



Synthesis, Characterization and Biological Evaluation of Novel Benzamides as CETP Inhibitors

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Abstract

Hyperlipidemia is the elevation of total blood lipid level, abnormal lipid level, elevation in triglycerides level, elevation in low density lipoprotein (LDL), and/ or lowering in high density lipoprotein (HDL) level. Hyperlipidemia is one of the risk factors for the development of atherosclerosis, which is the most common disease that affects the cardiovascular system. Cholesteryl ester transfer protein (CETP) is a 74-kDa glycoprotein that mediates the transfer of cholesterol esters from HDL to triglyceride-rich lipoproteins, which are subsequently cleared in the liver. Inhibition of this process results in higher HDL levels and reduces LDL levels. Herein, synthesis and characterization of four novel benzylaminobenzamides **8a-8d** was carried out. The in vitro biological evaluation study showed potential inhibitory activity against CETP protein for the synthesized compounds **8c**, **8d** and **8b**, where **8c** has the best % inhibition of 78.4 followed by **8d** and **8b** with % inhibition of 61.2, 39.2 respectively at a concentration of 10 μ M.