PHARMACOLOGICAL EVALUATION OF NOVEL FURAN-2-CARBOXAMIDE DERIVATIVES AS ANTIHYPERLIPIDEMIC AGENTS IN TRITON INDUCED RATS

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Abstract

A new series of Furan-2-carboxamide derivatives of anthraquinone (compounds N**1**, N**3**, N**5**) were synthesized and tested *in vivo* using Triton WR-1339-induced hyperlipidemic rat as an experimental model for their hypolipidemic activity.

The tested animals were divided into six groups: control, hyperlipidemic, N1, N3, N5 and bezafibrate. The designed target derivatives, compounds N**1, N3** were inactive. Compound N**5** has shown a significant reduction in triglyceride level in rats by 66.5% after 18 h in

comparison to the hyperlipidemic group. Furthermore, high-density lipoprotein-cholesterol levels were remarkably increased in compound N5 ($p < 0.001$) by 163% after 18 h in comparison to the hyperlipidemia group and also compound N5 significantly reduced LDL-C level ($p< 0.001$) by 72% after 18 h in comparison to the hyperlipidemia group. Furthermore, the total cholesterol level was reduced by 85% after 18 h in compound N5 compared to HLG-treated rats.

It was found that Compound N5 at dose of (15mg/kg) is better than bezafibrate at dose of (100 mg/kg) in lowering cholesterol, LDL levels and elevating HDL level while it is in the same effect on triglyceride level.

The present study demonstrated new properties of novel series of furan-2-carboxamides N5 as a potent lipid-lowering agent. It is therefore reasonable to assume that this compound may have a promising potential in the treatment of hyperlipidemia and coronary heart diseases.