A PhD position available

Initial Training & Research Program (Horizon 2020)

Ready to work in a foreign country to qualify for a PhD in an international, interdisciplinary research project? You are an enthusiastic and highly self-motivated team player? 16 PhD positions are offered by the Innovative Training Network:

“Solar Energy to Biomass – Optimisation of light energy conversion in plants and microalgea”

or short “SE2B”. SE2B is a multi-site Initial Training & Research Program of research institutions from the public and private sector in eight European countries. PhD students participate in an exciting research programme and receive a strongly interdisciplinary training in all scientific areas involved as well as in complementary skills. The program also includes extended stays in partner laboratories (secondments).

Project: Molecular structure of supercomplexes under different conditions.

Project description
Structural-functional characterization of photosynthetic supercomplexes will be carried out using single particle electron microscopy and image analysis in order to understand their role and functional significance in photosynthesis of different plants and microalgal species under specific environmental conditions. In addition, the thylakoid membrane architecture in diatoms will be studied using the-state-of-the-art cryo electron tomography.

Expected Results: The structure of Photosystem II supercomplexes in evergreen conifer trees under different growth conditions will be determined for the first time. Structural characterization of Photosystem II and Photosystem I supercomplexes with other complexes of the thylakoid membrane formed under conditions of NPQ and/or state transitions. A 3D model of the thylakoid membrane architecture in diatoms will be established.

Where
A PhD candidate will be appointed sequentially in the two following labs: the lab of Prof. Egbert Boekema (co-supervisor) (University of Groningen, The Netherlands) and the lab of Dr. Roman Kouřil (supervisor) (Palacky University, Czech Republic) (18 month each). The fourth year of the PhD study will be arranged according to actual needs.

- **Contact:** The group of Roman Kouřil, Palacký University Olomouc, Department of Biophysics CRH, Slechtitelu 27, 78371 Olomouc, Czech Republic, roman.kouril@upol.cz, +420 585634837.

Project specific Requirements
The PhD candidate should still be within the first four years of his/her research career after obtaining a M.Sc. degree in biophysics, biochemistry or related fields. The candidate can be national of any country except of Czech Republic and The Netherlands.