A PhD and a post doc fellow in plant vascular development at UPSC

Umeå Plant Science Centre (UPSC) is a research centre in Umeå, Sweden (www.upsc.se) where research of both basic and strategic importance is conducted. The research at UPSC is carried out on all organization levels of the plant with a common goal to understand the plant as a complex organism in dynamic interaction with its environment.

The PhD position deals with differentiation and secondary cell wall deposition of xylem vessel elements and fibers. Lignin is an important cell wall component which reinforces the walls and confers a hydrophobic barrier that is crucial for water transport in the xylem vessels. We have recently shown that lignification is a cooperative process in which the lignin monomers are supplied to the lignifying cells by their neighboring cells, and identified parts of the underlying molecular machinery (Zhang et al. 2020, New Phytologist 225: 1923–1935). The PhD project will build on these results and focus on the role of two new genes in regulation of lignification with the help of various molecular, genetic and physiological methods in Arabidopsis plants and Populus trees.

Please find more information and how to apply to the PhD position at https://www.slu.se/en/about-slu/jobs-vacancies/?rmpage=job&rmjob=3518&rmlang=UK

The post doc fellowship deals with the function of metacaspases in vascular development, and in particular Metacaspase9-mediated cleavage of target proteins, which results in production of biologically active peptides, including the previously identified Bia and Kratos peptides (Escamez et al., 2019, J Exp Bot. 70:2199-2210). The function of the peptides is investigated in vascular differentiation of Arabidopsis using genetic, proteomic and biochemical methods. Other aspects of the project can be developed according to the interests of the candidate.

Please find more information and how to apply to the post doc fellowship at https://www.upsc.se/jobs/5849-postdoctoral-fellowship-at-upsc-sweden-on-plant-metacaspases-and-vascular-development.html

Dr. Hannele Tuominen,
Hannele.tuominen@slu.se
Umeå Plant Science Centre
Department of Forest Genetics and Plant Physiology
Swedish University of Agricultural Sciences
90183 Umeå, Sweden
www.upsc.se/hannele_tuominen