

1. Record Nr.	UNINA9910955378203321
Autore	Piatigorsky Joram
Titolo	Gene sharing and evolution : the diversity of protein functions / / Joram Piatigorsky
Pubbl/distr/stampa	Cambridge, Mass., : Harvard University Press, 2007
ISBN	9780674042124 0674042123
Edizione	[1st ed.]
Descrizione fisica	1 online resource (337 p.)
Classificazione	WG 1940
Disciplina	572/.6
Soggetti	Genetic regulation Proteins - Evolution Eye - Molecular aspects Crystalline lens
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references (p. 241-305) and index.
Nota di contenuto	Frontmatter -- Contents -- Illustrations -- Preface -- 1. What Is "Gene Sharing"? -- 2. Multifunctions and Functional Shifts: Echos from the Past -- 3. The Elusive Concept of a "Gene" -- 4. Eyes and Lenses: Gene Sharing by Crystallins -- 5. The Enigmatic "Corneal Crystallins": Putative Cases of Gene Sharing -- 6. Gene Sharing as a Common Event: Many Multifunctional Proteins -- 7. Gene Sharing during Gene Expression -- 8. Gene Sharing As a Dynamic Evolutionary Process: Antifreeze Proteins and Hemoglobins -- 9. Gene Duplication and the Evolution of New Functions -- 10. Gene Sharing and Systems Biology: Implications and Speculations -- 11. Recapitulations: Ambiguities and Possibilities -- Glossary -- References -- Index
Sommario/riassunto	In Gene Sharing and Evolution Piatigorsky explores the generality and implications of gene sharing throughout evolution and argues that most if not all proteins perform a variety of functions in the same and in different species, and that this is a fundamental necessity for evolution.