterdam by subway, direction Gein, stop Holendrecht.

### Course fee & payment conditions

The course fee does not cover the accommodation and expenses for meals.

### Course fee:

Payments received till:

Before May 15, 2010 € 600,--

After May 15, 2010 € 700,--

Accommodation fee:

shared room (including bed linen): € 435,--.

The course fee should be paid in EURO:

to: ABN AMRO Amsterdam the Netherlands

Account number 446546844

BIC: ABNANL2A

IBAN:NL65ABNA0446546844

on behalf of:

Amsterdam Maastricht Summer University

P.O. Box 53066

1007 RB Amsterdam,

The Netherlands

Please make sure your name, the name

"the Amsterdam International Medical Summer

School" and the course code **Medic-1** is mentioned on your payment.

The course fee contains:

Admission to all lectures, course materials, public transport pass in Amsterdam, welcome drink and meal, canal tour, concert, visit to a museum and other social and cultural activities, closing buffet.

### Accommodation

The accommodation consists of modest student apartments (shared) with shared bathroom and kitchen. The apartments are situated in the city center of Amsterdam, near by several places of interest. The accommodation arrangements are available for participants only and cover the period July 2 – August 1, 2010, 10.00 a.m.

### Cost of living

The AMC-restaurant offer meals at reduced prices. This will amount to approximately € 125, -- per week.

Most economical is to prepare your own meals.

### Insurance

Please make sure your insurance (medical and travel insurance etc.) is valid during your stay in the Netherlands.



# The Amsterdam International Medical Summer School

## General information

### Application and registration

Please return the completed application form included Curriculum Vitae , letter of motivation, a letter of recommendation by the home institution and 1 photograph (necessary for your public transport pass) to:

The Amsterdam Maastricht Summer University

P.O. Box 53066

1007 RB AMSTERDAM

The Netherlands

Telephone: + 31.20.6200225

Telefax: +31.20.6249368

<http://www.amsu.edu>

For further information & correspondence:

Please contact the address stated above.



### Deadline

Applications and payments should be received in Amsterdam before May 15, 2010.

Applications arriving after May 15 will be treated in the order in which they are received.

### Cancellation

Before May 15, 2010

### Conditions

Priority will be given to completed applications (including payment in full) in the order in which the payments are received.

Written cancellations received before May 15, 2010 will be refunded after 15% of the total has been deducted for administrative expenses.

No refunds will be made for cancellations received after May 15, 2010 or for non-attendance. Course materials will be forwarded in any case.

The Academic Medical Center University of Amsterdam reserves the right to cancel a course due to unforeseen circumstances without any liability for damages arising, such as flight tickets etc. In that case the participation sum, if already paid, will be refunded in full.

All participants in the courses are bound by the standard conditions of the Amsterdam Maastricht Summer University ([www.amsu.edu](http://www.amsu.edu)).