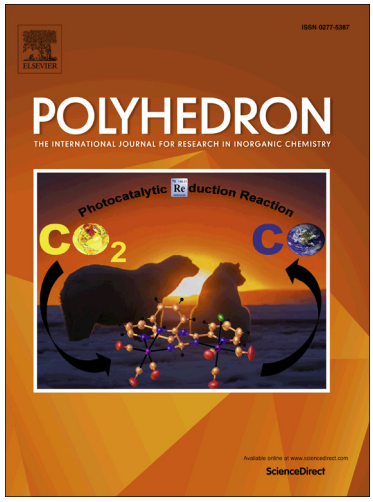

Syntheses, Structures and Biological Evaluation of some Transition Metal Complexes with a Tetradentate Benzamidine/Thiosemicarbazone Ligand

Thi Bao Yen Nguyen, Chien Thang Pham, Thi Nguyet Trieu, Ulrich Abram, Hung Huy Nguyen

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Syntheses, Structures and Biological Evaluation of some Transition Metal Complexes with a Tetradentate Benzamidine/Thiosemicarbazone Ligand

Thi Bao Yen Nguyen,[a)] Chien Thang Pham,[a,b)] Thi Nguyet Trieu,[a)] Ulrich Abram,[b)*] Hung Huy Nguyen[a)*]

[a)]*Department of Chemistry, Hanoi University of Science, 19 Le Thanh Tong, Hanoi, Vietnam*

[b)]*Freie Universität Berlin, Institute of Chemistry and Biochemistry, Fabeckstr. 34-36, D-14195 Berlin, Germany*

Abstract. The potentially tetradentate benzamidine/thiosemicarbazone ligand, Et_2N-(C=S)-NH-C(Ph)=N-(*o*-C_4H_6)-C(Me)=N-NH-(C=S)-NH-Me (**H_2L**) readily reacts with $Ni(CH_3COO)_2$, $[PdCl_2(CH_3CN)_2]$, $[PtCl_2(PPh_3)_2]$ and $(NBu_4)[ReOCl_4]$ under formation of complexes of the compositions [M(L)] (M= Ni (**1**), Pd (**2**), Pt (**3**)) and [ReO(L)(OMe)] (**4**). In all complexes, H_2L is doubly deprotonated and bonded to the central meal ion via its N_2S_2 donor set. Complexes **1**, **2** and **3** have distorted square-planar coordination spheres, while the rhenium compound **4** is an octahedral *trans* oxido/methoxido complex. The H_2L proligand shows a medium cytotoxicity with an IC_{50} value of 21.1 μM. While the rhenium complex **4** exhibits a stronger antiproliferative effect (IC_{50} = 5.52 μM), the nickel, palladium and platinum complexes are almost inactive.

Keywords: Transition Metals, Benzamidines, Thiosemicarbazones, X-ray structure, Cytotoxicity

Corresponding Authors: ulrich.abram@fu-berlin.de (Ulrich Abram)

nguyenhunghuy@hus.edu.vn (Hung Huy Nguyen)