

Biological Evaluation of Some Novel Ibuprofen Derivatives Moiety as an Analgesic and Anti-Inflammatory Agents

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SUMMARY. Some (*E*)-4-(arylideneamino)-3-(1-(4-isobutylphenyl)ethyl)-1H-1,2,4-triazole-5(*4H*)-thiones (**2a-2e**) were synthesized and evaluated as anti-inflammatory and analgesic agents. Compounds **2a-2e** were synthesized from thiocarbonylhydrazide reacted with ibuprofen (2-(4-isobutylphenyl)propanoic acid) to form 4-amino-3-(1-(4-isobutylphenyl)ethyl)-1H-1,2,4-triazole-5(*4H*)-thione (**1**). Compound **1** was refluxed with different aromatic aldehydes to form the title compounds or Schiff's Bases (**2a-2e**). All the synthesized compounds were identified by analytical techniques such as infrared (IR), proton nuclear magnetic resonance (¹HNMR), and mass (Ms) spectral analysis. The result showed that compound **2d** showed significant anti-inflammatory and analgesic activity at 200 mg/kg dose compared to ibuprofen (200 mg/kg) as an anti-inflammatory drug and aspirin (200 mg/kg) as an analgesic drug.

RESUMEN: Se sintetizaron algunas (*E*)-4-(arilidenoamino)-3-(1-(4-isobutilfenil)etil)-1H-1,2,4-triazol-5(*4H*)-tio-
nas (**2a-2e**) y evaluadas como agentes antiinflamatorios y analgésicos. Los compuestos **2a-2e** se sintetizaron a
partir de tiocarbonylhidrazida reaccionada con ibuprofeno (ácido 2-(4-isobutilfenil) propanoico) para formar 4-ami-
no-3-(1-(4-isobutilfenil)etil)-1H-1,2,4-triazol-5(*4H*)-tiona (**1**). El compuesto **1** se calentó a reflujo con dife-
rentes aldehídos aromáticos para formar los compuestos del título o bases de Schiff (**2a-2e**). Todos los compuestos
sintetizados fueron identificados mediante técnicas analíticas como infrarrojo (IR), resonancia magnética nuclear
de protones (¹HNMNR) y análisis espectral de masas (Ms). El resultado mostró que el compuesto **2d** mostró una
actividad antiinflamatoria y analgésica significativa a una dosis de 200 mg/kg en comparación con el ibuprofeno
(200 mg / kg) como fármaco antiinflamatorio y la aspirina (200 mg/kg) como fármaco analgésico.

KEY WORDS: analgesic, anti-inflammatory, ibuprofen, spectral characterization, 1,2,4-triazoles.

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