Design, Synthesis, Anti-Cancer Activity, and *in silico* Studies of Novel Imidazo[1,2-*a*]pyridine Derivatives

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Received July 27, 2020; revised August 18, 2020; accepted September 9, 2020

Abstract—A novel series of imidazo [1,2-*a*]pyridine derivatives has been designed, synthesized and tested for the anti-proliferative activity against three different human cancer cell lines. Most of the synthesized compounds exhibit anti-proliferative activity with IC_{50} values ranging from 5.35–59.8 μM. Six compounds demonstrate efficient inhibition of growth of all cell lines with IC_{50} values close to that of standard drug, and the compound **16h** is more potent than the standard drug cisplatin for the HeLa cell line.

Keywords: synthesis, imidazo[1,2-*a*]pyridine, anticancer activity, molecular docking

DOI: 10.1134/S1070363220090212