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The antioxidant activity of novel chromones and xanthenes: a structure-activity relationship

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Chromones and xanthenes are oxygen-containing heterocyclic compounds with bioactive properties widely reported in the literature, specially concerning to their antioxidant properties. The search for new natural and synthetic chromone and xanthone derivatives order to evaluate and discover new structural features rendering optimized biological effects has been a challenge. Thus, the aim of this work was to evaluate the scavenging activity of reactive oxygen (ROS) and nitrogen (RNS) species of new synthetic hydroxylated chromones and xanthenes (Fig. 1) using *in vitro* non-cellular systems. These compounds exhibited scavenger effects dependent on the concentration, with IC₅₀ values found at the micromolar range. The overall scavenging activity of chromones was better than xanthenes, specially the one of chromone **3A**. In conclusion, the novel tested chromone and xanthone scaffolds proved to be promising pharmacophores with potential therapeutic applications as antioxidant agents.

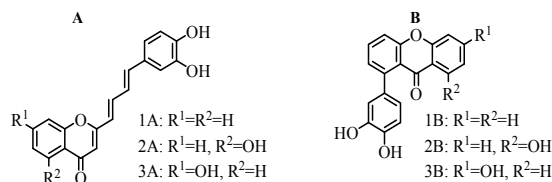


Figure 1: Chemical structures of the tested compounds.

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