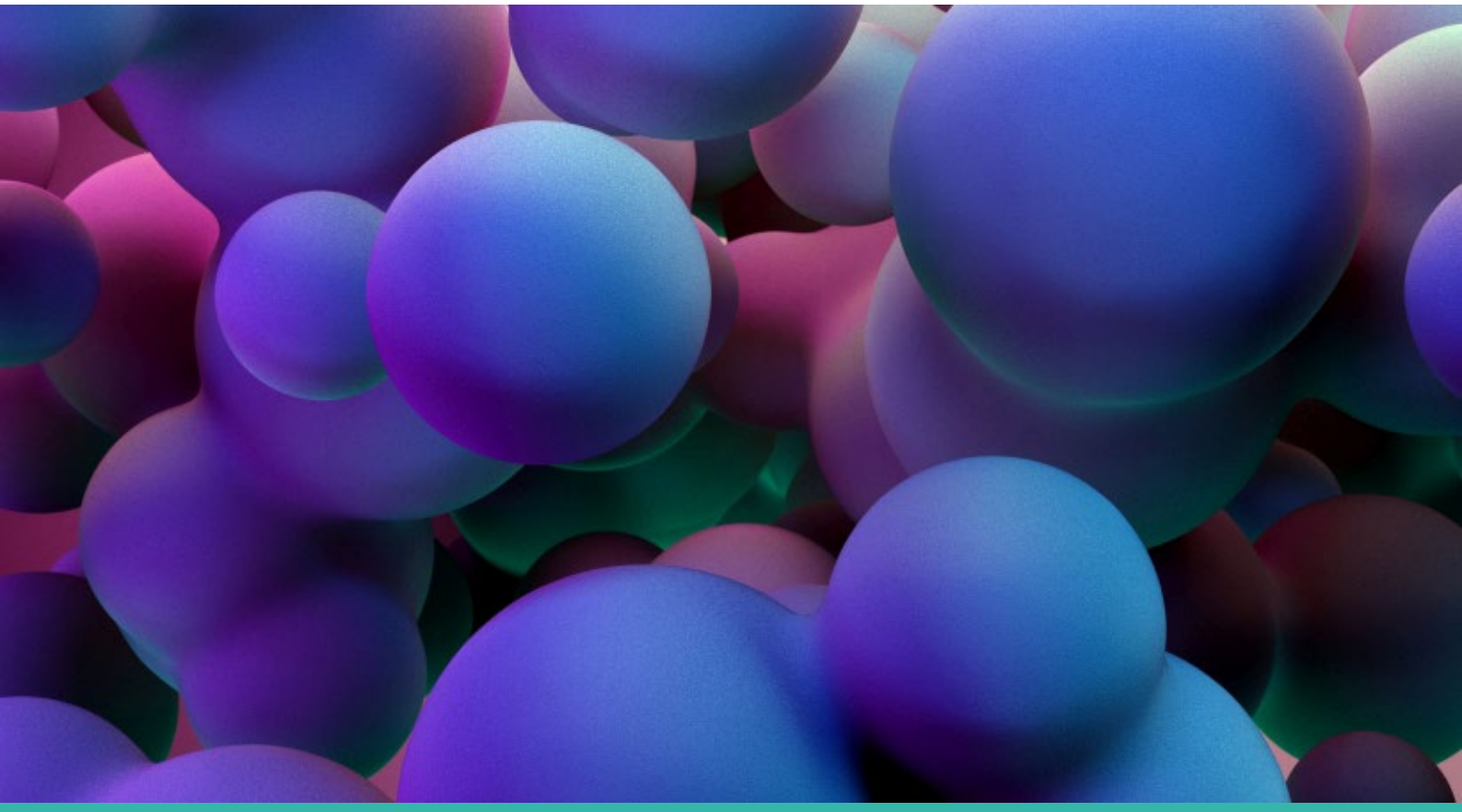
ESCMID

EUCIC Certificate Programme

Dynamics of disease transmission: from genomes to infection control

Münster, Germany
11 - 12 March 2027



Dynamics of disease transmission: from genomes to infection control

Münster, Germany

Faculty Members

Münster, Germany	**Alexander Friedrich**
Münster, Germany	**Alexander Mellmann**
Münster, Germany	**Natalie Scherff**
Münster, Germany	**Karola Prior**
Würzburg, Germany	**Stefanie Kampmeier**
Bonn, Germany	**Nico T. Mutters**
Münster, Germany	**Barbara Middendorf**
Münster, Germany	**Vera Schwierzeck**

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Day 1 Thursday, 11 March 2027

Basic principles of whole genome sequencing (WGS) analysis

Location: Institute of Hygiene, Münster
Chair: Karola Prior & Alexander Mellmann (Münster, DE)

08:30 – 09:00	**Registration**
09:00 – 09:15	**Welcome and housekeeping** Alexander Friedrich, Alexander Mellmann (Münster, DE)
09:15 – 10:00	**Bacterial typing methods in the course of time** Alexander Mellmann (Münster, DE)
10:00 – 11.00	**Keynote: Introduction to bacterial whole genome sequencing (WGS)** Natalie Scherff (Münster, DE)
11:00 – 11:30	**Coffee break**
11:30 – 13:00	**Workshop: From raw reads to phylogenetic trees** Natalie Scherff, Barbara Middendorf & Karola Prior (Münster, DE)
13:00 – 14:00	**Lunch break**
14:00 – 14:45	**Short- and long-read microbial WGS data generation: principles, throughput, and costs** Karola Prior (Münster, DE)
14:45 – 15:30	**Genomic nomenclature, thresholds for outbreak delineation, and confounders** Natalie Scherff (Münster, DE)
15:30 – 16:00	**Coffee break**
16:00 – 16:45	**Keynote: WGS-based surveillance in a hospital setting – from genomes to infection prevention control (IPC)** Stefanie Kampmeier (Würzburg, DE)
18:00 – 19:00	**Guided city tour** Meeting point: town hall courtyard at Chillida sculpture (Syndikatgasse 4, 48143 Münster)
19:00	**Dinner in Münster downtown** Restaurant Großer Kiepenkerl (Spiekerhof 45, 48143 Münster)

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Day 2 Friday, 12 March 2027

WGS tools and application examples

Location: Institute of Hygiene, Münster
Chair: Natalie Scherff & Stefanie Kampmeier (Münster, DE)

08:30 – 09:00	**Genomics applied for antimicrobial resistance (AMR) surveillance of environmental bacteria** Nico T. Mutters (Bonn, DE)
09:00 – 09:45	**Keynote: AMR, mobile genetic element (MGE), and plasmid analysis of WGS data** Alexander Mellmann (Münster, DE)
09:45 – 11:00	**Workshop: Analysis of antimicrobial resistance markers and mobile genetic elements from WGS data** Natalie Scherff, Barbara Middendorf & Karola Prior (Münster, DE)
11:00 – 11:30	**Coffee break**
11:30 – 12:00	**Development of (real-time) PCR screening assays from WGS data** Barbara Middendorf (Münster, DE)
12:00 – 13:00	**Workshop: Designing a PCR screening assay from WGS data** Natalie Scherff, Barbara Middendorf & Karola Prior (Münster, DE)
13:00 – 14:00	**Lunch break**
14:00 – 14:45	**Keynote: Prospective genomic surveillance in a university hospital – a clinical and economic evaluation** Vera Schwierzeck (Münster, DE)
14:45 – 15:15	**Enabling rapid (supra)national cross-sectoral cluster detection through integrated molecular surveillance of pathogens: Introducing the miGenomeSurv network** Natalie Scherff (Münster, DE)
15:15 – 15:45	**Coffee break**
15:45 – 16:45	**Assessment (mandatory)**
16:45 – 17:00	**Q&A, conclusive remarks, and farewell** Alexander Mellmann (Münster, DE)

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The course **"Dynamics of disease transmission: from genomes to infection control, Münster, Germany 11/03/2027 - 12/03/2027"** will apply for CME credits at the European Accreditation Council for Continuing Medical Education (EACCME®)

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The course **"Dynamics of disease transmission: from genomes to infection control, Münster, Germany 11/03/2027 - 12/03/2027"** will apply for accreditation by the Medical Association of Westphalia-Lippe.