PhD position in Plant Physiology at the University of Turin, Italy

The University of Turin is one of the most ancient and prestigious Italian Universities. Hosting about 70,000 students, 4,000 academic, administrative and technical staff, 1800 post-graduate and post-doctoral students and with 120 buildings in different areas in Turin and in key places in Piedmont, the University of Turin can be considered as “city-within-a-city”, promoting culture and producing research, innovation, training and employment. It also acts at an international level through partnership arrangements with India, China, developing countries in Asia, Latin America, Eastern Europe, the Mediterranean Area and with a number of international organizations operating in the region. The Piedmont Regional Agency for the Right to University Education (EDISU) - a regional institution offering assistance to students - awards scholarships to university students based on prerequisites of merit and need: the amount of the scholarships depends on the student's financial situation.

The Plant Physiology Unit of the Department of Life Sciences and Systems Biology of the University of Turin is looking for a student interested in a PhD position to study “The effect of magnetic fields on plant growth, development and evolution”. The Earth’s magnetic field, also known as the geomagnetic field (GMF), is an environmental factor affecting all organisms living on the planet, including plants. The GMF protects the Earth and its biosphere from the lethal effects of the solar wind by deflecting most of its charged particles through the magnetosphere away into space. The effect of both weak and strong magnetic fields have been thoroughly discussed, with a particular focus on the involvement of GMF reversal events on plant evolution (Maffei 2014, Frontiers in Plant Sciences, 5:445; Occhipinti et al, 2014, Trends in Plant Sciences, 19: 1-4; Bertea et al, 2015, Journal of Visualized Experiments. 105: e53286). The reduction of the GMF delays the flowering time of Arabidopsis thaliana by down-regulating the major floral integrating genes both in the rosette and in the meristem. The delay is associated with the strong down-regulation of FT, FLC and GA20ox in the flowering meristem and FT, TSF, FLC and GA20ox in the rosette (Agliassa et al, 2016, Frontiers in Plant Sciences, in press). The aim of this project is to shed light on plant magnetoreception and to study the involvement of cryptochrome in plant responses to varying magnetic field conditions. In particular, we seek for students with experience in plant molecular biology (Arabidopsis thaliana and other model plants) and plant biochemistry.

Please send your application (incl. CV, list of publications, a motivation statement for research, and a reference letter) until the 10th of June 2016 to Professor Massimo Maffei (mailto: massimo.maffei@unito.it) citing in the subject “PhD position Magnetoreception”. Please contact him also for questions regarding the application and selection procedure.