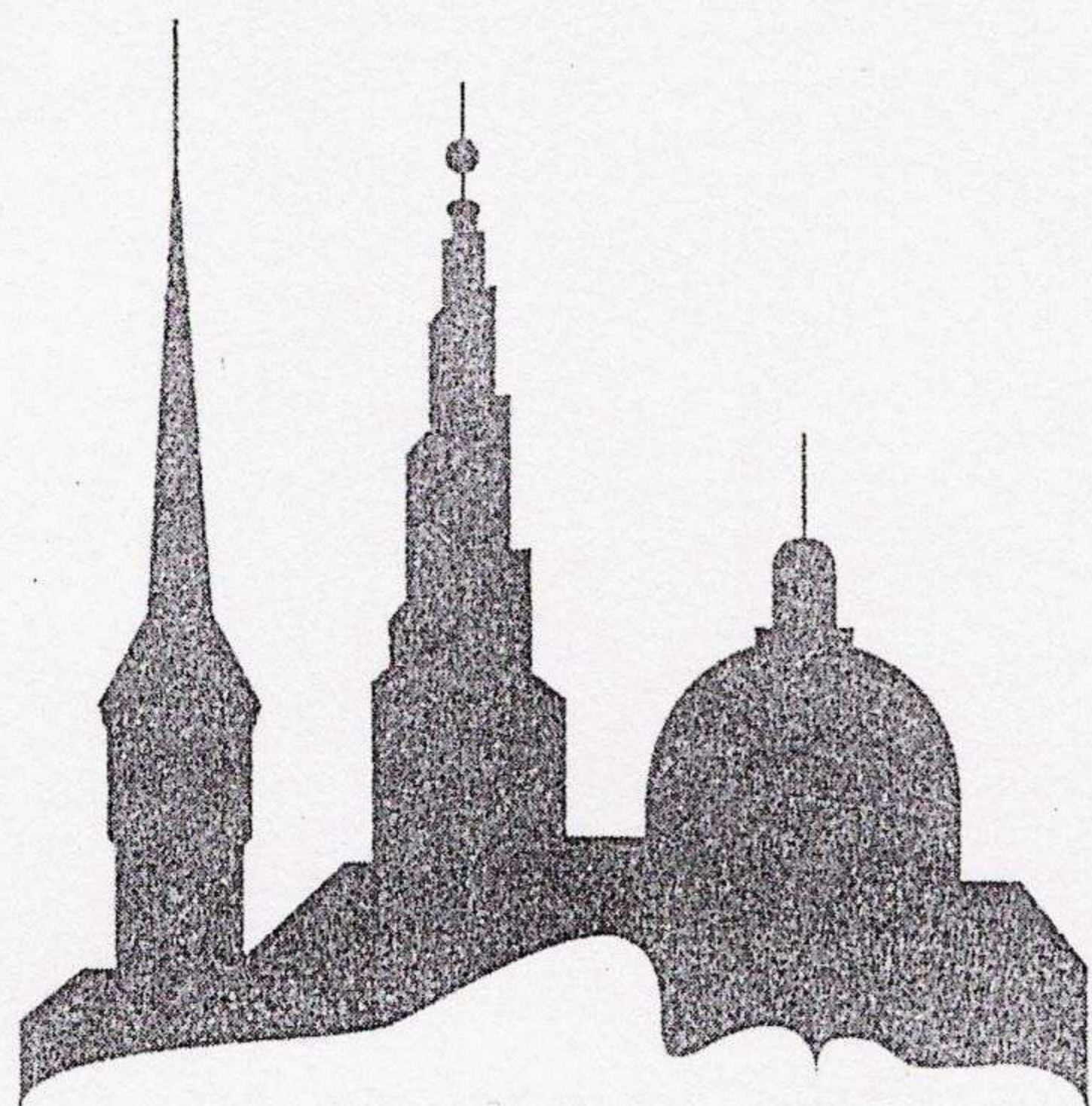


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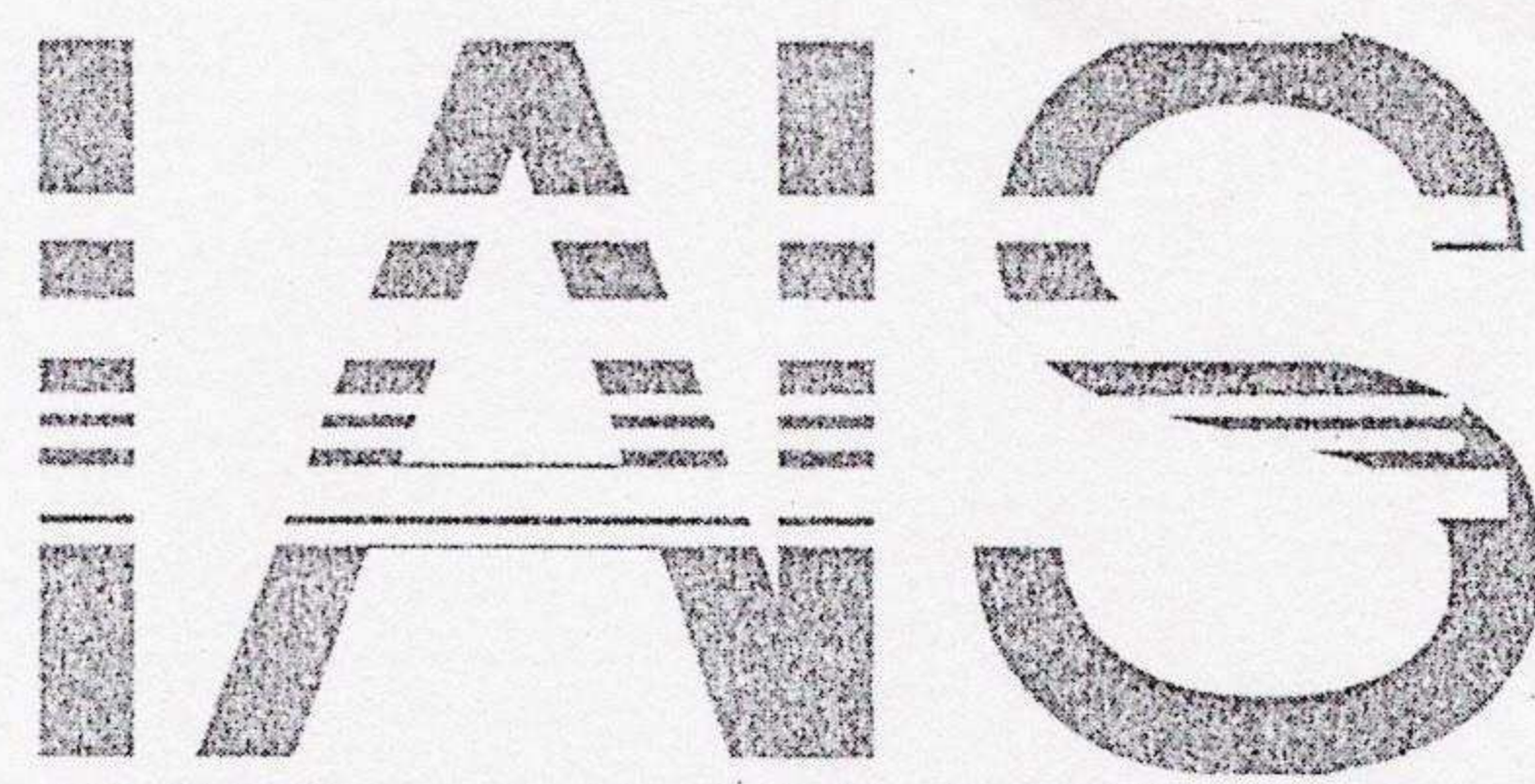
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The Abstracts



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WITH PRO-INFLAMMATORY ENZYMES AND
OXIDATIVE SPECIES

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2-Styrylchromones are a novel class of chromones, vinylogues of flavones (2-phenylchromones), which have recently been found in nature. Several natural and synthetic chromones have demonstrated to possess biological effects of potential therapeutic applications. However, the anti-inflammatory potential of 2-styrylchromones has not been explored so far. Thus, the aim of this work was to evaluate the putative anti-inflammatory properties of several synthetic 2-styrylchromones by studying their influence on different systems that are related to the inflammatory process. The putative inhibitory effects of several 2-styrylchromones on the pro-inflammatory enzymes cyclooxygenase 1 (COX-1), cyclooxygenase 2 (COX-2) and 5-lipoxygenase (5-LOX) was evaluated in vitro and compared with structurally related flavonoids. The capacity of the studied 2-styrylchromones to scavenge reactive oxygen (ROS) and nitrogen species (RNS) was also assessed by different in vitro assays, which allowed to identify the influence of those compounds in each reactive species, separately. From the tested 2-styrylchromones, those having a catecholic B-ring were shown to be the most effective scavengers of ROS and RNS, being, in some cases, more active than flavonoids. No considerable correlation was found between the scavenging profile of these compounds and their interactions with pro-inflammatory enzymes. The results obtained from the present study indicate that some of the tested compounds are promising molecules with potential therapeutic value. The usefulness of 2-styrylchromones in the prevention or control of inflammation can only be clarified with additional studies concerning their influence on other relevant mechanisms of this pathology.

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