"Studies of demetallation of haemin by mammalian apoferritins"

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Abstract
The main objective of this thesis is the elucidation of the mechanism of demetallation of haemin by L-chain apoferritins by different techniques: Crystallographic studies can give us information about the nature of the porphyrin binding sites. In order to attain maximum occupation of these sites we have used 24 haemin /apoferritin molecules. In contrast, for the EPR studies, which allow us to distinguish between haem and non-haem iron, we have used less than saturating values, typically 8 haemin / apoferritin. For the mass spectrometry studies, which give us information on the molecular weight of the bound porphyrin derivative, we have chosen, after preliminary experiments to use 12 haemin / apoferritin. The same conditions were employed for the EXAFS studies, which give us information concerning the ligand environment of the metal ion. We have analysed the wild type L-chain apoferritin (rHoLF) and its three mutants ( rHoLF E53,56,57,60Q; rHoLF R59M and rHoLF E53,56,57,60Q + R59M) i...

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Référence bibliographique

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