Record Nr. UNINA9910298402803321 Autore **Braun Markus** Titolo Gravitational Biology I: Gravity Sensing and Graviorientation in Microorganisms and Plants / / by Markus Braun, Maik Böhmer, Donat-Peter Häder, Ruth Hemmersbach, Klaus Palme Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2018 3-319-93894-0 ISBN Edizione [1st ed. 2018.] 1 online resource (XVII, 122 p. 36 illus., 24 illus. in color.) Descrizione fisica Collana SpringerBriefs in Space Life Sciences, , 2196-5560 571.6 Disciplina Soggetti Cytology Aerospace engineering **Astronautics** Microbiology Botany Cell Biology Aerospace Technology and Astronautics Plant Sciences Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Chapter 1: Gravity Sensing, Graviorientation and Microgravity --Chapter 2: Methods for Gravitational Biology Research -- Chapter 3: Gravitaxis in Flagellates and Ciliates -- Chapter 4: Gravitropism in Tip-Growing Rhizoids and Protonemata of Characean Algae -- Chapter 5: Gravitropism in Fungi, Mosses and Ferns -- Chapter 6: Gravitropism in Higher Plants: Cellular Aspects -- Chapter 7: Gravitropism in Higher Plants: Molecular Aspects -- Chapter 8: Bioregenerative Life Support Systems in Space Research. Sommario/riassunto This book summarizes what is currently known about gravity sensing and response mechanisms in microorganisms, fungi, lower and higher plants; starting from the historical eye-opening experiments from the 19th century up to today's extremely rapid advancing cellular,

molecular and biotechnological research. All forms of life are constantly exposed to gravity and it can be assumed that almost all organisms

have developed sensors and respond in one way or the other to the unidirectional acceleration force, this books shows us some of these different ways. The book is written for plant biologists and microbiologists as well as scientists interested in space and gravitational biology.