

HANDS ON COURSE IN COMPARATIVE NEUROANATOMY

Organizers: Ken-Ichiro Tsutsui (Tohoku University Sendai) and Menno Witter (NTNU Trondheim)

Venue: Graduate School for life sciences Tohoku University, Sendai, Japan

Dates: 8 – 13 May 2019; arrival on 7 May; departure on 14 May

This course aims to provide a concise introduction in comparative neuroanatomy. Teaching includes lectures in the morning covering the development and overall anatomical organization of the brain and the functional organization of main systems in the brain, such as motor, visual as example of sensory systems, basal ganglia and cerebellum, learning and memory and emotion, planning attention and decision making. The afternoons are dedicated to anatomical dissections ranging from fish, frogs, reptiles and mammals, including non-human primate and human primate brains. The dissections will be partially hands-on and partially demonstrations. The dissections will be recorded for future use.

Costs to be determined

A limited number of grants is available through the NFR funded program 'Japan And Norway United in Brain, Education and Therapeutics'; contact menno.witter@ntnu.no

You can also apply for an international travel grant from NRSN

For more information see document or contact menno.witter@ntnu.no

HANDS ON COURSE IN COMPARATIVE NEUROANATOMY TENTATIVE SCHEDULE (PhD course: teaching will be in English)

Wednesday 8/5	Thursday 9/5	Friday 10/5	Saturday 11/5	Sunday 12/5	Monday 13/5
9.00-10.00 Opening, welcome and introduction goals of the course and format Prof. Witter	9.00-10.15 Basal Ganglia Prof. Takada	9.00-10.15 The PFC and motor planning Prof. Mushiake 10.15-11.30 PFC and parietal cortex: higher order cortical processing; attention; consciousness Prof. Tsutsui	9.00-10.15 Cerebellum TBA 10.15-11.30 Visual/somatosens system TBA	9.00-10.15 Medial temporal lobe structures/learning and memory & emotion Prof. Witter 10.15- 11.30 ?????? emotional systems/Amygdala????	Departure. Visitors travel to primate center
10.00-12.00 Motor system 1 Upper motor system 2 lower motor system Prof. Isa	10.15 - 10.30 move to anatomy lab in Seiryō 10.30-12.30 Human brain dissection demonstration	11.30-12.00 Entry test for dissection	11.30-12.00 Entry test for dissection	11.30-12.00 Entry test for dissection	
12.00-13.15 lunch	12.30-13.30 & lunch	12.00-13.15 Lunch	12.00-13.15 lunch	12.00-13.15 lunch	
13.15- 14.30 Brain development. Prof. Osumi 14.45-16.00 Comparative aspects of brain anatomy Prof. Witter 16.00-16.30 Anatomy test (prep for human dissection)	13.30-16.30 Human brain dissection demonstration	13.15 -18.30 Dissection Fish & frog & Rat brains Partial demonstration partial hands-on	13.15- 17.30 Dissection Pig or calf brain Hands-on	13.15- 17.30 Monkey Demonstration	
16.30- 17.30 Preparation for barbeque	16.30 -18.30 Human brain dissection	18.00-18.30 Repeat test	18.00 -18.30 Repeat test	17.30 -18.30 Final test and day report	
17.30 Welcome barbeque	18.30- 20.00 Dinner	18.30- 20.00 Dinner	18.30- 20.00 Dinner	18.30- 20.00 Farewell party	
17.30 -23.00 Welcome barbeque and party	20.00 Student poster session and writing of day report	20.00 Student poster session, Q & A session and working on day report	20.00 Q & A and working on day report	20.00 Farewell party	

General organization:

- During the first session, all students introduce themselves with background and research interest. Have them bring a poster on their work for the poster sessions.
- Each lecture session starts with a short survey of questions that each student needs to answer; questions are about factual knowledge of the topic of the lecture. Students then convene in small groups of 3-4, find a consensus on their answers, and present them plenary. The lecturer considers these answers in her/his lecture, such as to provide the correct answer, and argues why the other ones are incorrect. Each lecture starts with a short summary of the anatomical organization of the system: the main components, where they are in the brain and how they are connected. We should have two breaks in each morning session/between the two lectures.
- The evening sessions on Thursday, Friday and Saturday are for the students to work among themselves and with the tutor work on remaining questions that are unclear, students try to figure it out themselves through discussions/searching for information, but the tutor(s) help/guide them. Each student writes a short report of what was learned during the day; all tutors/faculty are preferentially present during the evening sessions.