Preface

With a stable or decreasing amount of arable land on earth but with a continuing increase in human population, creative improvements in agriculture will be needed in the coming decades to maintain or improve the standard of living. Novel approaches to the production of food, feed, fuel, fiber, and pharmaceuticals will be needed, and the modification of crops and other plant species is one means to achieve such a goal. This volume on plant chromosome engineering includes reviews and protocols for transformation procedures, chromosome painting, production of engineered minichromosomes, gene targeting and mutagenesis, site-specific integration, gene silencing, protein expression, chromosome sorting and analysis, protocols for generating chromosomal rearrangements, enhancer trapping, and means of studying chromosomes in vivo. Collectively, these chapters touch upon the spectrum of tools currently available for modifying plant genomes and chromosomes and provide the foundation for future developments.

Columbia MO *James A. Birchler*



http://www.springer.com/978-1-61737-956-7

Plant Chromosome Engineering
Methods and Protocols
Birchler, J.A. (Ed.)
2011, XI, 329 p., Hardcover
ISBN: 978-1-61737-956-7
A product of Humana Press