

Synthesis and Unique Function of a Copper(II) Compound Possessing an Imidazole Moiety as an Anchor Group

Satoshi Nishino, Yuichi Sutoh, Takanari Togashi, and Yuzo Nishida

Department of Chemistry, Faculty of Science, Yamagata University, Yamagata 990-8560, Japan

Reprint requests to Prof. Y. Nishida. Fax:+81-23-628-4591. E-mail: yuzo@sci.kj.yamagata-u.ac.jp

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A new copper(II) complex with a (bdpg-His) ligand was prepared and its structural properties were investigated both in crystalline and in solution states; (bdpg-His) = *N,N*-bis(2-pyridylmethyl)carnosine methylester. In the solid state, the complex has a dimeric structure, but in solution it partially dissociates into monomeric species, which have an imidazole moiety as an anchor group. This complex can prevent the precipitation of aggregated amyloid beta-peptide induced by zinc(II) ions, and affects the structure of the superoxide dismutase molecule, leading to the loss of the dimeric structure; these effects are probably due to the free imidazole group of the complex in solution.

Key words: Copper(II) Complex with a Histidine Anchor, Aggregation of Amyloid Peptide