Record Nr. UNINA9910346692403321 Autore Bartolome Sabater (Ed.) Titolo Chloroplast MDPI - Multidisciplinary Digital Publishing Institute, 2018 Pubbl/distr/stampa **ISBN** 3-03897-337-8 Descrizione fisica 1 electronic resource (474 p.) Lingua di pubblicazione Inglese Materiale a stampa **Formato** Livello bibliografico Monografia Sommario/riassunto Chloroplasts are at the front line of many advancements in molecular biology, ranging from evolutionary biology to the mechanism of energy transduction, also including stress responses and programmed leaf death. In addition to the relevance of basic knowledge, advances are unveiling promising insights to improve plant productivity, disease resistance, and environmental control. The production of secondary metabolites and proteins by transformed chloroplasts adds further excitement to applied investigations on chloroplasts. The comparison of the sequences of the chloroplast DNA of different plants provides valuable information on gene content, reordering in the circular chloroplast DNA, and mutational genetic-derive, relevant to the evolution of the chloroplast. Increasing facilities for intense genome sequencing have prompted many laboratories to focus on the chloroplast DNA. Reflecting these efforts, more than half of the articles in this book deal with functional or evolutionary investigations based on sequence analyses of chloroplast DNA. Additional topics treated in the issue include post-transcriptional control, the processing of nuclear encoded preproteins of chloroplasts, the response of photosynthetic

machinery to water deficit, turn-over of chloroplast proteins, mechanism of chloroplast division, and chloroplast movements.