

**SYNTHESIS AND BIOLOGICAL EVALUATION OF NOVEL *N*-
BENZOYLPHENYL-2-FURAMIDE DERIVATIVES**

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ABSTRACT

The present study focuses on the synthesis and pharmacological evaluation of novel potential series of *N*-(benzoylphenyl)-2-furamide (**3a**, **3b**, **4a**, **4b** and **4c**) as antihyperlipidemic agents. Compounds (**3b**, **4b** and **4c**) were tested *in vivo* using Triton WR-1339 induced hyperlipidemic rats as an experimental model for their hypolipidemic activity. The tested animals were divided into five groups: control, hyperlipidemic, **3b**, **4b** and **4c**. At a dose of 15 mg/kg body weight, the elevated plasma triglyceride (TG) levels, total cholesterol (TC) levels and low density lipoprotein cholesterol (LDL-C) levels were significantly reduced by compounds **4b** ($p < 0.001$) and **4c** ($p < 0.0001$) after 18 h compared to hyperlipidemic group. Furthermore, high density lipoprotein cholesterol (HDL-C) levels

were remarkably increased by compounds **4b** ($p < 0.001$) and **4c** ($p < 0.0001$). The present study has shown potency of novel series of *N*-(benzophenyl)-2-furamide (**4b** and **4c**) as lipid-lowering agents. Therefore compounds (**4b** and **4c**) may be considered as lead compounds for the discovery of new derivatives.