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Autore	Bross Peter
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Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Introduction -- Historical sketch of the discovery and recognition of the function of chaperonins -- Molecular structure of chaperonins -- Folding by enclosure in the chaperonin cavity -- Evolutionary origins and family relations -- Chaperoning mechanisms: folding helpers, folding protectors or misfolding blockers? -- Sequence variations in proteins affecting chaperonin dependence -- Genetic organization of type I chaperonin genes -- Regulation of type I chaperonin gene expression -- Subcellular localization -- Posttranslational modifications -- Variations in Hsp60 and Hsp10 in humans -- Type I chaperonins are essential for cell viability and mutations cause deficiency phenotypes -- Human diseases caused by genetic mutations in the Hsp60/Hsp10 system -- Molecular investigations of disease mechanisms -- Molecular investigations of disease mechanisms -- Outlook.
Sommario/riassunto	In this unique overview of the Hsp60 chaperonin, Peter Bross addresses molecular biologists, medical research scientists and individuals interested in molecular or general biology. First, Bross discusses the basics of the Hsp60 chaperonin in terms of its structure and the

molecular mechanisms determining its function. Second, the author highlights the multiple roles of Hsp60 for cellular systems and regulatory pathways, especially in connection with neurodegenerative diseases caused by Hsp60 deficiency. Finally, the author highlights controversial observations suggesting additional, non-standard functions of Hsp60 in and outside mitochondria as well as possible gaps in our understanding of the chaperonin. This volume serves as a snapshot suitable for experienced researcher working in fields related to molecular chaperones yet still accessible to researchers entering the field.