

Target identification and drug repurposing using heterobivalent constructs

Summary

PhD studentship in Chemistry and Biotechnology program in Pavel Starkov group (<https://www.starkov.group>)

Research field:	Chemistry and biotechnology
Supervisor:	Dr. Pavel Starkov
Availability:	This position is available.
Offered by:	School of Science Department of Chemistry and Biotechnology
Application deadline:	Applications are accepted between September 01, 2021 00:00 and September 30, 2021 23:59 (Europe/Zurich)

Description

Networks and their architectures are central to the mathematical and computer sciences as well as to systems biology and systems medicine. We aim to transcend the concepts of network science onto synthetic organic and materials chemistry. From the outset, we have identified that the concept of networks in chemistry should be divided into two separate, however, strongly intertwined research streams. We will design cell- permeable heteromultifunctional constructs to probe intracellular networks using small molecules that typically go beyond Lipinski's rule. We will also build molecular networks (materials) by using single-precursor/fused hybrid linker-based approach and will apply them as electrocatalysts and in heterogenous catalysis for large-scale applications.

Entry requirements:

MSc in natural science or chemistry; practical skills in synthetic organic chemistry are essential; use of cell culture, microscopy or materials characterisation will be useful. Other research topics may be available.



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