ESCMID Postgraduate Education Course

Virulence and Resistance in Staphylococcus aureus: 2016 State of the Art

Lyon, France
28 June – 1 July 2016

Target Audience
20 – 40 young microbiologists and infectious disease physicians with basic knowledge in bacteriology.

Faculty Members
Corinne Bouchat, Lyon, France
Rafael Canton, Madrid, Spain
Olivier Daouwaille, Bron, France
Gina Dumitrescu, Lyon, France
Céline Dupieux, Lyon, France
Tristan Ferry, Lyon, France
Thomas Geissmann, Lyon, France
Yves Gillet, Lyon, France
Hajo Grundmann, Freiburg, Germany
Luca Guadabassi, Basseterre, Saint Kitts and Nevis
Stephan Harbarth, Geneva, Switzerland
Mathias Herrmann, Homburg/Saar, Germany
Barbara Kahl, Münster, Germany
Angela Kearn, London, United Kingdom
Winfried Kern, Freiburg, Germany
Frédéric Laurent, Lyon, France
David Lebeaux, Paris, France
Gérard Lina, Lyon, France
Jodi Lindsay, London, United Kingdom
Johannes Mouton, Rotterdam, Netherlands
Tarek Msadek, Paris, France
Jean-Philippe Rasigade, Lyon, France
Stefan Schwarz, Neustadt-Mariensee, Germany
Robert Skov, Copenhagen, Denmark
Aranka Tambic, Zagreb, Croatia
Anne Tristan, Lyon, France
Florent Valour, Lyon, France
François Vandenesch, Bron, France
Thierry Wirth, Paris, France

Course Objectives
• To provide to postgraduate microbiologists and infectious disease physicians (with basic knowledge in bacteriology) an updated overview of pathophysiology and resistance in Staphylococcus aureus
• To give to participants the opportunity to have state of the art, new insights and scientific exchanges on virulence and resistance on these pathogens including:
  – Mechanisms of resistance and virulence in vivo data, clinical management
  – Screening, detection and identification of virulence and resistance determinants in the daily lab
  – Infection control practice

Contact

Contact Person (Scientific Programme)
Frédéric Laurent
Institut de Microbiologie
Laboratoire de Bactériologie
Centre National de Référence des staphylocoques
59 Boulevard Pinel
Bron Cedex, France
Phone +33 472 07 8 387
Fax +33 472 129 626
frederic.laurent@univ-lyon1.fr

Administrative Secretary
Hélène Meugnier
Institut de Microbiologie
Laboratoire de Bactériologie
Centre National de Référence des staphylocoques
59 Boulevard Pinel
Bron Cedex, France
Phone +33 472 129 626
Fax +33 472 129 626
helene.meugnier@chu-lyon.fr
Course Programme

Tuesday, 28 June 2016

Virulence
13:30  Staphylococcal cell wall-associated virulence factors.  
Mathias Herrmann
15:00  Mechanisms of action of staphylococcal toxins (PVL and pore-forming toxins, exfoliatins, PSMs, superantigens).  
Gerard Lina & Oliver Dauwalder
16:15  Intracellular lifestyle of S. aureus.  
To be confirmed
17:15  Regulation of virulence in S. aureus: non-coding RNA, virulence and global regulators.  
Thomas Geissmann & Tarek Msadek

Wednesday, 29 June 2016

08:00  Staphylococcus: from commensalism/colonization to infection and decolonization.  
Stephan Harbarth
08:45  Pathophysiology of staphylococcal bone and joint infection.  
Frédéric Laurent & Tristan Ferry
10:45  Pathophysiology of staphylococcal bacteraemia and endocarditis.  
Carole Bouchiat & Winfried Kern
13:30  Pathophysiology of staphylococcal skin and soft tissue infections.  
Anne Tristan & Yves Gillet
14:00  Biofilm-associated catheter infections and Staphylococcus.  
David Lebeaux & Florent Valour
15:45  Staphylococcus aureus and cystic fibrosis.  
Barbara Kohl
16:15  Staphylococcal colonization and infection in animals: epidemiology, pathophysiology and management.  
Luca Guaraldi & Tarek Msadek
17:15  Staphylococcal virulence through WGS.  
François Vandenesch

Thursday, 30 June 2016

Resistance
08:30  Antimicrobial susceptibility tests for Staphylococcus and EUCAST recommendations.  
Rafael Canton
09:15  Anti-staphylococcal activity of antibiotics in biofilm and host cells.  
Françoise Van Bambeke
10:30  Beta-lactams.  
Frédéric Laurent & Robert Skar  
• Mechanisms of action: from SASM to SARM  
• Genetic support of beta-lactam resistance: bla, mec gene alphabet and PLP alteration  
• Screening, detection, determination of beta-lactam resistance in routine
14:00  Lipo- and glyco-peptides.  
Dana Dumitrescu  
• Mechanisms of action  
• Phenotypic and genetic support of resistance: from VSSA to h-VISA, VISA and VISA++. From van to multi-faceted mutations  
• Detection of resistance in mg lab: why, when and how?  
• In vivo activity and clinical case
16:00  Oxazolidones.  
Angela Kearns & Céline Dupieux  
• Mechanisms of action  
• Mutational and plasmidic resistances  
• Detection of resistance in routine  
• In vivo activity and clinical use
16:45  Animals and resistance in S. aureus.  
Stefan Schwarz
17:20  Epidemiology and prevalence of antibiotic resistance.  
Arjana Tambic

Friday, 1 July 2016

08:15  Anti-staphylococcal antibiotics: the new ones and the future ones.  
Florent Valour
08:45  New approaches to circumvent Staphylococcus multi-resistance.  
Thierry Wirth
10:30  WGS and resistance in Staphylococcus: from research to routine.  
Jodi Lindsay
11:10  Epidemiology and dynamics of virulence resistance S. aureus cloners.  
Najo Grundmann
11:50  Resistance and virulence in S. aureus: an integrative approach.  
Jean-Philippe Rasigade

Course Venue
Lyon-East Medical School  
Institute of Pharmaceutical and Biological Sciences  
University of Lyon  
8 avenue Rockefeller  
69008 Lyon, France

Registration Procedure
Register now online on the ESCMID website at www.escmid.org/education.  
Registration deadline is 20 May 2016.

Registration Fee
EUR 850 for ESCMID members  
(Full Membership/Young Scientist Membership)  
EUR 1000 for all others

The registration fee includes 3 nights of accommodation [28, 29 and 30 June], lunches, coffee breaks, teaching materials and social activities. Travel is not included.

Attendance Grants
ESCMID provides a number of attendance grants for ESCMID “young scientist members”. The grant covers the registration fee. Travel is not included. Please apply via the ESCMID website at www.escmid.org/education before 15 April 2016. Applicants will be informed about their acceptance by 29 April 2016.

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