Antioxidative and antiproliferative activity of methoxy and amidino substituted benzamides and benzimidazoles

Antioksidativna i antiproliferativna aktivnost metoksi i amidino supstituiranih benzamida i benzimidazola

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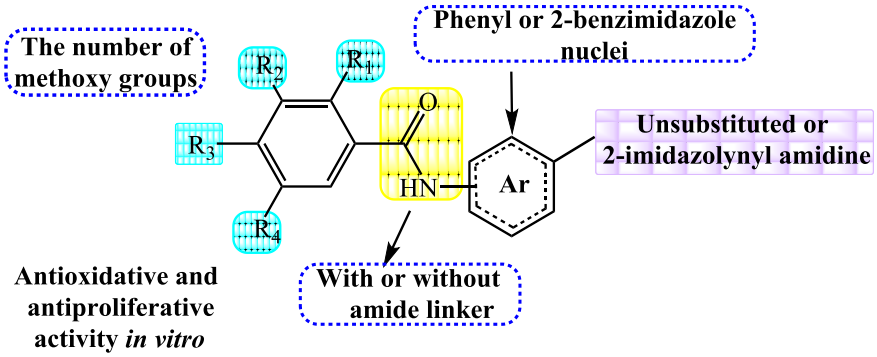
A variety of biochemical and pathophysiological processes in the human body could produce oxygen free radicals and other reactive oxygen species as by-products which may cause oxidative damage of most important biomolecules such as nucleic acids, lipids and proteins. Thus, oxidative damage of biomolecules eventually leads to several chronic diseases including cancer, diabetes, aging and other degenerative diseases.[1]

Herein we present the synthesis and potential antioxidative and antiproliferative activity of novel methoxy amidino substituted bezamides and benzimidazoles. For the synthesis of novel targeted compounds, classical organic synthesis reactions were used.[2] Their antioxidative potency has been evaluated by *in vitro* spectrophotometric assays and preliminary structure-activity relationships among the synthesized compounds are discussed.[3] The compound bearing three methoxy groups and imidazolynyl amidine groupe exhibited the most prominent reducing activity as well as free-radical scavenging activity. Furthermore all novel compounds were tested against three human cell lines: HCT 116 (colon carcinoma), H 460 (lung carcinoma) and MCF-7 (breast carcinoma).



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Acknowledgement: This work was funded by the Croatian Science Foundation (project HRZZ-5596).