Synthesis of Benzothiophene Carboxamide Derivatives and their Pharmacological Evaluation as Potent Antihypertriglyceridemic Agents in Rats

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Benzothiophene carboxamide derivatives of aminobenzophenone, aminopyridine, aminobenzimidazole, and aniline derivatives (compounds **1**–**9**) were synthesized and compounds **3**, **6**, **7**, **8**, and **9** tested *in vivo* for their hypolipidemic activity. Compounds **1**–**8** were prepared adopting the fusion process at 130–150 °C between benzothiophene-2-carbonyl chloride and aminobenzophenones, aminopyridine, and anilines, respectively, and were obtained in high yield, while compound **9** was obtained from the reaction of benzothiophene acyl chloride with aminobenzimidazole in DMF at 160 °C. At a dose of 15 mg/kg body weight compounds **6**, **7**, and **9** significantly reduced plasma triglyceride levels in Triton WR-1339-induced hyperlipidemic rats in comparison to control rats. Furthermore, they significantly increased high-density lipoprotein levels. It is therefore reasonable to assume that compounds **6**, **7**, and **9** may have a promising potential in the treatment of hyperlipidemia and atherosclerosis.

Key words: Antihyperglyceridemia, Benzothiophene Carboxamide, Aminobenzimidazole