Uniwersytet Wrocławski

Repozytorium

Plik pochodzi z repozytorium Wydziału Chemii Uniwersytetu Wrocławskiego

Histamine H_2 antagonists: powerful ligands for copper(II). Reinterpretation of the famotidine-copper(II) system.

Autorzy

Anna M. Duda

Teresa Kowalik-Jankowska

Henryk Kozłowski

Teobald Kupka

Rok wydania

1995

Czasopismo

Journal of the Chemical Society, Dalton Transactions

Strony

2909-2913

DOI

10.1039/DT9950002909

Kolekcja

Naukowa

Język

Angielski

Typ publikacji

Artykuł

Streszczenie

Potentiometric, absorption, EPR and ^{13}C NMR spectroscopic studies performed for a series of effective H_2 antagonists of histamine (imidazole-4-ethanamine) including effective antiulcer drug famotidine, have shown that all ligands containing a guanidine–thiazole fragment co-ordinate copper(II) ions at pH around 2 using two nitrogen donors. The guanidine moiety having acidic nitrogen (log *K* 1.5–3.0) acts as an anchor and the thiazole nitrogens with protonation constants around p*K* 6.7 very efficiently form a chelate ring. The adjacent thioether sulfur may also be involved in metal-ion binding, contributing to the stabilities of the complexes formed. At higher pH an amine terminal fragment is involved in co-ordination *via* one of its nitrogens leading to a {N,N,S,N} binding set. Comparison of all results obtained for the seven compounds studied strongly suggests that only equimolar species can be detected in this system. This allows a convincing reinterpretation of earlier studies on the copper(II)–famotidine system.

Adres publiczny

https://doi.org/10.1039/DT9950002909

Strona internetowa wydawcy

https://www.rsc.org/

Plik został wygenerowany dnia 2026-11-12 01:41:48

Adres w repozytorium https://old.chem.uni.wroc.pl/pl/repozytorium/BIFKVxX.