

1. Record Nr.	UNINA9910373898703321
Autore	Sato Naoki
Titolo	Endosymbiotic Theories of Organelles Revisited : Retrospects and Prospects / / by Naoki Sato
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2019
ISBN	981-15-1161-6
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (XII, 187 p. 48 illus., 10 illus. in color.)
Disciplina	577.85
Soggetti	Evolution (Biology) Science - History Botany Biology - Philosophy Molecular ecology Cytology Evolutionary Biology History of Science Plant Science Philosophy of Biology Molecular Ecology Cell Biology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter 1. Introduction -- Part I History of endosymbiotic discourses -- Chapter 2. Mereschkowsky, founder of endosymbiotic hypothesis -- Chapter 3. Endosymbiotic discourses until the mid 20th century -- Chapter 4. Re-evaluation of the initial ideas of Lynn Margulis -- Chapter 5. Endosymbiotic discourses in the 1960s and 1970s -- Part II Current perspectives -- Chapter 6. Phylogenetic evidence for the endosymbiotic origin of organelles -- Chapter 7. Continuity and discontinuity of chloroplasts and cyanobacteria -- Chapter 8. Re-examination of the "endosymbiotic event" -- Chapter 9 Concluding remarks. .
Sommario/riassunto	This book re-examines the endosymbiotic theory, and presents various

related theories and hypotheses since the first proposal in 1905 by a Russian biologist. It also demonstrates that Lynn Margulis's contribution to the current endosymbiotic is less than sometimes thought, and presents a plausible idea on how the organelles were formed. Explaining that Margulis's initial work did not intend to show the endosymbiotic origin of chloroplasts and mitochondria, the book discusses their endosymbiotic origin in the light of current biology with the help of clear visual images. Further, by including numerous historical facts and details of phylogenetic analyses using recent genomic data that are largely unknown to many in the field, it offers deep insights into the history of biology, phylogenetic analysis, and the new evolutionary thinking. 2017 was the 50-year anniversary of Margulis's first paper in the *Journal of Theoretical Biology*, and 2020 will mark 50 years since the publication of her famous work *Origin of Eukaryotic Cells*, and as such this book offers a timely reconsideration of the works of Lynn Margulis and the endosymbiotic origin of organelles. .
