

course description

The general topic of the summer school is occupational and environmental determinants of disease and the need for multidisciplinary approach as a key for prevention. The main focus will be the toxicity of heavy metals through various exposure sources and absorption routes. The gene-environment interaction will be an important part of the course, with emphasis on the emerging aspects of epigenetics.

A focus on statistical approach to the analysis of complex datasets will be also part of the course. Students will have the opportunity to exercise on data analysis with expert statisticians.

Plant physiology will be part of this program as a possible solution to the health problems raised by exposure. The importance of nutritional factors will be considered as a balance with toxic substances. Methodological aspects will be covered with special emphasis to chemical speciation analysis. Most of the lecturers are part of PHIME (Public health impact of long-term, low-level mixed element exposure in susceptible population strata www.phime.org), an Integrated Project of the 6th EU FrameProgram.

The size of classes will be of 50 participants maximum, including undergraduate, graduate students and young researchers.

Students work groups will be organized following lessons by high level experts. Students will have the opportunity to present their work and receive feedback from lecturers.

The University of Brescia will certify the attendance to the course, through official recognition signed by the University Chancellor and ECTS credits.

inscription

There is no inscription fee. Maximum number of participants is 50, based on first-come-first modality. Low cost accommodation will be available for participants.

documents for inscription

Participants will have to provide an updated curriculum vitae and personal information by filling in the application form to the Course at the following link:
<http://summerunibs.neurotoxmet.org/>

secretariat

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www.unibs.it/on-line/med/Home.html

Sponsored by the University of Brescia and the
Italian Ministry of Education and Research (MIUR)



University of Brescia
School of Medicine, Italy

SUMMER SCHOOL

Occupational and environmental
determinants of disease:
multidisciplinary approach as a
key for research and prevention



29 August - 2 September / 2011
Brescia, Italy

AUGUST - MONDAY 29, 2011 (Aula Consigliare)

8:45 - 9:00 Welcome address by the University of Brescia Authorities

Sergio Pecorelli
Chancellor of the University of Brescia

Stefano Giuliani
Dean of the School of Medicine

9:00 - 9:15 Introduction of the Summer School participating lecturers and students

Roberto Lucchini, Larissa Gares
University of Brescia, Italy

9:15 - 10:15 The risk assessment applied to metal toxicity

Gunnar Nordberg
Umea University, Sweden

10:15 - 11:15 The effects of arsenic during pregnancy and early childhood

Renee Gardner
Karolinska Institutet, Stockholm, Sweden

11:15 - 11:30 Break

11:30 - 12:30 Soil toxicology: a new emerging field

Karin Ljung Björklund
Karolinska Institutet, Stockholm, Sweden

14:30 - 16:30 Introduction to "The R Project for Statistical Computing"

Students work group
Giovanni Parrinello and **Stefano Calza**
University of Brescia, Italy

AUGUST - TUESDAY 30, 2011 (Aula G)

9:00 - 10:00 Toxic metals exposure in women and children in urban, rural and industrial areas in Europe

Ingvar Bergdahl
Umea University, Sweden

10:00 - 11:00 Kidney and metals: - Effects at extremely low cadmium exposures or reversed causality? End-stage renal disease and lead

Alfred Bernard
Université Catholique de Louvain, Bruxelles, Belgium

11:00 - 11:15 Break

11:15 - 12:15 Phytoremediation and mitigation of As and Cd in plants

Steve McGrath
Rothamsted Research, Harpenden, UK

12:15 - 13:00 DMT-1 up-regulation: a susceptibility mechanism to neurodegeneration

Marina Pizzi
University of Brescia, Italy

14:30 - 15:00 Soil heavy metal pollution in central India

Khageshwar Singh Patel
Pt. Ravishankar Shukla University, India

15:00 - 16:00 Total reflection XRay fluorescence: a new method for metal analysis

Laboratory work group
Elza Bontempi
University of Brescia, Italy

AUGUST - WEDNESDAY 31, 2011 (Aula G)

9:00 - 10:00 An Ecosystem Approach to Human Health: integrating disciplines, community participation and gender equity

Donna Mergler
Université du Québec à Montréal

10:00 - 11:00 Methylmercury and child neurodevelopment

Alison McAfee and Maria Mulhern
University of Ulster, Coleraine, UK

11:00 - 11:15 Break

11:15 - 12:15 Manganese toxicity: from soil to neurodevelopmental functions

Roberto Lucchini
University of Brescia, Italy

12:15 - 13:00 Influence of lead, socioeconomic status and alcohol on children IQ

Stefano Guazzetti
Public Health Agency, Reggio Emilia, Italy

14:30 - 16:00 Students work group (Computer room)

SEPTEMBER - THURSDAY 1, 2011 (Aula G)

9:00 - 10:00 Genetic influence on toxicokinetics and toxicodynamics of metals results from the EU PHIME project

Staffan Skerfving
Lund University, Sweden

10:00 - 11:00 Epigenetics: Environmental Instructions for the Genome

Valentina Bollati
University of Milan, Italy

11:00 - 11:15 Break

11:15 - 12:15 Assessing the effects of local irritants: a multi-level, multi-method approach to prevent upper airway diseases

Christoph van Thriel
Leibniz Research Centre for Working Environment and Human Factors, Dortmund, Germany

12:15 - 13:00 Students presentation

14:30 - 16:00 Students work group (Computer room)

SEPTEMBER - FRIDAY 2, 2011 (Aula Consigliare)

9:00 - 10:00 Metallic elements speciation: the perspectives in occupational and environmental toxicology

Pietro Apostoli, Simona Catalani
University of Brescia, Italy

10:00 - 11:00 Risk assessment and prediction of the toxicity of chemicals in the context of the new EU legislation REACH

Andrea Richarz
Helmholtz Zentrum, Leipzig, Germany

11:00 - 11:15 Break

11:15 - 12:15 Metal Speciation at the Neural Barrier: Application to Manganese in Occupational Health

Bernhard Michalke
Helmholtz Zentrum München, Germany

12:15 - 13:15 Students presentation

13:15 - 13:30 **Adjurn Maurizio Memo**
Vice-Chancellor of the University of Brescia