

PROGRAM

POSTGRADUATE COURSE IN MICROBIOLOGY 2013

Monday 08.04

- 09.00- 09.15 Welcome and introduction – presentation of course program
09.15- 10.00 Oral microbial diversity (FLOYD E DEWHIRST)
10.15- 11.00 Oral microbial diversity (FLOYD E DEWHIRST)
11.15- 12.00 Introduction to bacterial genetics (FERNANDA PETERSEN)
12.00- 13.00 Lunch
13.00- 13.45 Classification, identification and nomenclature of microorganisms (MORTEN ENERSEN)
14.00- 15.00 Practice: Clinical microbiology/anaerobic cultivation, pure cultures, Gram-staining/ preparation for *mini* Api and Vitek2 (ANNE K KRISTOFFERSEN, ISABELLE MESSEL, MORTEN ENERSEN)
15.00-16.00 Practice/ essay planning and writing.

Tuesday 09.04

- 09.00- 09.45 Microbiology of periodontal diseases (MORTEN ENERSEN)
10.00- 10.45 Checkerboard analysis (ANNE K KRISTOFFERSEN)
11.00- 12.00 Identification and resistance assessment by *mini* API; Vitek2 and E-test (ISABELLE MESSEL, ANNE K KRISTOFFERSEN)
12.00- 16.00 Lunch, practice, essay planning and writing.

Wednesday 10.04

- 09.00-09.45 Diagnostic microbiology (PETER GAUSTAD)
10.00-10.45 Diagnostic microbiology (PETER GAUSTAD)
11.00-12.00 Practice: Clinical microbiology at OUS (PETER GAUSTAD)
12.00-13.00 Lunch
13.00-13.45 Polymerase chain reaction (ANNE K KRISTOFFERSEN)
14.00-14.45 Sequencing – introduction (ANNE K KRISTOFFERSEN)
15.00-15.45 16S rRNA sequencing (JØRN A FRIEDRICH AAS)

Thursday 11.04

- 09.00-09.45 Practice: PCR and 16S rRNA sequencing in microbiology (ANNE K KRISTOFFERSEN)
10.00-10.45 High-throughput DNA sequencing (ROBERT LYLE)

11.00-11.45 High-throughput DNA sequencing (ROBERT LYLE)
12.00-13.00 Lunch
13.00-13.45 MALDI-TOF in diagnostic microbiology
(ANDRE INGEBRETSEN)
14.00-14.45 Biofilm crosstalk and signalling (ANNE AA SCHEIE)
15.00-16.00 Practice/essay writing

Friday 12.04

09.00-09.45 Microbiology of dental caries (LINO TORLAKOVIC)
10.00-10.45 Bacterial pathogenesis (ANN PROGULSKE FOX)
11.00-11.45 Bacterial pathogenesis in periodontal diseases
(ANN PROGULSKE FOX)
12.00-13.00 Lunch
13.00-13.45 Fungal diseases (PETER GAUSTAD)
14.00-14.45 Microbiology of pulpal infections (PIA TITTERUD SUNDE)
15.00-16.00 Practice/essay writing

Monday 15.04

09.00-09.45 Oral fungal diseases (KARI METTE ANDERSEN)
10.00-10.45 Bioinformatics (JON LÆRDAHL)
11.00-11.45 Bioinformatics (JON LÆRDAHL)
12.00-13.00 Lunch
13.00-16.00 Practice/essay writing

Tuesday 16.04

09.00-09.45 Antibiotic therapies (PETER GAUSTAD)
10.00-10.45 Antibiotic drug therapy in dental practice - what do we
know? (LASSE SKOGLUND)
11.00-11.45 Antibiotic resistance (TRUDE HANDAL)
12.00-13.00 Lunch
13.00-13.45 Bacterial metabolism (ANDRE INGEBRETSEN)
14.00-14.45 Population genetics (MORTEN ENERSEN)
15.00-16.00 Essay writing

Wednesday 17.04

09.00-09.45 Virus infections (BJØRN GRINDE)
10.00-10.45 Oral virus infections (BJØRN GRINDE)
11.00-12.00 Virulence factors of *P. gingivalis* (MORTEN ENERSEN)
12.00-13.00 Lunch

13.00-13.45 In an epidemiologic perspective – oral infections og systemic disease (LISE LUND HÅHEIM)
14.00-16.00 Essay writing

Thursday 18.04

09.00-09.45 Anaerobic bacteria and infections (MORTEN ENERSEN)
10.00-10.45 Cardiovascular disease and oral infections
(ZAHRA ARMINGOHAR)
11.00-11.45 Clinical manifestations of immunocompromised hosts
(MARIUS TRØSEID)
12.00-13.00 Lunch
13.00-13.45 Infection control (EGIL LINGAAS)
14.00-14.45 Infection control (EGIL LINGAAS)
15.00-16.00 Discussion/summing up/evaluation

Lectures

The course will give 10 study points.

The lectures will be held at the Department of Oral Biology, Gaustad, Sognsvannsveien 10, Building A1, Domus Odontologica, second floor, meeting room A1.2029A. The lectures from the American researchers will be given through DVDs. Lecture handouts will be provided from the internet.

Practices/demonstrations

Demonstrations will be at the Department of Oral Biology, Gaustad, Sognsvannsveien 10, Building A1, Domus Odontologica, middle floor, room A1.M009 and at the Department of Microbiology, Oslo University Hospital, Rikshospitalet.

Essays

These should comprise at least 5 A-4 pages with double space between the lines. Participants are expected to cover in depth a problem of current interest in microbiology, i.e. from the topics dealt with during the course or related subjects. Essays can be prepared beforehand. If you do not, it would be advisable to choose the topic and find relevant literature before the course starts. Time has been allocated each day for writing on the essay during the course. Submittance of essays will not be accepted later than **1 month** after cessation of the course. PCs will be available at Domus Odontologica (ground floor, room A1.1022).

Suggested reading and textbooks

Each lecture will be accompanied by a pdf file of the lecture and with additional literature.

Dahlen G, Fiehn N.-E, Olsen, I, Dahlgren U. Oral Microbiology and Immunology, Munksgaard, 2012.

Lamont RJ, Burne RA, Lantz MS, Leblanc DJ. Oral Microbiology and Immunology. ASM Press, Washington, D.C., 2006.

Marsh PD, Martin MV. Oral Microbiology. 5th edition. Wright, Oxford 2009.

Degré M, Hovig B, Rollag H (red.). Medisinsk Mikrobiologi. 3. utg., 2 oppl. Gyldendal Akademisk 2010.

Wilson BA, Salyers AA, Whitt DD, Winkler ME. Bacterial pathogenesis. A molecular approach. 2011. 3rd edition. ASM Press.

Lecturers listed according to the program:

Floyd E Dewhirst PhD, DDS, The Forsyth Institute, Cambridge, MA

Fernanda Petersen, dr. odont, DDS Institute of Oral Biology

Morten Enersen, PhD, DDS, specialist in periodontology, Institute of Clinical Dentistry.

Anne Karin Kristoffersen, dr. scient, Institute of Oral Biology

Isabelle A. Messel, Research technician, Institute of Oral Biology

Peter Gaustad, dr. med, MD, Department for Microbiology, Oslo University Hospital, Rikshospitalet

Jørn Arne Friedrich-Aas, PhD, DDS, specialist in prostodontics, Institute of Clinical Dentistry

Robert Lyle, PhD, Senior reseacher, Department of Medical Genetics and Norwegian Sequencing Centre (NSC), Oslo University Hospital

Andre Ingebretsen, cand scient, staff engineer, Department for Microbiology, Oslo University Hospital, Rikshospitalet

Anne Aamdal Scheie, dr. odont, DDS, Institute of Oral Biology.

Lino Torlakovic, PhD student, specialist candidate orthodontics, Institute of Clinical Dentistry

Ann Progulsk-Fox, PhD, Center for Molecular Microbiology, University of Florida, FA

Pia Titterud Sunde, dr. odont, DDS, specialist in endodontics, Institute of Clinical Dentistry

Kari-Mette Andersen, PhD student, specialist in periodontics, Institute of Oral Biology, UiO/Institute of Clinical Dentistry, University of Tromsø

Jon Lærdahl, Research scientist, Department of Medical Microbiology, Oslo University Hospital – Rikshospitalet

Lasse Skoglund, cand odont, Dipl Sci, Dipl Sedation & Pain Control, Dr Sci, FDSRCS, specialist in oral surgery and oral medicine, Faculty of Dentistry

Trude Handal, dr. odont, DDS, specialist candidate in endodontics, DDS, Institute of Clinical Dentistry

Bjørn Grinde, dr. philos, dr. scient, National Institute of Public Health, Oslo.

Lise Lund Håheim, dr. philos, DDS, Institute of Oral Biology

Zahra Armingohar, PhD student, DDS, Institute of Oral Biology
Marius Trøseid, PhD, MD, Department for Microbiology, Oslo University
Hospital, Rikshospitalet
Egil Lingaas, PhD, MD, Department of Hospital Infection Control, Oslo
University Hospital, Rikshospitalet

Course responsible

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