



IBA

National Graduate School in
Infection Biology and Antimicrobials



Norwegian University
of Life Sciences

One health approach to zoonotic infectious diseases course, 2 ECTS (full course)

Time: November 29th 2021 – December 3rd 2021 (Week 48)

Place: NMBU Ås Campus. The lectures on Monday and in the mornings of the other days will be held in Auditorium Gullvepsen at Bikuben, 1st floor and live-streamed via Zoom. The detailed schedule of the rooms for practical sessions will be announced to the participants after the registration deadline.

Organizing committee:

Dr. Özgün Candan Onarman Umu – Department of Paraclinical Sciences
(PARAFAG) Norwegian University of Life Sciences (NMBU)

Assoc. Prof. Ann-Katrin Llarena – PARAFAG NMBU

Assoc. Prof. Sabrina Rodriguez Campos – PARAFAG NMBU

Dr. Erik Hjerde – ELIXIR Norway, The Arctic University of Norway (UiT)

Prof. Yngvild Wasteson – PARAFAG NMBU

Prof. Arnfinn Sundsfjord - Department of Medical Biology (IMB), UiT

Dr. Ola Brønstad Brynildsrud – Norwegian Institute of Public Health (NIPH)

Dr. Anna Kaarina Pöntinen, Department of Biostatistics, University of Oslo (UiO)

PROGRAM

MONDAY, 29.11.2021

Introduction to One Health

- 09.00-10.00 Welcome & Poster and oral presentations of the students for introducing themselves
- 10.00-10.50 Zoonotic diseases a consequence of complex ecological systems
Prof. Eystein Skjerve, NMBU
- 10.50-11.10 *Break*
- 11.10-12.00 The Lancet taskforce on the origin of SARS-CoV-2 and One Health.
Dr. Carlos Goncalo das Neves, NVI
- 12.00-12.45 *Lunch*
- 12.45-16.00 General One Health session, *Chair: Prof. Yngvild Wasteson, NMBU*
- One Health and zoonoses- A General introduction
Prof. Jacques Godfroid, UiT
 - One health and Tuberculosis
Prof. Musso Munyeme, U of Zambia
Dr. Adrian Muwonge, The Roslin Institute
 - One Health and Food Safety/AMR
Prof. John Muma, U of Zambia
 - One Health inside rural communities: The NORHED Capazomaninteco project
Prof. Clovice Kankya, Makerere University, Uganda
 - One Health and Filoviruses: Ebola/Marburg
Assoc. Prof. Luke Nyakarahuka, Makerere University, Uganda
 - One Health / AMR
Flavien Bumbangi / Terence Odoch

TUESDAY, 30.11.2021

One Health and Microbial genomics

- 08.30-09.20 Whole genome sequencing in surveillance and outbreak investigations of zoonotic and animal pathogens
Dr. Camilla Sekse, NVI
- 09.20-10.10 Leptospirosis a neglected tropical disease in Europe and Scandinavia -
Leptospira spp.
Assoc. Prof. Sabrina Rodriguez Campos, NMBU
- 10.10-10.25 *Break*

- 10.25-11.15 Zoonotic pathogens from the human perspective of One Health and outbreak investigations
To be announced, NIPH
- 11.15-11.45 Introduction to the practical session and set-up
- 11.45-12.30 *Lunch*
- 12.30-16.00 Continue - Practical session on microbial genomics - microbial tracing on *Campylobacter*

WEDNESDAY, 01.12.2021

One Health and Microbial genomics

- 08.30-09.20 Antimicrobial resistance in food chain and use of WGS
Prof. Bjørn-Arne Lindstedt, NMBU
- 09.20-10.10 Science to policy - AMR research in HOH (Helsinki One Health) research network
Asst. Prof. Annamari Heikinheimo, University of Helsinki
- 10.10-10.25 *Break*
- 10.25-11.15 One Health collaborative efforts between food safety and public health authorities: Implementation of WGS by EFSA in food safety and zoonotic diseases
Assoc. Prof. Mirko Rossi, EFSA BIOCONTAM Unit
- 11.15-11.45 Introduction and wrap-up for practical session from yesterday
- 11.45-12.30 *Lunch*
- 12.30-16.00 Continue - Practical session on microbial genomics - microbial tracing on *Campylobacter*

DINNER

THURSDAY, 02.12.2021

High-throughput screening of AMR & Novel antimicrobials: Bacteriocins

- 08.30-09.20 Metagenomics at the animal-human interface of One Health.
Assoc. Prof. Sabrina Rodriguez Campos, NMBU
- 09.20-10.10 Bacteriocins, a bullet to fight antimicrobial resistance
Prof. Dzung Diep, NMBU
- 10.10-10.25 *Break*

- 10.25-11.15 AMR detection with metagenomics, possibilities and pitfalls
Dr. Thomas Haverkamp, NVI
- 11.15-11.45 Introduction and wrap-up for practical session from yesterday
- 11.45-12.30 *Lunch*
- 12.30-16.00 End - Practical session on microbial genomics & Start -metagenomics for resistome analysis

FRIDAY, 03.12.2021

High-throughput screening of AMR

- 09.00-09.50 CRISPR-based genetic screening within the frame of AMR
Assoc. Prof Morten Kjos, NMBU
- 9.50-10.40 Antimicrobial resistance in the age of metagenomics
Dr. Patrick Munk, DTU
- 10.40-11.00 *Break*
- 11.00-11.30 Introduction and wrap-up for practical session from yesterday
- 11.30-12.15 *Lunch*
- 12.15-15.45 End - Practical session on metagenomics for resistome analysis
- 15.45-16.15 Evaluation of the course & End