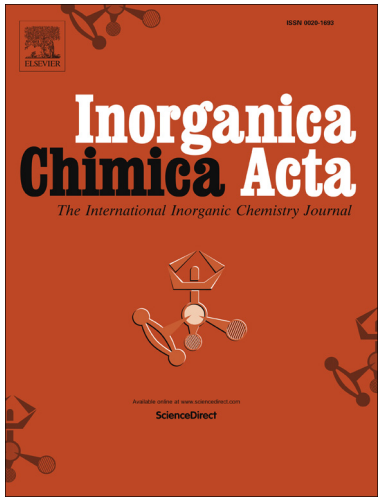

Research paper

N-(R)Ethanolamine Dithiocarbamate Ligands and their Ni(II) and Pt(II) Complexes. Evaluation of the *in vitro* Anticancer Activity of the Pt(II) Derivatives

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N-(R)Ethanolamine Dithiocarbamate Ligands and their Ni(II) and Pt(II) Complexes. Evaluation of the *in vitro* Anticancer Activity of the Pt(II) Derivatives.

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Abstract

A series of Ni(II) and Pt(II) complexes with DTC ligands including a hydrophilic ethanol moiety [*N*-(R)ethanolamine (R= Me(**1**), Et(**2**), iPr(**3**), Bn (**4**))] have been prepared and fully characterized. The antitumor activity of the Pt(II) derivatives has been evaluated against different cancer cell lines, showing complex **4-Pt** (including *N-(benzyl)*ethanolamine DTC ligand **DTC-4**) to be the most active of the series, exhibiting 100% inhibition on glial cells of nervous central system (U251), leukaemia (K562), colon (HCT-15), breast (MCF-7) and lung (SKLU-1). Finally, the Ni(II) derivatives were explored as catalyst in Suzuki-Miyaura couplings, however only decomposition of the complexes was observed with null conversions to biphenyls.

Keywords*:* Platinum complexes, Nickel complexes, Crystal structures, Cytotoxic activity, dithiocarbamate complexes, coordination compounds, Cancer.

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