Cytotoxicity Studies of the Gold (III) Complexes with 1,2-Diaminocyclohexane Complexes

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A series of gold (III) complexes were prepared by reacting Auric acid (HAuCl₄•3H₂O) with cis and trans- 1,2-diaminocyclohexane (DACH). Gold (III) complexes are now known to have and to better understand the chemical and physical behavior of biologically relevant mono-(DACH) gold (III) complexes, the chiral isomers [Cis-(±)-1,2-(DACH)AuCl₂]Cl (1), [Trans-(±)-1,2-(DACH)AuCl₂]Cl (2) and [(1S,2S)-(+)-1,2-(DACH)AuCl₂]Cl (3), have been synthesized and fully characterized by IR, NMR, Elemental Analysis and UV-Vis. Scheme 1 illustrates the synthetic route for these compounds. Their cytotoxicity has been tested in vitro in human gastric carcinoma and cell line SGC-7901 and prostate cancer cell lines PC-3.

The authors would like to acknowledge the support provided by King Abdulaziz City for Science and Technology (KACST) through the Science & Technology Unit at King Fahd University of Petroleum & Minerals (KFUPM) for funding this work through project No 10-BIO1368 as part of the National Science, Technology and Innovation Plan.