

Objectives

The main aim of this course is to impart the theoretical and practical knowledge required for the correct use of new LC/MS and GC/MS analytical methods in the field of clinical, pharmacological and toxicological diagnosis. This approach aims to provide students with extensive theoretical and experimental training in handling these highly specialized systems in analytical quality conditions.

Since the course has a highly practical component, and to ensure active student participation and facilitate communication among teachers and participants, there is a limit of 20 participants.

Faculty staff

Dr. Mercè Brunet, Head of the Pharmacology and Toxicology Section, Department of Biochemistry and Molecular Genetics, Biomedical Diagnostics Center, Hospital Clínic de Barcelona.

Dr. P. Wallemacq, Head of the Department of Clinical Chemistry, Hospital St. Luc, Université Catholique de Louvain, Brussels, Belgium.

Dr. B. Mellado, Senior Specialist, Department of Medical Oncology, Hospital Clínic de Barcelona.

Dr. Jordi To-Figueras, Senior Consultant of the Pharmacology and Toxicology Section, Department of Biochemistry and Molecular Genetics, Biomedical Diagnostics Center, Hospital Clínic de Barcelona.

Dr. Antonia Ribes, Head of the Congenital Errors of Metabolism Section, Department of Biochemistry and Molecular Genetics, Center of the Network of Biomedical Research in Rare Diseases, Hospital Clínic de Barcelona.

Dr. M. Myer, BHF Senior Fellow and Senior Lecturer, Cardiovascular Division, The James Black Centre, King's College, University of London, UK.

Dr. J. P. Albar, Director of the National Biotechnology Center, Autonomous University of Madrid, Spanish National Institute for Proteomics, ProteoRed, Madrid, Spain.

Dr. David Guillen, IDIBAPS, Pharmacology and Toxicology Section, Department of Biochemistry and Molecular Genetics, Biomedical Diagnostics Center, Hospital Clínic de Barcelona.

Department of Technical Applications, Waters Corporation:
Dr. J.Ll. Lliberia, **Alberto Mendez**, **Dr. Francis Ferron**, **Dr. Belen Hernandez**, **Dr. Xavier Rodriguez**.

Dr. Juan Aybar, Department of Technical Applications, Agilent Technologies.

Daniel Blake, Department of Technical Applications, AB Sciex

General information

Course director
Dr. Mercè Brunet

Coordination
Dr. Mercè Torra, **Dr. Wladimiro Jiménez**

Organization
Department of Biochemistry and Molecular Genetics
Pharmacology and Toxicology Section, Hospital Clínic de Barcelona.

Schedule
25 to October 29, 2010

Registration
The price of registration for the course is 1050 euros.
For residents and fellows 800.

The maximum number of participants is 20.

Upon request we can provide information about hotel accommodation close to the course venue.

Course venue
Hospital Clínic de Barcelona

Aula Farreras Valenti, Aula Miquel Servet and Pharmacology and Toxicology Laboratory.

C/ Villarroel, 170. 08036 Barcelona

Technical secretary, information and reservations

To reserve, please contact:
Hospital Clínic de Barcelona.

Aula Clínic
Sra. Isabel Gallego
C/ Villarroel 170, 08036 Barcelona
Escalera 7, 7ª planta
Tel: 93 227 98 95 - Fax 93 227 98 59
aulaclinic@clinic.ub.es
www.aulaclinic.com

Waters

THE SCIENCE OF WHAT'S POSSIBLE.™



Accredited course:
Consell Català de la Formació Mèdica Continuada- Comisión de Formación Continua del Sistema Nacional de Salud.

Aula Clínic

THE ROLE OF MASS SPECTROMETRY IN THE CLINICAL DIAGNOSTIC LABORATORIES

TECHNICAL ADVANCES AND NEW APPLICATIONS



Barcelona, 25-29 October

Course Director
Dr. Mercè Brunet

Coordination
Dr. Mercè Torra, **Dr. Wladimiro Jiménez**

Organization
Pharmacology and Toxicology Section
Department of Biochemistry and Molecular Genetics,
Hospital Clínic de Barcelona.

Con la calidad de:

CLÍNIC
BARCELONA
Hospital Universitari

Program

Monday, October 25th

SALA ACTES

- 14:30-14:45 Delivery of documentation. Course presentation and aims.
[Dr. M. Brunet](#)
- 14:45-15:15 Advances in clinical applications of LC/MS
[B. Hernández](#)
- 15:15-16:15 LC/MS/MS Coupling. General concepts.
[Dr. J. Ll. Lliberia](#)
- 16:15-16:45 Coffee break
- 16:45-17:45 Theory of LC/MS/MS systems and Control Software
[Dr. J.Ll. Lliberia](#)

Tuesday, October 26th

LABORATORY PRACTICES

PASILLO DE LA FACULTAD

- 09:00-11:00 Maintenance equipment for LC/MS/MS.
[Alberto Mendez](#)
- 11:00-11:30 Coffee break.
- 11:30-13:30 Analysis procedure by LC/MS/MS system
[Dr. D. Guillen](#)
- 13:30-15:00 Lunch Break.
- 15:00-17:00 Validation of analytical methods for drug analysis. Procedure for calibration, array effect, and limits of detection.
[Dr. Francis Ferron](#)
- 17:00-17:30 Coffee break.
- 17:30-18:30 Automated sample preparations and columns.
[X. Rodriguez](#)
The concept of exact mass.
[Dr. Belen Hernandez](#)

Wednesday, October 27th

CLINICAL APPLICATIONS: PHARMACOLOGY

MIQUEL SERVET

- 09:00-10:00 New trends in immunosuppression monitoring: biomarkers and their clinical application.
[Dr. M. Brunet](#)
- 10:00-11:00 What did we learn from two decades of pharmacokinetic immunosuppressive drug monitoring? The role of LC/MS/MS as a reference method.
[Dr. M. Brunet](#)
- 11:00-11:30 Coffee break.
- 11:30-13:00 Monitoring of psychotropic drugs by LC/MS.
[Dr. P. Wallemacq](#)

- 13:00-15:00 Lunch Break.

PASILLO DE LA FACULTAD

- 15:00-16:00 Inside antitumoral drug therapy.
[Dr. B. Mellado](#)
- 16:00-17:00 Practical seminar pharmacology.
[D. Guillen. D. Blake](#)

Thursday, October 28th

CLINICAL APPLICATIONS: TOXICOLOGY

MIQUEL SERVET

- 09:00-10:00 Toxicology. Drug abuse.
[Dr. J. To-Figueras](#)
- 10:00-11:00 Drugs of Abuse. GC / MS Confirmation
[Dr. J. To-Figueras](#)
- 11:00-11:30 Coffee break.
- 11:30-13:00 Metabolomics and applications in clinical diagnosis
Neonatal screening: LC-MS/MS applications.
[Dr. A. Ribes](#)

- 13:30-15:00 Lunch Break.

PASILLO DE LA FACULTAD

- 15:00 -16:00 GCMS contributions in anti-doping and toxicological laboratories.
[J. Aybar](#)
- 16:00-17:00 RTL-DRS applied to solving matrix problems in target applications.
[J. Aybar](#)
- 17:00-17:30 Coffee break.
- 17:30-18:30 GC/MS analysis of drugs of abuse.
[J.To-Figueras](#)

Friday, October 29th

CLINICAL APPLICATIONS: PROTEOMICS AND METABOLOMICS

SALA ACTES

- 09:00-10:30 Proteomics and metabolomics combined in cardiovascular research: a new approach to address pathophysiologic mechanisms.

Proteomics, metabolomics, and immunomics in microparticles derived from human atherosclerotic plaques.
[Dr. M. Mayr](#)
- 10:30-11:00 Coffee break.
- 11:00-12:00 Biomarker discovery in human body fluids: Challenges of the plasma and bile
[Dr. J.P. Albar](#)
- 12:00-13:00 The relevance of proteomics standards: LC-MS and 2D-DIGE multicentric experiments in the ProteoRed consortium"
[Dr. J.P. Albar](#)
- 13:00-13:30 Delivery form for accreditation and closing of the course.

Registration form

THE ROLE OF MASS SPECTROMETRY IN THE CLINICAL DIAGNOSTICS LABORATORY.

TECHNICAL ADVANCES AND NEW APPLICATIONS.

Name.....

Identity card number.....

Address

ZIP..... City.....

Country Tel

Fax E-mail

Workplace

Job tittle

Address

Postcode County/State

Country Tel

Fax

Payment method

Check to the FUNDACIO CLINIC PER A LA RECERCA BIOMÈDICA, with the reference PD 04 02 40

Bank transfer to the FUNDACIO CLINIC PER A LA RECERCA BIOMÈDICA, with the reference PD 04 02 40, Caixa d'Estalvis i Pensions de Barcelona, C/C n.º 2100-0811-76-0201083698.