



## البحث الثامن

### **"Phthalazines and phthalazine hybrids as robust antimicrobial agents: synthesis and biological evaluation"**

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#### **Abstract:**

Phthalazine and phthalazinone derivatives are of utmost importance owing to their significant biological activities and pharmacological properties. Herein, benzoic acid derivative **(2)**, benzoxazin-1-one derivative **(3)**, and oxophthalazin-2(1*H*)-yl)acetohydrazide **(13)** were utilized as precursors to construct a novel series of phthalazinones bearing various valuable function groups in excellent yields *via* several simple and promising approaches. Finally, the antimicrobial activity of newly-synthesized phthalazines was screened against different microbial strains; namely, Gram-negative and Gram-positive bacteria utilizing Amoxicillin as a standard drug.