



Rhodium(III) complexes with polypyridyls and pyrazole and their antitumor activity.

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Rok wydania

2002

Czasopismo

Inorganica Chimica Acta

Numer woluminu

334

Strony

59-66

DOI

10.1016/S0020-
1693(02)00776-4

Kolekcja

Naukowa

Język

Angielski

Typ publikacji

Artykuł

Streszczenie

Synthesis and properties of rhodium complexes with nitrogen ligands $[\text{RhCl}_2(\text{Hpz})_4][\text{RhCl}_4(\text{Hpz})_2]$ (**1**), $[\text{RhCl}_3(\text{tpy})]$ (**2**), $[\text{RhCl}_3(\text{tpta})] \cdot \text{H}_2\text{O}$ (**3**) and $[\text{Rh}(\text{tpy})_2(\text{Him})]\text{Cl}_3 \cdot 3\text{H}_2\text{O}$ (**4**), have been described. X-ray structures of complexes **1–3** have been determined. IR, UV–Vis and ^1H NMR spectra of the complexes have been discussed. Cytostatic activity of the complexes against *HCV29T* tumor cells increases in the series: **1** < **3** < **2** < **4**. The cytostatic activity of complex **4** is greater than that of cisplatin. Interaction of the complexes with DNA has been investigated. The compounds $[\text{RhCl}_2(\text{Hpz})_4][\text{RhCl}_4(\text{Hpz})_2]$, $[\text{RhCl}_3(\text{tpy})]$, $[\text{RhCl}_3(\text{tpta})] \cdot \text{H}_2\text{O}$ and $[\text{Rh}(\text{tpy})_2(\text{Him})]\text{Cl}_3 \cdot 3\text{H}_2\text{O}$ have been prepared and characterized using spectroscopic methods and X-ray crystallography. The complexes are effective cytostatic agents against *HCV29T* tumor cells. The cytostatic activity of the last complex is greater than that of cisplatin. Interaction of the complexes with DNA has been investigated.

Słowa kluczowe

Rhodium(III) complexes, Antitumor, Cytostatic activity

Adres publiczny

[https://doi.org/10.1016/S0020-1693\(02\)00776-4](https://doi.org/10.1016/S0020-1693(02)00776-4)

Strona internetowa wydawcy

<http://www.elsevier.com>

Plik został wygenerowany dnia 2026-10-06 20:34:31

Adres w repozytorium <https://old.chem.uni.wroc.pl/pl/repozytorium/BED9GfM>.