Synthesis, characterisation and biological evaluation of novel coumarin derivatives.

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ABSTRACT

Coumarin chemically known as 2H-1-benzopyran-2-one. It has a significant resemblance to the construction of Vit-k and this led to assumptions that the substance functions against prothrombin that leads to blood clotting. They have varied bioactivities such as inhibition of platelet aggregation, anti-inflammatory2, anti-convusant3, anti-viral4, anticoagulant5, antioxidant6, antitubercular8, antifungal9, anti-HIV10, anticarcinogenic material11 and antihistamine. The purity of the compounds was checked by TLC on pre-coated SiO2 gel (HF254 200 mesh) aluminum plates (E. Merck) using Dichloromethane: Ammonia: Methanol as eluent and visualized in UV-chamber. For Biological evaluation sources are swiss albino mice and method is Hot plate. For evaluation of acute oral toxicity following procedures are OECD Guidelines-423. Evaluation of *Invitro* anti-microbial activity is by Paper Disc Diffusion Method for knowing Preliminary screening of anti-microbial activity. Among all the title compounds [IIa-1 (Ciprofloxacin)], [IIa-2 (Norfloxacin)], [IIa-3 (Sparfloxacin)], [IIa-5 (n-Methyl piperazine)], [IIb-2 (p-toludine)], [IIb-5 (P-anisidine)], [IIb-6 (Sulphanilamide)], [IIb-7 (sulphadiazine)], [IIb-8 (Sulphamethoxazole)], [IIc-2 (tyrosine)], [IIc-3 (Tryptophan)] synthesized mannich bases with prilimary and secondary amine substitutions showed moderate to good anti oxidant activity. The importance of coumarin ring with the features of substitutes of piperazine, sulpha, aniline and amino acids responsible for the analgesic, anti inflammatory, anti microbial, anti tubercular and anti oxidant activities and therefore may serve as a lead molecule for further modification to obtain clinically useful novel entities in the new millennium

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