

## Contact

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## ESCMID Postgraduate Education Course

# Challenges in the diagnosis of life-threatening infections

Zagreb, Croatia  
10 – 12 October 2019

## ESCMID Postgraduate Education Course

# Challenges in the diagnosis of life-threatening infections

### Organisers

- ESCMID Study Group for Forensic and Postmortem Microbiology – ESGFOR
- Croatian Society for Biosafety and Biosecurity
- ESCMID Study Group for Genomic and Molecular Diagnostics – ESGMD
- European Society of Pathology (ESP), Brussels, Belgium
- SEPAF Sociedad Española de Patología Forense
- ESCMID Study Group for Antimicrobial Resistance Surveillance – ESGARS
- ESCMID Study Group for Bloodstream Infections† 7 ValUSd/f[e Snd Sepsis – ESGBI7S
- ESCMID Study Group for Infectious Diseases of the Brain – ESGIB
- ESCMID Emerging Infections Task Force (EITaF)
- CIBERES – Spanish Network of Respiratory Infectious Diseases of the ISCIII (Instituto de Salud Carlos III)

### Course Coordinators

- Amparo Fernández-Rodríguez, Madrid, Spain
- Veroniek Saegeman, Sint-Niklaas, Belgium
- Alemka Markotic, Zagreb, Croatia
- Marta Cohen, Sheffield, United Kingdom
- Jacob Moran-Gilad, Beer Sheva, Israel
- Jordi Rello, Barcelona, Spain
- Antonio Oliver, Palma de Mallorca, Spain
- Winfried V. Kern, Freiburg, Germany
- Jean Paul Stahl, Grenoble, France
- Eskild Petersen, Aarhus, Denmark

### Target Audience

Up to 45 clinical microbiologists, clinicians, infectious disease physicians, internal medicine doctors, molecular biologists, pathologists, forensic physicians, students and trainees interested in the clinical, molecular and forensic diagnosis of life-threatening infections.

### Faculty Members

Laurent Androletti, Reims, France  
Iva Butic, Zagreb, Croatia  
Djurdjica Cekinovic, Rijeka, Croatia  
Marta Cohen, Sheffield, United Kingdom  
Marc Eloit, BScel France  
Amparo Fernández-Rodríguez, Madrid, Spain  
Margareta Ieven, Antwerp, Belgium  
Despoina Koulenti, Athens, Greece  
Ivan-Christian Kurolt, Zagreb, Croatia  
Alemka Markotic, Zagreb, Croatia  
Nicola Petrosillo, Rome, Italy  
Spyros Pournaras, Athens, Greece  
Juan Daniel Prieto Cuadra, Malaga, Spain  
Jordi Rello, Barcelona, Spain  
John W. A. Rossen, Groningen, Netherlands  
Veroniek Saegeman, Sint-Niklaas, Belgium  
Marija Santini, Zagreb, Croatia  
Jean Paul Stahl, Grenoble, France

## Course Objectives

This post-graduate education course is composed of crosscutting modules on the diagnosis and challenges of life-threatening infections caused by classical and emerging pathogens.

Topics are sepsis and respiratory infections in both the community and the ICU, antimicrobial resistance, viruses causing life-threatening infections, fulminant infection patterns, preparedness in outbreak settings, microbiological sampling and molecular diagnostic techniques.

The objectives are to provide an update on the clinical signs and the pathophysiological mechanisms observed and to assess the range of diagnostic assays available.

The course will include a practical approach with clinical and forensic case discussions and with visual material. At the end of the course, all participants will have acquired key tools for the early diagnosis of life-threatening infections and they will understand the importance of the interaction between microbiological and pathological results. They will have learned those pathological and microbiological findings to be aware of in the search for the aetiology of sudden deaths.

## Course Programme

### Thursday, 10 October 2019

- 13:00 Registration and snack
- 14:15 Welcome introduction

#### Roundtable: Unexpected deaths due to infection in the community and in the ICU

- 14:30 Sepsis, septic shock and unexplained deaths in the community – epidemiology, risks and perspectives for early recognition.  
*Marija Santini*
- 15:00 Severe pathogens at the ICU: clinical cases with interactive discussion.  
*Despoina Koulenti*

#### Antibiotic resistance and mortality

- 15:30 Deaths due to antibiotic resistance.  
*Spyros Pournaras*
- 16:00 Global priority pathogens list of antibiotic resistant bacteria: useful to prevent deaths?  
*Jordi Rello*
- 16:30 Coffee break

#### Forensic microbiology in the 21st century I

- 17:00 How to organize postmortem microbiology in a routine clinical laboratory?  
*Veroniek Saegeman*
- 17:30 Interpretation of post-mortem microbiology: a new perspective.  
*Amparo Fernández-Rodríguez*
- 18:00 Case discussion in two scenarios: sudden child death and unexpected adult death.
- 19:00 End of the day

### Friday, 11 October 2019

#### Roundtable: Severe infections with fatal outcome: prediction and prevention already possible?

- 08:30 Genetic susceptibility to severe infections.  
*Đurđica Cekinović*
- 09:00 The pathologist's perspective: how many of these deaths are preventable? *Marta Cohen*
- 09:30 The microbiologist's perspective: Shotgun metagenomics on blood in life threatening infections. *John Rossen*
- 10:00 Molecular diagnosis and laboratory preparedness. *Ivan-Christian Kurolt*
- 10:30 Coffee break

## Autopsy of unexpected deaths: microbiology sampling and safety

- 11:00 Sampling recommendations in unexpected deaths due to infection the forensic perspective. *Amparo Fernández-Rodríguez*
- 11:30 Presentation of a video about how to take these microbiological samples in a paediatric autopsy. *Marta Cohen*
- 12:00 Biosafety at the autopsy room. How to deal with highly virulent pathogens?  
*Alemka Markotic*
- 12:30 Lunch
- 13:30 Case discussion by participants
- 14:30 Interactive cases. How can we excel on the use of molecular techniques to identify pathogens responsible for severe infections and minimise dissemination.
- 16:00 Social Programme

### Saturday, 12 October 2019

#### Pathogens involved in life threatening infections

- 08:30 Infection outbreaks causing high number of fatalities: are we prepared?  
*Nicola Petrosillo*
- 09:00 Emerging pathogens and death.  
*Alemka Markotic*

#### Viruses involved in life threatening infections

- 09:30 Epidemiology and diagnosis of encephalitis and meningitis with fatal outcome.  
*Jean Paul Stahl*
- 10:00 The role of viruses in sudden cardiac death. Post-mortem diagnosis of severe cardiovascular infections.  
*Laurent Andreoletti*
- 10:30 Coffee break

#### Forensic microbiology in the 21st century II

- 11:00 Viral pathogens discovery (In silico detection of emerging pathogens).  
*Marc Eloit*
- 11:30 Improving autopsy microbiology: new techniques and new challenges.  
*Juan Daniel Prieto Cuadra*
- 12:00 New technologies to early diagnose severe respiratory tract infections. *Margareta Ieven*
- 12:30 New technologies for diagnosing blood-stream infections. *Iva Butic*
- 13:00 Conclusions and farewell Lunch

## Organization

### Course Venue

Palace Hotel Zagreb  
Trg J.J. Strossmayera 10  
10000 Zagreb, Croatia  
www.palace.hr

### Registration Procedure

The registration form can be found on the ESCMID website at [www.escmid.org/education](http://www.escmid.org/education).  
Registration deadline is 10 August 2019.

### Registration Fee

EUR 550 for ESCMID members  
EUR 650 for all others

Members of ESP, CIBERES, Croatian Society for Biosafety and Biosecurity and SEPAF can get a reduced fee, please contact [amparo.fernandezrodriguez@justicia.es](mailto:amparo.fernandezrodriguez@justicia.es) or [veroniek.saegeman@uzleuven.be](mailto:veroniek.saegeman@uzleuven.be).  
The fee includes registration, course materials, accommodation for two nights, coffee breaks and lunches, social dinner, social activities.  
Fee without accommodation: EUR 250

### Attendance Grants

ESCMID provides a number of attendance grants for ESCMID "young scientist members". The grant covers the registration fee. Please apply via the ESCMID website at [www.escmid.org/education](http://www.escmid.org/education) before 30 June 2019. Applicants will be informed about their acceptance by 19 July 2019.

### CME Accreditation

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