

2017 Southeastern Conference Professor of the Year Dr. James Birchler, University of Missouri



James Birchler is the Curators' Distinguished Professor of Biological Sciences at the University of Missouri. Dr. Birchler earned his bachelor's degree in botany and zoology from Eastern Illinois University, and master's and doctoral degrees in genetics and biochemistry from Indiana University. He performed postdoctoral work at Oak Ridge National Laboratory and the University of California, Berkeley.

Dr. Birchler was an assistant and associate professor at Harvard University prior to joining the Missouri faculty in 1991. He teaches classes in general genetics and advanced plant genetics. Dr. Birchler is well-known for his entertaining, informative and knowledgeable teaching methods in his undergraduate genetics class, which include using full regalia to characterize Gregor Mendel, the father of modern genetics. He has mentored 41 undergraduate research students, three master's students, 20 Ph.D. students and 35 postdoctoral fellows.

Dr. Birchler's research of *Drosophila*, commonly known as fruit flies, focuses on gene silencing and dosage compensation. His laboratory uses maize as a model organism to study the structure and behavior of chromosomes, centromere epigenetics, heterosis, polyploidy and aneuploid. In general, the laboratory is interested in the consequences of dosage sensitive gene regulatory mechanisms in multicellular eukaryotes and their implications for the phenotype and evolutionary processes.

During his time at Missouri, Dr. Birchler has been awarded more than \$13 million in research grants and authored or co-authored more than 135 scientific publications. He has served on the editorial boards of *Tropical Plant Biology*, *McGraw-Hill Yearbook of Science and Technology*, and the *Journal of Biomedicine and Biotechnology*, among others. He is associate editor of both *GENETICS* and *G3*, two of the top peer-reviewed genetics journals.

In 2014, Dr. Birchler was named a fellow of the National Academy of Inventors for his development of the first engineered synthetic plant chromosome, as well as a method for visualizing chromosomes in plants. Both inventions provide broad scientific and industrial application and sustained impact. He is also a fellow of the American Association for the Advancement of Science and a member of the National Academy of Sciences.

Dr. Birchler earned the UM System President's Award for Sustained Career Excellence in 2015. He has also been honored with the Dr. Abraham Eisenstark Faculty Fellow Award from Missouri's Division of Biological Sciences and the Fellows Award from the Academy of Science of St. Louis. In 2003, he was named one of five "Teaching Legends" by *Mizzou* magazine.

Internationally, he earned the Award for Excellence in Academic Achievements from Northeast Normal University in the People's Republic of China in 2007, and was named an Einstein Professor by the Chinese Academy of Sciences in 2014 and Honorary Professor of Beijing Normal University in 2015. [Read more about Dr. Birchler.](#)