ICGI Overall Chair Candidate

Shuangxia Jin

Professor, Dean of College of Plant Science and technology, HZAU, Wuhan, China

Executive Editor-in-Chief of Plant Biotechnology Journal

Editor of Genome Biology

Associate Editor of iMeta and The Crop Journal

Winner of Cotton Biotechnology Award（2021）

Institution: College of Plant Science and technology, Huazhong Agricultural University (HZAU), Wuhan, Hubei, China

My research is focused on cotton molecular breeding using genomic tools (Omics strategy) and advanced biotechnology (such as Genome editing, Biosynthesis) for sustainable cotton production. Connecting genomics with genes function is a prerequisite to bridging plant breeding with biotechnology for efficient cotton molecular breeding. To achieve this goal, my team has been developing numerous biotech tools including highly efficient genetics transformation system based on the development of an elite genotype Jin668 for cotton genetic transformation, A variety of genome editing tools including CRISPR/Cas 9, Cas12a, Cas12b for knock out of the target genes, Cas13a/b/d/RX for knock down, CBE, ABE and CABE for base editing, dCas9-TV system for transcription activation (knock-up) and dCas13-TME/TDE for RNA epigenic modification. By using these tools, we created insect pest and herbicide resistant cotton germplasm, gossypol-free and high oleic acid content cotton seeds, ideotype cotton. I have been a strong supporter of ICGI and cotton community, and served as the co-chair and chair of the Functional Genomics Workgroup between 2017 and 2021. That's a four-fold increase of the number of publications from cotton community since I served as the editor of Plant Biotechnology Journal in 2018.

My vision for the Overall Chai includes: 1) Advance the cotton biotechnology efforts across the cotton community focusing on the novel system of non-genotype dependent genetic transformation and genome editing; 2) Advocate for the establishment of the International Cotton Synthetic Biology Alliance, aiming to set the main goals, key technical systems and international cooperation mechanisms for synthetic biology; 3) Promote the implementation of the concept of cotton molecular design breeding driven by advanced biotechnology and bioinformatics technology. 4) Encourage communication of novel discoveries in cotton biotechlogy and molecular breeding in high tier journals such as Genome Biology, Plant Biotechnology Journal, iMeta.