

Organized By



9th 'Rapid NGS for Clinical, Public Health, and Food Microbiology' Computer-Class

**Multi-Drug-Resistant Gram-Negatives
and Pathogenic *Campylobacter***

March 25th – 27th, 2020

University Münster, Germany

In co-operation with



IGS-Zoo- and GÜCCI-Networks

MMGC 2020



Objectives

It is our great pleasure to welcome you to the 9th 'Rapid Next-Generation-Sequencing for Clinical, Public Health, and Food Microbiology' computer-class in Münster, Germany. The program provides an overview of Next-Generation Sequence (NGS) based typing of multi-drug-resistant (MDR) Gram-negatives and pathogenic *Campylobacter*. In a practical hands-on approach, the participants will be trained in the use of comparative genomics and genotypic antimicrobial resistance prediction using Illumina NGS data and the Ridom SeqSphere+ software. The course has been designed to boost practical knowledge exchange as well as ample discussions with your colleagues from all over Europe.

Fee and Registration

No participation fees will be charged. However, a **non-refundable service charge of 149 €** for beverages will be claimed from every participant. - Given the international scope of the initiative and the limited capacity available, the meeting organizers strive to select qualified participants from as many different European countries as possible. **Only two participants form each organization** are maximal eligible. Registrations are accepted on first-come first-serve basis. The Workshop language will be English. **Registration** is open via <https://forms.gle/XwJLh9iz7Pii4Fbf7>.

Organization

Drs. **Dag Harmsen** and **Alexander Mellmann** (Medical Faculty, University Münster, Germany), **Werner Ruppitsch** (AGES, Vienna, Austria), and **Guido Werner** (RKI, Wernigerode, Germany) on behalf of the Society for Medical Microbial Genomics (SMMG) e.V.

Venue

Lehrgebäude am UKM Zentralklinikum

Building A6, LG Multi-Media Room

Albert-Schweitzer-Campus 1, 48149 Münster, Germany

Contact

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Computer-Class: Wednesday - Friday, 25th – 27th March 2020

Wednesday, 25th March 2020

12:00 Registration (lunch and drinks provided in registration area)

Chair: Alexander Mellmann, University of Münster, Germany

13:00 Welcome and Introduction

Dag Harmsen, University of Münster, Münster, Germany

13:15 Tips and Tricks for Illumina Micobial Whole Genome Sequencing Workflow (WGS)

Karola Prior, University of Münster, Münster, Germany

14:25 Tips and Tricks for Oxford Nanopore Microbial Sequencing Workflow

Anne Pohlmann, FLI, Greifswald – Island Riems, Germany

15:00 Coffee Break

Chair: Guido Werner, RKI, Wernigerode, Germany

15:30 Tips and Tricks for Pacific Biosciences Microbial Sequencing Workflow

Alexander Mellmann, University of Münster, Münster, Germany

16:00 Bioinformatic Tools for WGS Data Analysis

Dag Harmsen, University of Münster, Münster, Germany

17:00 Emergence of NDM-producing *Klebsiella pneumoniae* and *Escherichia coli* in Spain: Phylogeny, Resistome, Virulence and Plasmids Encoding *bla*_{NDM}-like Genes as Determined by WGS

*Maria Pérez-Vázquez, Centro Nacional de Microbiología, Instituto de Salud Carlos III
Madrid, Spain*

18:00 Get-Together Reception (finger-food and drinks are provided)

19:30 Finish

Thursday, 26th March 2020

Chair: Werner Ruppitsch, AGES, Vienna, Austria

09:00 IS26-Mediated Transfer of *bla*_{NDM-1} as the Main Route of Resistance Transmission During a Polyclonal Multispecies Outbreak in a German Hospital

Robert Weber, RKI, Wernigerode, Germany

09:45 Part I Hands-on: Comparative Genomics and AMRFinding in MDR-GNs

Dag Harmsen, Werner Ruppitsch, and Karola Prior

11:00 Coffee Break

Agenda, Transportation and Accommodation

11:30 Part II Hands-on: Comparative Genomics and AMRFinding in MDR-GNs

12:30 Lunch Break (lunch and drinks provided)

13:45 Part III Hands-on: Comparative Genomics and AMRFinding in MDR-GNs

15:45 Coffee Break

Chair: Werner Ruppitsch, AGES, Vienna, Austria

16:15 Identification of Recurring Genotypes of *Campylobacter jejuni* Within Clinical Isolates: New Insights from a Pilot Study Using Three Validated WGS-based Typing Schemes

Catherine Ragimbeau, National Health Laboratory, Epidemiology and Microbial Genomics, Dudelange, Luxembourg (tbc)

17:00 Finish

18:30 City Tour (Meeting point: [Old Town Hall](#); Prinzipalmarkt 10, 48143 Münster)

19:30 Dinner Invitation Restaurant [Zum Himmelsreich](#) (Annette-Allee 9, 48149 Münster)

Friday, 27th March 2020

Chair: Dag Harmsen, University of Münster, Münster, Germany

09:00 Listeria Serogroup- and Virulence-Typing

Werner Ruppitsch, AGES, Vienna, Austria

09:30 Part I Hands-on: Comparative Genomics and Virulence Typing *Campylobacter*

Dag Harmsen, Werner Ruppitsch, and Karola Prior

11:00 Coffee Break

11:30 Part II Hands-on: Comparative Genomics and Virulence Typing *Campylobacter*

12:00 Outlook: Metagenomics Pathogen Detection

John Rossen, IDbyDNA, Groningen, The Netherlands

12:45 Closing Remarks

Alexander Mellmann, University of Münster, Münster, Germany

13:00 Finish (lunch and drinks provided in registration area)

Luggage can be stored on Friday in the computer-class room.

Internet access is all three days possible for our academic participants via 'eduroam' WiFi.



General Information About City of Münster

Münster is a convention city in the German federal state of North Rhine-Westphalia with European tradition - envoys from Austria, France, Sweden, the Netherlands and Germany gathered there as early as 1648. In Münster City Hall they officially sealed the end of the Thirty Years War with the Treaty of Westphalia.

Historical gabled buildings, baroque treasures, lots of green spaces and delightful surroundings all conspire to make visitors to Münster loath to say farewell. - 200 years of University history, bikes, and a pulsating student community lend one of the largest German University cities charm and character.

How To Travel To Münster

1.) By plane

Nearest airports:

Münster/Osnabrück (IATA code: FMO) Airport is 32/47 min by bus (line S50/R51; about every half-hour).

Please note to fly only to Münster airport if you can find a direct connection otherwise use one of the two following more convenient connected airports.

Düsseldorf (IATA code: DUS) Airport is approx. 1.5 h by frequent and low-priced direct trains (*very convenient!*).

Frankfurt (IATA code: FRA) Airport is approx. 3 h by train (more expensive, usually 1 step-over).

2.) By train

Münster is easy to reach by train via high-speed Inter-City Express trains. Choose Münster Central Station ('Hauptbahnhof') as your destination (Information about connections: <http://www.bahn.de/i/view/USA/en/index.shtml>). Train tickets should be bought at a ticket-machine or –office before entering a train!

3.) By car

Münster is situated in the North-West of Germany. It is located directly at the A1 and A43 motor highway.

Accommodation in Münster

We recommend booking a hotel in Münster downtown area (close to Central Station).

There are many hotels available in Münster (reservation information: <http://www.muenster.de/stadt/tourismus/en/hotels.html>). A convenient and not too expensive one is for example the ibis Münster City hotel (Engelstr. 53, 48143 Münster; room prices start at 75€, <http://www.accorhotels.com/gb/hotel-2206-ibis-muenster-city/index.shtml>).

How To Travel In Münster To Venue

By bus/taxi

From the Central Station: Busses leave every 10 min at the Central Station, i.e., line 11 (track C1), line 12 or 14 (both track B1). Suitable bus stops are 'Hüfferstiftung', 'Jungeblodtplatz', and 'Domagkstraße' (takes about 12 min drive). From here 5 min walk to the 'Lehrgebäude' (see next page). A travel with a taxi from the Central Station takes about 10 min and costs about 10 €.

