Dr. Zhang checks disease phenotypes of Arabidopsis mutants obtained from a novel genetic screen she designed to identify new components of plant immunity against fungal pathogens (in this case, powdery mildew).

Dr. Zhang recently received her Ph.D. in
Molecular and Cell Biology from the Biological Sciences Graduate Program (UMCP College of Computer, Mathematical, and Natural Sciences). She worked in the laboratory of IBBR Fellow, Dr. Shunyuan Xiao (Professor, UMCP Department of Plant Science & Landscape Architecture). At IBBR, Dr. Zhang used forward and reverse genetic approaches to uncover novel mechanisms used by plants to fight against fungal pathogens, or exploited by fungi to adapt to host plants, using the Arabidopsis-powdery mildew pathosystem.

"I have had the pleasure of watching Qiong grow from a young student into a highly knowledgeable, experienced, aspiring, and capable scientist with outstanding capacity for logical reasoning and critical thinking," said Dr. Xiao. "This ability, coupled with her well-balanced knowledge and expertise, helped her effectively conceive and design experiments, interpret results, prepare manuscripts, and make presentations. Qiong was an excellent choice to join the cohort of prestigious Miller Institute Fellows and I am very proud of her."

During her fellowship at the Miller Institute, Dr. Zhang will use a CRISPR-based genomeediting tool called EvolvR, recently developed by Dr. John Dueber and his colleagues, for rapid directed evolution of plant disease resistance genes through localized *in vitro* and *in vivo* mutagenesis. Dr. Dueber will host Dr. Zhang and she will work in his and Dr. Brian Staskawicz’s lab at UC Berkeley.

"The supportive research community at IBBR and the caring, encouraging, collaborative, and open-minded lab environment cultivated by Dr. Xiao enabled me to develop into the scientist that I am today," said Dr. Zhang. "It has been like home to me and I am very grateful for the training I’ve received at IBBR. The experience gave me the professional confidence to apply for the Miller Research Fellowship and it is an honor to have been selected."

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