



**Hong Li Wang, PhD**  
Associate Professor  
Department of Biology  
University of Arkansas at Little Rock  
Phone: 501 569 8983  
Email: hxwang@ualr.edu

**Academic interests:** Plant physiology, carbon transport & partitioning control; Plant cell and molecular biology; Plant development and nutrition; Plant virology; Genomics, plant biotechnology.

**Research Focus & Techniques of Expertise:** My laboratory is aimed at improving the biomass production, yield and nutritional quality of wheat and legume crop plants. Currently we are using multidisciplinary approaches such as microscopic observation, histochemical examination, genomic, proteomic and bioinformatics analyses, and as well as molecular and physiological tests to study: (1) The development and function of transfer cells in economically important crops – to understand how plants increase their solute membrane transport capacity via developing transfer cells in source leaves (photoassimilate phloem loading), seeds (assimilate phloem unloading and accumulation), and roots (mineral nutrient uptake and transport); (2) Structure and development of the seeds and pods of the legume model plant *Medicago truncatula*; (3) Developmental histochemical and metabolomic analyses of nutritional components in the seeds and pods of *Medicago truncatula*; (4) Metabolomics and genomics empowered discovery of novel phytochemicals and their related gene networks in *Medicago truncatula*, and the health promoting effects of these identified novel phytochemicals.

\*\*We are targeting to apply for NIH and NSF research grants.

### **Grants**

**Grant P3-108:** Metabolic & genomics empowered platform for phytochemical and gene network discovery in *Medicago truncatula*.

**PI: Hong Li Wang; Co-PI's:** Xiuzhen Huang, Stephen Grace & Nawab Ali

**Grant P3-211:** Pave the Way for Deciphering the Development of Transfer Cells in Economically Important Crop Plants

**PI: Hong Li Wang; Co-PI:** JD Swanson