Postdoctoral fellowship available to research the structure and function of ABCB auxin transporters at Purdue University

A postdoctoral position is available to study the regulation of auxin transport by plant ATP binding cassette (ABC) transporters in Arabidopsis. The project integrates computer modeling, cell biology, physiology, and biochemistry to elucidate ABCB transport mechanisms and their integration with PIN-mediated auxin transport. The postdoc working in this project will be trained in the use of computational modeling tools, analysis of the transport characteristics of plant ABCB transporters expressed in the yeast *S. pombe* (Yang and Murphy, 2009), and analysis of mutated transporter function in Arabidopsis. The work *in planta* will include the use of inducible expression and overexpression coupled with subcellular localisation analyses. The ultimate objective of this work is the development of methodologies to manipulate plant form and biomass in crop plants.

Plant biology research is playing an increasingly important role in global policy because of its potential to ameliorate climate change, provide bioenergy feedstocks, and increase food production in the face of deteriorating land quality, and improve nutrition in commodity foods. Countries and states that are major bioenergy and food crop producers are increasingly the centre of new developments in plant biology, especially as basic research in the Arabidopsis model system is translated into functional studies in agriculturally and environmentally important species. In the midwestern United States, agriculture is a major economic activity and enjoys high levels of support at the state and federal level. Purdue University is situated two hours south of Chicago in the heart of Indiana agricultural production. At Purdue, plant biology research is prominent, interdisciplinary, and exciting. Career opportunities after training in plant biology at Purdue are excellent. The cost of living at Purdue is very low. Potential applicants are encouraged to send a CV and list of references to Angus Murphy (murphy@purdue.edu). Laboratory and core facilities for plant biology research at Purdue are state of the art and are supported by extensive growth facilities including contained environment and outdoor growing units. Information on the department can be found at http://www.ag.purdue.edu/HLA/Pages/default.aspx.