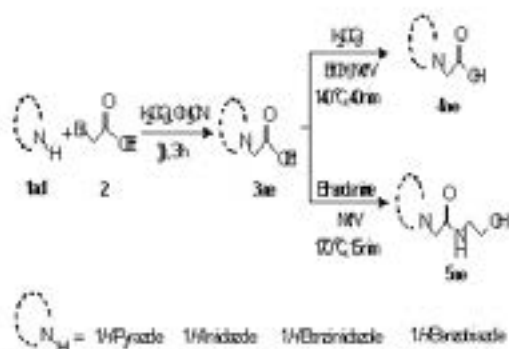


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**Synthesis and characterization of azolyl-acetic acids and azolyl- $\beta$ -hydroxyacetamides assisted by microwave irradiation****Juan Alberto Reyna Torres, Gladiola Noemí Machuca Pérez, Verónica M Rivas Galindo, Perla Elizondo Martínez and Eugenio Hernández Fernández**  
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Easy and efficient synthesis of compounds with biological activity are of great interest due to health problems worldwide. Reason why diverse groups of investigation dedicate their efforts to develop new strategies of synthesis to accede to new compounds of a fast and efficient way. In this sense, the synthesis of azolyl-acetic acids and azolyl- $\beta$ -hydroxyacetamides assisted by microwave irradiation is a unique methodology that allows to obtain these kind of compounds with better chemical yields, in little time of reaction and use of reagents more friendly with the environment. In this work, five azolyl-esters 3a-e were obtained by reaction between the corresponding azole 1a-d with ethyl bromoacetate 2, by ultrasound. Subsequently, with the compounds pure in hand, the hydrolysis reaction was carried out under microwave irradiation between the azolyl-esters 3a-e in the presence of  $K_2CO_3$  and ethanol as solvent, to generate azolyl-acetic acids 4a-e. On the other hand, the amidation reaction of azolyl-esters 3a-e with ethanolamine using microwave irradiation and solvent free, generated the azolyl- $\beta$ -hydroxyacetamides 5a-e. All compounds were characterized by infrared spectroscopy (FT-IR), Nuclear Magnetic Resonance  $^1H$ ,  $^{13}C$  (NMR  $^1H$ ,  $^{13}C$ ) and High Resolution Mass Spectrometry (HRMS).

**Scheme 1.** Synthesis of azolyl-acetic acids 4a-e and azolyl- $\beta$ -hydroxyacetamides 5a-e.**Biography**

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