Zinc binding sites conserved in short neuropeptides containing a diphenylalanine motif.

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Streszczenie

A diphenylalanine motif in peptides plays a crucial role in supramolecular systems. The current work represents a novel strategy in which a diphenylalanine motif in the central domain of neuropeptides conserves the specific Zn^{2+} binding site and prevents "hopping" of the Zn^{2+} ion between alternative metal binding sites. Alternative metal binding sites may also include carboxylic atoms in the terminal domains of a peptide. Therefore, one needs to design a peptide in which the metal will not bind the carboxylic groups in the terminal domains. Herein, we propose that engineering and designing peptides with a diphenylalanine motif in the central domain may yield excellent metal chelators.

Słowa kluczowe

Peptides and proteins, Metals, Ions, Chemical structure, Conformation

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