Join Radboud Summer School 2018!

Molecules, Mice & Math: A Statistical Toolbox for the Lab

change perspective

Radboud University
Why do I always have to repeat my experiments 3 times? How should I analyse qPCR data? I always see the effect of the treatment on cells clearly, however due to large variation it is never significant. Which statistical test should I use in that case? How do I determine the amount of animals I should use for my experiment? It feels unethical not to use the data of my animal pilot experiment, is there a solution? These are just a few of the questions that basic scientists encounter daily in the laboratory. Common statistical courses do not address these questions. In this course we will! This course is specifically designed for basic scientists that work in a laboratory setting, for both in vitro and small scale in vivo experiments.

The course will teach the different aspects of experimental design and analysis by using very identifiable problems for basic scientists. You can immediately implement the knowledge you will gain during this course in your daily work. There will also be ample opportunity to bring your own data and get advice of experienced statisticians.

The course will be highly interactive as it will contain a combination of interactive lectures, work groups, discussions and computer practice. During computer practice, real data from animal studies, qPCR experiments, cell-line data, immunohistochemistry, flow cytometry, etc. will be used to get familiar with the methods, the interpretation, and the visualization of the outcome of the analysis. We will make use of SPSS for the analysis. We will also briefly discuss the information you should provide in the method section of a scientific paper.

In short, we will discuss a range of different topics related to in vivo and in vitro laboratory experiments:

- How can I make a smart and efficient design for my experiment?
- What types of data will I encounter and what is the appropriate statistical analysis?
- Can I do a statistical analysis that increases the probability that I will have significant results?
- How can I determine the sample size for my experiment?
- What to do with outliers?
- How to handle variation?
- How to visualise your data for publication?

Entry level
Master, PhD and Post-doc
For whom is this course designed
Especially for biomedical scientists that do laboratory experiments and small scale animal studies. But also for PhD students and master students that are planning to continue doing research in the laboratory.

After this course you are able to
• Design laboratory and small animal studies, including sample size calculations
• Identify the type of data that you get out of your experiments
• Select the best way of analysing and interpreting your in vitro and in vivo data
• Write a proper method section for manuscripts

Course leader
A.F.J. de Haan, Assistant Professor Biostatistics, Health Evidence, RadboudUMC

Number of EC
2 ECTS credits

Dates
Monday 13 August – Friday 17 August 2018

Course fee
€885

Discounts
• 10% discount for early bird applicants. The early bird deadline is 1 April 2018.
• 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, guest lecture and farewell drink. We offer sports activities, a BBQ, a river cruise on a Pancake Boat and a city tour for a small fee.

Have a look at what participants have said about their experience!

Deadline application
1 June 2018

Register now!

Contact
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You can find more details about the courses on our website

www.ru.nl/radboudsummerschool, August 5-17 2018