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Nota di contenuto	1 Introduction -- 2 Occurrence, genes and gene expression -- 3 Structure and function of -GTs -- 4 Autoprocessing and reaction mechanism of -GTs -- 5 -GT in bioclinical -- 6 -GTs: biotechnological and biomedical applications -- 7 Conclusions -- References.
Sommario/riassunto	Gamma-Glutamyl Transpeptidases (-GTs) are members of the N-terminal nucleophile hydrolase superfamily, enzymes that cleave the -glutamyl amide bond of glutathione to liberate cysteinylglycine. The released -glutamyl group can be transferred to water (hydrolysis) or to amino acids or short peptides (transpeptidation). -GT plays a key role in the gamma glutamyl cycle by regulating the cellular levels of the antioxidant glutathione, hence it is a critical enzyme in maintaining cellular redox homeostasis.-GT is upregulated during inflammation and in several human tumors, and it is involved in many physiological disorders related to oxidative stress, such as Parkinson's disease and diabetes. Furthermore, this enzyme is used as a marker of liver disease and cancer. This book covers current knowledge about the structure-function relationship of -GTs and gives information about applications of -GTs in different fields ranging from clinical biochemistry to biotechnology and biomedicine.