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Synthesis, characterization and biological study of some newer 1, 3, 4-oxadiazoles compounds

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Abstract: The present paper focuses on the synthesis of novel oxadiazoles. Importance of development of some novel HDAC2 modulators such as 1, 3, 4-oxadiazole containing compounds was carried by the author. A total of eight compounds were synthesized and characterized by IR, ¹H-NMR and ¹³C-NMR and Mass spectrometry. Upon *insilico* study reveals that the designed compounds shows good docking scores and interaction between ligands and surrounding amino acids at the active binding site of the target protein HDAC2. Based on *invitro* HDAC2 activity assay, all the synthesized compounds were found to be HDAC2 inhibitors at 1-10 μ M concentration.

Key words: Oxadiazoles, HDAC2 modulators, docking score and *in silico* study.

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