

Synthesis and *In Vitro* Antimycobacterial Evaluation of Some (*E*)-*N*-benzylidene-5-(2-methylquinolin-4-yl)- 1,3,4-oxadiazol-2-amine Derivatives

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SUMMARY. To produce powerful and innovative anti-tubercular drugs. To synthesize the novel quinoline-oxadiazole derivatives and characterize them utilizing elemental analysis, ¹H-Nuclear Magnetic Resonance Spectroscopy, LC-Mass Spectroscopy, and infrared spectroscopy, among other analytical techniques. (*E*)-*N*-benzylidene-5-(2-methylquinolin-4-yl)-1,3,4-oxadiazol-2-amine derivatives (**2a-e**) were synthesized from 5-(2-methylquinolin-4-yl)-1,3,4-oxadiazol-2-amine (**1**) and appropriate aromatic aldehydes. To determine the *in vitro* anti-tubercular activity of the synthesized compounds **2a-e** against *M. tuberculosis* H37Rv by using MABA method and compounds **2c** (MIC value 3.12 μg/mL) was found most active, compounds **2d**, **2e** (MIC value 6.25 μg/mL), intermediate active and compounds **2a**, **2b** (MIC value 12.5 μg/mL) least potent antitubercular activity.

RESUMEN. Producir medicamentos antituberculosos potentes e innovadores. Sintetizar los nuevos derivados de quinolina-oxadiazol y caracterizarlos utilizando análisis elemental, espectroscopia de resonancia magnética nuclear ¹H, espectroscopia de masas LC y espectroscopia infrarroja, entre otras técnicas analíticas. Los derivados de (*E*)-*N*-benzylidene-5-(2-metilquinolin-4-il)-1,3,4-oxadiazol-2-amina (**2a-e**) se sintetizaron a partir de 5-(2-metilquinolin-4-il)-1,3,4-oxadiazol-2-amina (**1**) y aldehídos aromáticos apropiados. Para determinar la actividad antituberculosa *in vitro* de los compuestos sintetizados **2a-e** contra *M. tuberculosis* H37Rv utilizando el método MABA y se encontró que los compuestos **2c** (valor MIC 3,12 μg/mL) eran los más activos, los compuestos **2d**, **2e** (valor MIC 6,25 μg/mL), activo intermedio y compuestos **2a**, **2b** (valor MIC 12,5 μg/mL) actividad antituberculosa menos potente.

KEYWORDS: antitubercular activity, *Mycobacterium tuberculosis* H37Rv, oxadiazoles, quinoline, Schiff base.

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