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New benzimidazole-hydrazones as MAO inhibitors

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Monoamine oxidase inhibitors (MAOIs) are agents, which inhibit the activity of the monoamine oxidase (MAO) enzymes. These drugs possess a long history of use as medications proposed for the treatment of depression. MAOIs are especially effective in the control of atypical depression. MAO-B inhibitors are also preferred in the treatment of Parkinson's disease. Propargyl moiety is an important pharmacophoric group which presents in the chemical structures of MAO inhibitors as selegiline and rasagiline. Hydrazone is another essential functional group in terms of MAO inhibition. Thus, in the present study some new benzimidazole compounds bearing propargyl and hydrazone side chains were synthesized. Structures of the synthesized compounds were evaluated by IR, ^{1}H-NMR, ^{13}C-NMR and Mass spectroscopic methods. Effects of the synthesized compounds on MAO enzymes were observed by using kynuramine based *in-vitro* fluorimetric method. Activity studies revealed that synthesized compounds have more selectivety against MAO-B enzyme.

Biography

Özgür Devrim CAN has completed his PhD from Anadolu University. She received Associate Professor Degree in 2013. She has published more than 30 papers in reputed journals. Central Nervous System related drugs constitute her main research area.

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