



STudent REseArch Mobility Programme (STREAM) Project proposal

Host University:
Universität Zurich

Field:
Pharmacology, Biochemistry, Biology, Medicine

Specified field, subject:
Sleep and biological clocks

Research project title:
Molecular and cellular mechanisms regulating sleep and biological clocks

Possible starting month(s):

Sep	Oct	Nov	Dec	Jan	Fev	Mar	Apr	May	Jun	Jul	Aug
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>									

Possible duration in months:

1	2	3	4	5	6
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Exact starting and end dates will be discussed between the supervisor and the student

Suitable for students in: Bachelor level Master level

Prerequisites:
NONE

Restrictions:
NONE

Description (maximum 2,000 characters):

Sleep timing is regulated both by a biological "circadian" clock that directs us to sleep at particular times of day, and a homeostat that increases sleep pressure with increasing time awake. Our laboratory tries to understand this biological timing at a molecular level, using viral tools in both animal models and in primary human cells. From these studies, we have learned that a part of this coding in humans is genetically encoded: "larks" have biological clocks running measurably faster than "owls". Another part is environmentally determined by light, which rewires the neurons of clock tissues in the brain. In this project, the candidate will use viral technologies, organotypic slice culture, and in vivo imaging of mouse models to explore how clocks in different parts of the brain communicate with one another. The project is also open for recently graduated undergraduate students and graduate students. Research period will be on mutual agreement with the student and supervisor. The project is available in the Fall and Spring semester. Number of places available: 1 per semester.

Note: Research project may be adapted according to the student profile and the period/timeline.



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Comprendre le monde,
construire l'avenir



Universiteit Utrecht



University of
Zurich^{UZH}



Department:
Institute of Pharmacology and Toxicology (Vetsuisse Faculty)

Contact person, including position:
Katja Durkin, Project Manager, International Relations Office

Contact email:
Katja.durkin@int.uzh.ch

Deadline for nomination to reach host university:
Ongoing

Notification of admission given by the end of:
Given within 4 weeks

Additional information:
NA



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