

2nd International Conference on Pharmaceuticals & Novel Drug Delivery Systems

20-22 February 2012 San Francisco Airport Marriott Waterfront, USA

TITLE

Synthesis and Evaluation of Some Steroidal Oximes as Cytotoxic Agents: Structure/Activity Studies

Aimin Zhou

Guangxi Teachers Education University, China

A series of hydroximinosteroid derivatives with distinct substituted groups on the ring A and B, and a diversity of side chains, have been prepared. The cytotoxicity of the synthesized compounds against Sk-Hep-1, H-292, PC-3 and Hey-1B cancer cells was investigated. Our results have demonstrated that the presence of a hydroxy on 3- or 6-position of the steroidal nucleus would result in an increase of cytotoxic activity for the compounds against tumor cells and a cholesterol-type side chain at the position 17 was required for the biological activity. Interestingly, elimination of a 4,5-double bond remarkably augmented the cytotoxic activity of the steroidal oximes with 3, 6-hydroximino groups, suggesting that a specific three-dimensional structure of these compounds contributes to their biofunctions. The findings provide some new evidences showing the relationship between the chemical structure and biological function.