
NRSN Summer school in Neuroscience

Understanding the behavior in animal models

2nd-6th September 2019

Summary

With the rapid development of cutting edge methods and techniques in neuroscience, animal models are gaining more attention. With these novel techniques, scientists are able to investigate specific projections and functions in the brain in more detail, and on impressive spatial and temporal scales. But in order to understand these functions, it is undeniably necessary to link neural activity and connectivity to behavior. For this purpose, scientists fall back on established behavioral tests that claim to study phenomena like memory, social behavior, depression, etc. However, do these behavioral tests actually assess what we think they do? Are behavioral tests designed and used the right way? And what is behavior to start with?

The aim of the summer school is to learn more about the wide range of animal tests that exists for studying different neurological processes. What type of models are available and what do they study? How do you select the appropriate animal model for your research? But more importantly, what is it that we actually study? What behavior do our animal models really show, and how should we interpret them? Which factors are important to keep in mind to create the best optimal conditions to study the behavioral mechanisms we are really interested in?

The course will give in-depth knowledge and training in critical thinking through lectures, exercises and discussions about the behavioral aspects of animal models. This summer school will focus on the pitfalls and caveats when studying behavior in particular. We will discuss different kind of behaviors, and debate the analyses and interpretations of data.

Faculty

The teaching team consists of the following researchers:

- Dr. Eelke Snoeren, Department of psychology, UiT
- Prof. Anders Ågmo, Department of psychology, UiT
- Prof. Janne Grønli, University of Bergen
- Dr. Amy Milton, University of Cambridge, UK
- Prof. Sietse de Boer, University of Groningen, NL
- Dr. James McCutcheon, University of Leicester, UK
- Dr. Alexa Veenema, Michigan State University, USA
- Dr. Nafissa Ismail, University of Ottawa, Canada
- Prof. Brian Trainor, UC Davis, USA

Participant presentations

In order to facilitate social and scientific interactions from the start of the course, students will be asked to prepare brief (maximum 5 min) presentations of their current PhD project and their use of animal models during the first day of the course.

Practicalities

Number of participants

The summer school is open to 25 PhD students in neuroscience. Registration deadline: 15 April.

Location

The summer school will be held in **Sommarøy Arctic Hotel**: <https://www.sommaroy.no/>, a beautiful location with excellent facilities at an hour driving distance from Tromsø.

Travel and accommodation

On Monday the 2nd of September at 11 am, a shuttle bus will drive from Tromsø center via the airport to pick up participants, and will arrive at the accommodation around lunchtime. On Friday the 6th of September, the shuttle will return to the airport and Tromsø city center early afternoon (arrival circa 15 pm).

Meals

Breakfast, lunch, and dinner will be served every day (included). In addition, coffee and tea with snacks will be provided during the breaks.

Tentative course program

Monday - introductions

11:00	Shuttle bus from Tromsø
12:00 – 13:00	Lunch in Sommarøy Arctic Hotel
13:00 – 14:30	Welcome and participant presentations part I
14:30 – 14:45	Break
14:45 – 16:30	Participant presentations part II
16:30 – 17:00	Closure of the day

Tuesday

07:00 – 09:00	Breakfast
09:00 – 10:30	“Social behavior?” – Alexa Veenema
10:30 – 10:45	Break
10:45 – 12:15	“Reproductive behavior?” – Eelke Snoeren
12:15 – 13:30	Lunch
13:30 – 15:00	“Feeding behavior?” – James McCutcheon
15:00 – 16:30	Discussions
16:30 – 17:00	Closure of the day

Wednesday

07:00 – 09:00	Breakfast
09:00 – 10:30	“Memory and how to test it?” – Amy Milton
10:30 – 10:45	Break
10:45 – 12:15	“The impact of circadian rhythms” – Janne Grønli
12:15 – 13:30	Lunch
13:30 – 14:15	Company I
14:15 – 15:15	Discussions
15:15 – 15:30	Closure of the day
15:30	Excursion

Thursday

07:00 – 09:00	Breakfast
09:00 – 10:30	“Critical times in development” – Nafissa Ismail
10:30 – 10:45	Break
10:45 – 12:15	“Stress and anxiety?” – Brian Trainor
12:15 – 13:30	Lunch
13:30 – 15:00	“An alternative approach: the seminatural environment” – Anders Ågmo
15:00 – 16:30	Discussions
16:30 – 17:00	Closure of the day

Friday

07:00 – 09:00	Breakfast
09:00 – 10:30	“Aggressive behavior?” – Sietse de Boer
10:30 – 11:15	Company II
11:15 – 11:30	Break
11:30 – 13:00	“What have we learned” – Group discussion
13:00	Lunch
14:00	Shuttle bus to Tromsø