Join Radboud Summer School 2017!

Biofilms: From Molecular Anatomy to Supramolecular Systems

change perspective

Radboud Universiteit
The plaque that forms on our teeth, clogged drains, slimy rocks in a river are just a few examples of microbial biofilms that we come into contact every day. After a very successful 2016 edition is here an improved version of the course that will provide detail molecular information about structure and function of microbial biofilms.

During the course you will follow the development of several medically and environmentally important biofilms on a molecular level. In doing so, you will identify molecular processes that are responsible for attachment to the surface, development, and dispersal of biofilms. The importance of surface chemistry, hydrophobicity, roughness, and surface energy will be described. We will identify environmental clues that trigger genetic and physiological changes during the transition to biofilm. The composition of extracellular matrix that binds cells together will be reviewed. We will discuss the role of exopolysaccharides, proteins and eDNA in formation of biofilm architecture. The role of social interactions and communications in biofilm development and dispersal will be addressed. We will study viscoelastic mechanical properties important in maintenance of biofilm integrity and will survey diffusion and flow through the porous biofilm structure. We will explain why antimicrobials are less effective in biofilms. Finally, special attention will be given to advanced molecular approaches for efficient removal and control of biofilms in medicine, environment and industry.

More detailed course information can be found on our website!

After this course you are able to:
• recognize various forms of biofilms in the environment
• identify which conditions favour biofilm development and how biofilm problems can be treated.
• understand biofilm development, structure and function on a molecular level

For whom is this course designed?
The course is designed for students of Microbiology, Biology, Medicine, Biotechnology, Environmental and Material Sciences who would like to learn how the most prevailing microbial
structure on the planet changes our life and environment. Students that work on interdisciplinary problems that involve microbial biofilms are encouraged to apply.

**Number of EC**
2 ECTS

**Entry level**
Master students and PhD students.

**Admission documents**
CV and motivation letter

**Course leader**
David Stopar, Professor of Microbiology, Department of Food Science and Technology, University of Ljubljana

**Dates**
Monday 14 August – Friday 18 August 2017

**Course fee**
€525

**Discounts**
- 10% discount for early bird applicants. The early bird deadline is 1 April 2017.
- 15% discount for students and PhD candidates from partner universities.
Want to be part of the RSS experience?

More than just a course!
Radboud Summer School is more than an academic event. It is a unique opportunity to meet other international students and researchers and to get to know Radboud University and the city of Nijmegen. Our participants come from all over the world and have different cultural and academic backgrounds. Our programme includes the following activities free of charge: welcome reception, sports activity, guest lecture and farewell drink. We offer also a BBQ, River Cruise, City Tour, Pub quiz and excursion for a small fee.

Have a look at what participants had to say about their experience!

And do not forget to register now!

Deadline application
June 1, 2017

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www.ru.nl/radboudsummerschool, August 6-18 2017