

## Synthesis and *in vitro* anti-bacterial evaluation of some 3-((4-(4-(arylideneamino)-5-mercapto-4*H*-1,2,4-triazol-3-yl)phenyl)imino)isoindolin-1-one derivatives

Mazen Almehmadi<sup>1</sup>, Mamdouh Allahyani<sup>1</sup>, Ayman Al-hazmi<sup>1</sup> and Mohammad Asif<sup>2</sup>

<sup>1</sup>Department of Clinical Laboratory Sciences, College of Applied Medical Sciences, Taif University,  
P.O. Box 11099, Taif, 21944, Kingdom of Saudi Arabia

<sup>2</sup>Department of Pharmaceutical Chemistry, Era College of Pharmacy, Era University, Lucknow, Uttar Pradesh, India

**ABSTRACT** Some 3-((4-(4-(arylideneamino)-5-mercapto-4*H*-1,2,4-triazol-3-yl)phenyl)imino)isoindolin-1-one derivatives (**3a-e**) were synthesized by the reaction of 3-((4-(4-amino-5-mercapto-4*H*-1,2,4-triazol-3-yl)phenyl)imino)indolin-2-one (**2**) with aryl aldehydes. The *in vitro* anti-bacterial activity of the synthesized compounds was tested against Gram-negative (*Escherichia coli*) and Gram-positive (*Staphylococcus aureus*) bacteria. Some compounds (**3a-c**) exhibited satisfactory antibacterial efficacy against tested bacteria. The most effective compound against tested bacteria was compound **3a**.

**KEYWORDS:** Indoledione, thiadiazole, triazole, Schiff's bases, Synthesis, antibacterial activity.

**How to cite this article:** Almehmadi, M., Allahyani, M., Al-hazmi, A. and Asif, M. Synthesis and *in-vitro* anti-bacterial evaluation of some 3-((4-(4-(arylideneamino)-5-mercapto-4*H*-1,2,4-triazol-3-yl)phenyl)imino)isoindolin-1-one derivatives, *Indian J. Heterocycl. Chem.*, **2025**, *35*, 135-139. <https://doi.org/10.59467/IJHC.2025.35.135>