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SYNTHESIS AND EVALUATION OF ANTIMICROBIAL ACTIVITY OF TETRANORLABDANE COMPOUNDS BEARING 1,3,4-THIADIAZOLE UNITS

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Abstract. Synthesis of novel tetranorlabdane compounds bearing 1,3,4-thiadiazole units and intermediary tetranorlabdane compounds with thiosemicarbazone fragment has been reported. The structures of the new synthesized compounds were confirmed using IR and ^{1}H, ^{13}C, and ^{15}N NMR spectroscopy. The *in vitro* antifungal and antibacterial activities of the mentioned compounds have been evaluated. Results of this study have shown that the 1,3,4-thiadiazole-2-imine has excellent activity against tested strains of fungi and species of bacteria at minimum inhibitory concentration values of 0.125 and 2.5 μg/mL, respectively.

Keywords: (+)-sclareolide, tetranorlabdane compound, 1,3,4-thiadiazole, thiosemicarbazone, antimicrobial activity.

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