2023 ELECTION

American Society of Plant Biologists

ASPB President-elect

(to serve as president 2024–2025)

Z. JEFFREY CHEN

I was born and raised in the countryside where my parents grew crops and vegetables and rotated them every year to make ends meet. This motivated me to study agriculture; however, I was not so interested in plant science until I took a genetics class in college. I was fascinated by the elegant plant genetics experiments that lead to the discoveries of hereditary laws and transposable elements. As a humble winner of the K. C. Wong scholarship in Hong Kong, I came to the US to pursue an American dream. After receiving a PhD in Genetics at Texas A&M University in 1993, I worked as a postdoctoral fellow at the University of Minnesota and an NIH postdoctoral fellow at Washington University in St. Louis. Six years later, in 1999, I joined Texas A&M University as an Assistant Professor of Plant Genetics, and I was promoted to the rank of Associate Professor with tenure in 2005. I was then recruited as holder of the D. J. Sibley Centennial Professorship of Plant Molecular Genetics at The University of Texas at Austin and became a full Professor in 2008. These experiences at both land-grant and non-land-grant institutions have helped me work with interdisciplinary research groups, including in Agriculture, Plant Breeding, Plant Physiology, Genomics, Epigenetics, Cell and Molecular Biology, Evolution, Ecology, and Data Science. Our research program has made distinguished contributions to our understanding of complex plant genomes, particularly through a series of original studies using versatile omics approaches. We established genomic and epigenetic frameworks to elucidate the evolution and function of polyploid and hybrid genomes, from genome-wide nonadditive gene expression in plant polyploids, molecular mechanism of altered circadian rhythms in heterosis, and the epigenetic basis of inbreeding depression in maize. We have also generated epigenomic insights into cotton fiber cell development and in decoding the genomes of all five cotton tetraploid species, including economically important Upland and Pima cotton, the largest renewable sources of textile fiber. These findings and resources provide new breeding and genome-editing tools that can explore genetic and epigenetic variation to improve crop yield, nutritional values, and plant resilience.

As a plant biologist, I envision two missions: to feed the world and to make groundbreaking discoveries. Living in a developed country, we are blessed by the abundant amount and variety of foods. However, we cannot underestimate that every day in the world, nearly one out of nine people are hungry, and approximately 25,000 people, including ~10,000 children, die from hunger and related causes. Estimates indicate that over 50% more crop production is needed to feed everyone in 2050 because of population growth, steady reduction and deterioration of agricultural lands, and climate change. This will require all of us to work towards increasing the production of major crops, as well as orphan and new crops. As a leader of ASPB, I will be open-minded and forward-looking and will work with all members and leadership committees to promote basic and translational research, push for increased federal and industrial funding opportunities, and enhance education and participation of new generations of plant biologists.

As a faculty member, I have dedicated myself to achieving excellence in undergraduate and graduate education and community services. I served as chair of graduate programs of Molecular and Environmental Plant Sciences at Texas A&M and of Plant Biology at UT Austin to promote interdisciplinary collaboration. Currently I teach a contemporary Genomics course for undergraduate seniors and juniors. I serve as associate editor of *Genome Biology, The Plant Genome, Genes*, and as editorial advisor to BMC Plant Biology. I am also an active reviewer for *The Plant Cell, Plant Physiology*, and ~60 other peer-reviewed journals including *Cell, Nature, and Science*. I have served as a study section or panel member for NIH and NSF, panel manager for USDA, panel member and reviewer for more than 20 other national and international funding agencies, and external reviewer of promotion and tenure for dozens of universities and institutions. I have chaired and co-chaired national and international conferences, and I have presented over 190 lectures and seminars. From 2017 to 2021, I was an active member of ASPB and served on the Science Policy Committee, which has brought the plant biology community's support to congressional representatives and their staff for increasing federal funding in plant science. I received a US-UK Fulbright Senior Scholar Award (2011) and Cotton Biotechnology Award (2016); I am an elected fellow (2011) of AAAS and a member of Faculty Opinions (formerly F1000Prime).

As a naturalized U.S. citizen, I embrace diversity, equity, and inclusion (DEI) in science and society. I will work with all ASPB committee groups to apply the DEI guidelines across all processes, from board of directors and trustees, program development, to science policy, and national and international impact. I have a great passion to promote graduate and undergraduate education and will continue to make all efforts to attract undergraduate and graduate students from national, international, and diverse socioeconomic backgrounds to pursues careers in plant biology. I am enthusiastic about helping build ASPB as a forum for all plant scientists to make unique contributions to promoting science, improving agriculture, protecting the environment, and enhancing human health.