

Contact

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Picture inside:
Modern diagnostic laboratory
at CHUV Lausanne, © Gilbert Greub



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MANAGING INFECTIONS
PROMOTING SCIENCE

ESCMID Postgraduate Technical Workshop

Diagnostic Microbiology: MALDI-TOF, Bacterial Genomics, Metageno- mics, Automation and Molecular Microbiology

Lausanne, Switzerland
25 – 28 September 2018



ESCMID Postgraduate Technical Workshop

Diagnostic Microbiology: MALDI-TOF, Bacterial Genomics, Metageno- mics, Automation and Molecular Microbiology

Organisers

- ESCMID Study Group for Epidemiological Markers – ESGEM
- ESCMID Study Group for Genomic and Molecular Diagnostics – ESGMD
- CHUV, Lausanne, Switzerland
- Université de Lausanne – UNIL

Course Coordinators

- Adrian Egli, Basel, Switzerland
- Gilbert Greub, Lausanne, Switzerland
- Jacob Moran-Gilad, Beit Kama, Israel
- John Rossen, Groningen, Netherlands

Course Objectives

To further improve patients care, it is crucial to continue to develop new tools providing faster results, with a broader diversity of pathogenic agents with very high sensitivity and specificity. To reach these goals, it is important to be aware of the new innovative methods that have recently been developed and to exchange knowledge and ideas on the future of diagnostic microbiology, including the emerging indications of metagenomics for non-infectious diseases such as obesity and asthma. This course thus aims to provide a unique platform to learn about the strengths and limitations of new diagnostic tools including Maldi-TOF, molecular diagnosis, genomics and metagenomics, as well as novel innovative techniques such as nanoplasmonic sensors and atomic force microscopy. The course also offers a unique opportunity for participants to gain practical experience during the twelve different practicals led by local microbiologists.

Course Programme

Tuesday, 25 September 2018

- 09:00 Introduction. *Gilbert Greub, Jacob Moran-Gilad, Katia Jaton*
- 09:15 Molecular diagnosis. *Marijke Raymaekers*
- 09:45 Multiplex PCRs. *Colin Mackenzie*
- 10:15 Coffee break
- 11:00 Laboratory diagnosis of viral infections. *Katja Seme*
- 11:30 Automated molecular testing of infectious diseases. *Alexander Dalpke*
- 12:00 The future of diagnostic microbiology. *Gilbert Greub*
- 12:30 Lunch
- 14:00 Practicals (parallel sessions)
- 17:45 End

Wednesday, 26 September 2018

- 09:15 Automation in bacteriology. *Antony Croxatto*
- 09:45 Etiological diagnosis of blood culture. *Gilbert Greub*
- 10:15 Coffee break
- 11:00 Mycobacteria: molecular diagnosis. *Belen Rodriguez-Sanchez*
- 11:30 Laboratory diagnosis of anaerobic infections. *Elisabeth Nagy*
- 12:00 Carbapenemases: how to detect them? *Laurent Poirel*
- 12:30 Lunch
- 14:00 Practicals (parallel sessions)
- 16:00 Social programme
- 17:30 End

Thursday, 27 September 2018

- 09:15 Genomics: clinical applications. *Surbhi Malhotra-Kumar*
- 09:45 Genomics: data analyses and quality controls. *Claire Bertelli*
- 10:15 Coffee break
- 11:00 Metagenomics for clinical microbiology. *John Rossen*
- 11:30 Gut metagenomics: beyond clinical microbiology. *Jacques Schrenzel*
- 12:00 Metagenomics application in patients with cystic fibrosis. *Geneviève Hery Arnaud*
- 12:30 Lunch
- 14:00 Practicals (parallel sessions)
- 17:45 End

Friday, 28 September 2018

- 09:15 MALDI-TOF Mass spectrometry. *Robin Patel*
- 09:45 MALDI-TOF and typing. *Adrian Egli*
- 10:15 Coffee break
- 11:00 AB susceptibility testing: new techniques including atomic force microscopy. *Antony Croxatto*
- 11:30 Diagnosis of infections due to respiratory tract viruses. *Kate Templeton*
- 12:00 Open panel discussion. *Katia Jaton, Adrian Egli, Gilbert Greub, Jacob Moran-Gilad, Marijke Raymaekers, Kate Templeton*
- 12:30 Lunch
- 14:00 Practicals (parallel sessions)
- 16:00 Final plenary lecture: molecular and genomic epidemiology. *Jacob Moran-Gilad*
- 16:30 Concluding remarks and farewell. *Gilbert Greub, Jacob Moran-Gilad*

Practicals

- Bacterial phenotypes and automation. *Antony Croxatto*
- Rapid tests. *Onya Opota*
- MALDI-TOF: classical identification of bacteria and fungi. *Frédéric Lamoth*
- MALDI-TOF: application on blood culture. *Alix Coste*
- Etiological diagnosis of pneumonia. *Florian Tagini*
- Diagnosis of urinary tract infections. *Immaculée Nahimana*
- Parasitology. *Guy Prod'ham*
- Morphological identification of fungi. *Philippe Hauser*
- How to sequence: fragment analyser and MiSeq. *Sébastien Aeby*
- Molecular diagnosis. *Katia Jaton*
- Genomics analyses: virulence factors & typing. *Trestan Pillonel*
- 16SrRNA amplicons & shotgun metagenomics. *Claire Bertelli*



Organization

Course Venue

CHUV
Rue du Bugnon 46
Auditoire Alexandre Yersin
1011 Lausanne, Switzerland

Registration Procedure

Register now online on the ESCMID website at www.escmid.org/education.

Registration deadline is 17 August 2018.

Registration Fee

EUR 600 for ESCMID members
(Full Membership/Young Scientist Membership)

EUR 750 for all others

The registration fee includes the course, coffee/tea breaks, lunches, dinner on Thursday evening and the social event. Travel and accommodation are not included.

Attendance Grants

ESCMID provides a number of attendance grants for ESCMID "young scientist members". The grant covers the registration fee. Travel and accommodation are not included. Please apply via the ESCMID website at www.escmid.org/education before 20 July 2018. Applicants will be informed about their acceptance by 3 August 2018.

CME Accreditation

The organizers of the course will apply for European CME accreditation through EACCME.