NH P 8

Sinteza i antifungalna aktivnost kompleksa cinka(II) sa aromatičnim heterocikličnim jedinjenjima koja sadrže azot u prstenu

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Novi kompleksi cinka(II), $[ZnCl_2(qz)_2]$ (**1**), $[ZnCl_2(1,5\text{-naph})]_n$ (**2**) i $[ZnCl_2(4,7\text{-phen})_2]$ (**3**), (qz = hinazolin, 1,5-naph = 1,5-naftiridin i 4,7-phen = 4,7-fenantrolin) sintetisani su u reakcijama $ZnCl_2$ i odgovarajućeg *N*-heterocikličnog liganda u 1 : 2 molskom odnosu u etanolu na sobnoj temperaturi. Sintetisani kompleksi cinka(II) su okarakterisani primenom elementalne mikroanalize, NMR, IR i UV-Vis spektroskopije i rendgenske strukturne analize. Na osnovu disk-difuzione metode, utvrđeno je da kompleksi **1 – 3** pokazuju dobru antifungalnu aktivnost prema dva *Candida* soja (*C. albicans* i *C. parapsilosis*), pri čemu nisu toksični na normalnoj ćelijskoj liniji fibroblasta pluća (MRC-5).

Synthesis and antifungal activity of zinc(II) complexes with aromatic nitrogen-containing heterocycles

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New zinc(II) complexes, $[ZnCl_2(qz)_2]$ (**1**), $[ZnCl_2(1,5\text{-naph})]_n$ (**2**) and $[ZnCl_2(4,7\text{-phen})_2]$ (**3**), (qz = quinazoline, 1,5-naph = 1,5-naphthyridine and 4,7-phen = 4,7-phenanthroline) were synthesized by the reactions of $ZnCl_2$ and the corresponding *N*-heterocyclic ligand in 1 : 2 molar ratio in ethanol at room temperature. The characterization of the synthesized zinc(II) complexes was done by the elemental analysis, NMR, IR and UV-Vis spectroscopy, while their crystal structures were determined by a single-crystal X-ray diffraction analysis. In agar disc-diffusion assay, complexes **1 – 3** showed good antifungal activity against two *Candida* strains (*C. albicans* and *C. parapsilosis*). These complexes were not toxic on the normal human fibroblast cell line (MRC-5).

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