

SIDE CHAIN IODINATION OF DIHYDROPYRIMIDONES AND ELUCIDATION OF THEIR ANTICANCER ACTIVITY

3,4-Dihydropyrimidin-2-ones have found wide applicability in pharmaceutical world in the recent years. Further nucleophilic substitution of C-6 methyl by halogens could lead to new compounds. Strickingly, reports on side-chain iodination are rare. The present study describes side-chain iodination of dihydropyrimidones using iodine monochloride. The resulting iodo compounds have been evaluated for their anticancer properties. Data suggest that the compound ethyl 6-(iodomethyl)-2-oxo-4-phenyl-3,4-dihydropyrimidin-5-carboxylate (2a) was sufficiently potent in inducing apoptosis in the prostate cancer cells through a mitochondrial dependent cascade.

Keywords: *Iodo-dihydropyrimidones, iodine monochloride, apoptosis, ROS, antitumor effects*
