

Effect of the tetrazole *cis*-amide bond surrogate on the complexing ability of some enkephalin analogues toward Cu(II) ions.

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A study of the effect of the tetrazole moiety, a *cis*-amide bond surrogate, on the Cu(II) coordinating properties of oligopeptides is reported. The insertion of the tetrazole moiety $\psi(\text{CN}_4)$ into the peptide sequence of [Leu⁵]enkephalin considerably changes the coordination ability of the ligand. Potentiometric and spectroscopic results indicate that if the tetrazole moiety is in a suitable position in the peptide chain, i.e. if it follows the third residue, an unusual stable CuH_{-1}L species involving 4N coordination is formed in the physiological pH region. The tetrazole $\psi(\text{CN}_4)$ ring provides one of these nitrogens. The data indicate that Cu(II) ions are strongly trapped inside a bent peptide backbone. However, the coordination mode involving the tetrazole ring nitrogen does not prevent the hydrolysis process under strongly basic conditions.

Adres publiczny

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