

## Radboudumc

### Monday August 8

#### ***Aspergillus* and aspergillosis**

- 11:00 – 11:30 Introduction – **P. Verweij, B. Zwaan**
- 11:30 – 12:30 Epidemiology of *Aspergillus* diseases – **P. Verweij**
- 12:30 – 13:30 **Lunch**
- 13:30 – 14:15 Diagnosis and treatment of *Aspergillus* diseases – **E. Kolwijck**
- 14:15 – 15:00 Definitions of invasive aspergillosis and outcome measures – t.b.d.
- 15:00 – 15:30 **Break**
- 15:30 – 17:30 ***Aspergillus* phenotypes** – practical - microscopy, identification, morphotypes, fitness – **T. Rijs, H. vd Lee, J. Zhang**

### Tuesday August 9

#### ***Aspergillus* genetics: taxonomy, molecular identification, reproduction**

- 09:00 – 09:45 Molecular identification – **W. Melchers**
- 09:45 – 10:30 *Aspergillus* taxonomy and ecology – **J. Houbraaken**
- 10:30 – 11:00 **Break**
- 11:00 – 11:45 Modes of reproduction in *Aspergillus fumigatus* – **F. Debets**
- 11:45 – 12:30 Reproduction and *Aspergillus* infection – **F. Debets / P. Verweij**
- 12:30 – 13:30 **Lunch**
- Azole compounds and resistance mechanisms in molds**
- 13:30 – 14:15 Medical azoles – t.b.d.
- 14:15 – 15:00 Azole fungicides: compounds, applications and authorization – t.b.d.
- 15:00 – 15:30 **Break**
- 15:30 – 17:30 ***Aspergillus* phenotypes** – practical - microscopy, identification, morphotypes, fitness – **T. Rijs, H. vd Lee, J. Zhang**

### Wednesday, August 10

#### **Azole resistance MIC and epidemiology**

- 09:00 – 09:45 Azole resistance mechanisms – **W. Melchers**
- 09:45 – 10:30 MIC and in vivo response – **S. Seyedmousavi**
- 10:30 – 11:00 **Break**

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11:00 – 11:45	Epidemiology of azole resistance in <i>A. fumigatus</i> – <b>J. Meis</b>
11:45 – 12:30	Molecular typing of aspergillus and applications – <b>F. Hagen</b>
12:30 – 13:30	<b>Lunch</b>
	<b>The dynamics of resistance development.</b>
	<b>I. general principles and its link to azole resistance</b>
13:30 – 14:15	Natural selection I – general principles – <b>B. Zwaan</b>
14:15 – 15:00	Natural selection II – adaptation, population genetics – <b>B. Zwaan</b>
15:00 – 15:30	<b>Break</b>
15:30 – 16:15	Resistance and fitness – <b>S. Schoustra</b>
16:15 – 17:00	Compensatory evolution – <b>S. Schoustra</b>

### Thursday, August 11

	<b>The dynamics of resistance development.</b>
	<b>II. The effects of population dynamics, fungal biology, and determinants of the selective environment</b>
09:00 – 09:45	Dynamics of resistance: lessons from phytopathogenic fungi – t.b.d.
09:45 – 10:30	Resistance selection in <i>Aspergillus</i> : critical factors – <b>B. Zwaan</b>
10:30 – 11:00	<b>Break</b>
11:00 – 11:45	Azole resistance and selection in the host – <b>P. Verweij</b>
11:45 – 12:30	Environment: Investigation of hot spots – t.b.d.
12:30 – 13:30	<b>Lunch</b>
	<b>Tackling the emerging questions: Experimental models and approaches</b>
13:30 – 14:15	Strategies to discover new resistance mechanisms - t.b.d.
14:15 – 15:00	Constructing recombinants – <b>E. Snelders</b>
15:00 – 15:30	<b>Break</b>
15:30 – 16:15	Finding new resistance mechanisms - sexual crossing experiments – <b>W. Melchers</b>
16:15 – 17:00	Experimental evolution – <b>J. Zhang</b>

### Friday, August 12

	<b>Investigation tools: genotyping, NGS, targets, proteomics</b>
09:00 – 09:45	NGS – <b>J. Zoll</b>

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09:45 – 10:30	Genomic dynamics – clinical examples – <b>J. Zoll &amp; P. Verweij</b>
10:30 – 11:00	<b>Break</b>
11:00 – 11:45	3 Presentations of own research (15 min per participant)
11:45 – 12:30	3 Presentations of own research (15 min per participant)
12:30 – 13:30	<b>Lunch</b>
13:30 – 14:15	3 Presentations of own research (15 min per participant)
14:15 – 15:00	3 Presentations of own research (15 min per participant)
15:00 – 15:30	<b>Break</b>
	<b>Research agenda</b>
15:30 – 16:15	The environment – main research questions and investigation strategy
16:15 – 17:00	Medical– main research questions and investigation strategy

### Confirmed Faculty

Prof dr Bas Zwaan	Laboratory of Genetics, Wageningen University, Wageningen
Dr Fons Debets	Laboratory of Genetics, Wageningen University, Wageningen
Dr Sijmen Schoustra	Laboratory of Genetics, Wageningen University, Wageningen
Dr Jianhua Zhang	Laboratory of Genetics, Wageningen University, Wageningen
Prof dr Paul Verweij	Department of Medical Microbiology, Radboud University Medical Centre, Nijmegen
Dr Eva Kolwijck	Department of Medical Microbiology, Radboud University Medical Centre, Nijmegen
Dr Willem Melchers	Department of Medical Microbiology, Radboud University Medical Centre, Nijmegen
Dr Jan Zoll	Department of Medical Microbiology, Radboud University Medical Centre, Nijmegen
Ton Rijs	Department of Medical Microbiology, Radboud University Medical Centre, Nijmegen
Hein vd Lee	Department of Medical Microbiology, Radboud University Medical Centre, Nijmegen
Dr Jos Houbraken	CBS Biodiversity Center, Utrecht

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Dr Amir Seyedmousavi

Department of Medical Microbiology, Erasmus Medical Center,  
Rotterdam

Dr Jacques Meis

Department of Medical Microbiology and Infectious Diseases,  
Canisius Wilhelmina Hospital, Nijmegen

Dr Ferry Hagen

Department of Medical Microbiology and Infectious Diseases,  
Canisius Wilhelmina Hospital, Nijmegen

Dr Eveline Snelders

Institute Pasteur, Paris, France

### **More information:**

<http://www.ru.nl/radboudsummerschool/>