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Sommario	The principal aim of this thesis is the structural determination of the residues involved in the complex between the human Ferritin H-chain (HFt) and the human Transferrin Receptor 1 (hTfR1 or CD71) at near to atomic resolution. HFt nanoparticles represent one of the most appropriate vectors for cellular delivery of molecules thanks to their internalization by CD71, a transmembrane receptor overexpressed in most cancer cell types. As such, literature is continuously enriched by successful biomedical applications of this interaction; nevertheless, the epitopes of their recognition are to date unknown. To this end, we exploited single-particle cryo-electron microscopy (cryo-EM): this technique is currently under intense technological development and can now be used as a convenient method to determine atomic structures of protein complexes. So, we took advantage of modern cryo-electron microscopes and GPU-equipped computer clusters for single particle analysis calculations. Through the CD71-targeted distribution of specific payloads, the cellular internalization property of HFt might be used for a plethora of purposes, ranging from anticancer therapy to image-enhancement for diagnostics: the side aims of this thesis deal with cryo-EM structural analysis of two different Ferritins chimeras whose constructs have been designed and optimized by our group.