J Dev Drugs 2018, Volume 7
DOI: 10.4172/2329-6631-C1-027

2nd International Conference and Exhibition on
PHARMACEUTICAL DEVELOPMENT AND TECHNOLOGY
May 11-12, 2018 Osaka, Japan

Amberlite IR-120 (H) mediated "on water" synthesis of anticancer Ruthenium(II)-arene 8-hydroxyquinoline complexes

Sourav De
University in Vellore, India

A series of ruthenium-quinolinol complexes (3a-d and 4a-d) has been synthesized by employing a simple, efficient and environmental friendly condition. Catalytic role of amberlite IRA-120(H) has been demonstrated. The structures of the new compounds were elucidated by the analysis of spectroscopic data. The stability of these complexes was measured by UV spectroscopy and time dependent NMR spectroscopy. These newly developed complexes were represented as potential anticancer agent. Complex [(η6-hexamethylbenzene)RuCl(κ2-O,N-5-chloro-HyQ)]•Cl (4b), [(η6-hexamethylbenzene) RuCl(κ2-O,N-5,7-dibromo-HyQ)]•Cl (4c) and [(η6-hexamethylbenzene)RuCl(κ2-O,N-5-chloro-7-iodo-HyQ)]•Cl (4d) exhibited best cytotoxicity profiles in three reported human cancer cell lines (MCF-7, Hela, Caco-2). A high selectivity was observed with these newly developed organoruthenium compounds in human cancer cell lines. Compound 4c might be utilized for cancer theranostic agents because of its significant quantum yield in water, high potency, selectivity and high cellular uptake in cancer cell lines.

chemsouravde@gmail.com

Notes: