

# Turkish Journal of Chemistry


Turkish Journal

of

Chemistry

**Mannich base derivatives of 3-hydroxy-6-methyl-4H-pyran-4-one with antimicrobial activity**

Demet US<sup>1</sup>, Barkın BERK<sup>1</sup>, Ece GÜRDAL<sup>1</sup>, Nihan AYTEKİN<sup>2</sup>, Tanıl KOCAGÖZ<sup>3</sup>,  
Berrak ÇAĞLAYAN<sup>2</sup>, Işıl AKSAN KURNAZ<sup>2</sup>, Dilek DEMİR EROL<sup>1</sup>

 [Keywords](#)  
 [Authors](#)



<sup>1</sup>Yeditepe University, Faculty of Pharmacy, Department of Pharmaceutical Chemistry, 34755, Kayışdağı, İstanbul-TURKEY  
e-mail: derol@yeditepe.edu.tr

<sup>2</sup>Yeditepe University, Faculty of Engineering and Architecture, Department of Genetics and Bioengineering, 34755, Kayışdağı, İstanbul-TURKEY

<sup>3</sup>Acıbadem University, Faculty of Medicine, Department of Microbiology, İstanbul-TURKEY

[chem@tubitak.gov.tr](mailto:chem@tubitak.gov.tr)

[Scientific Journals  
Home Page](#)

**Abstract:** A series of 3-hydroxy-6-methyl-2-[(substitutedpiperidine-1-yl) methyl]-4H-pyran-4-one structured compounds were synthesized by reacting 5-hydroxy-2-methyl-4H-pyran-4-one with suitable piperidine derivatives using Mannich reaction conditions. Antibacterial activities of the compounds for *E. coli* ATCC 25922, *S. paratyphi* ATCC BAA-1250, *S. flexneri* ATCC 12022, *E. gergoviae* ATCC 33426, and *M. smegmatis* ATCC 14468 were assessed in vitro by the broth dilution method for determination of minimum inhibitory concentration (MIC). In addition,