

## **Antibacterial and Antifungal Activity of Essential Oil of Eucalyptus camendulensis on a Few Bacteria and Fungi**

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**Abstract :** Red River Gum (*Eucalyptus camaldulensis*) is a tree of the genus *Eucalyptus* widely distributed in Algeria and in the world. The value of its aromatic secondary metabolites offers new perspectives in the pharmaceutical industry. This strategy can contribute to the sustainable development of our country. Preliminary tests performed on the essential oil of *Eucalyptus camendulensis* showed that this oil has antibacterial activity vis-à-vis the bacterial strains (*Enterococcus faecalis*, *Enterobacter cloacae*, *Proteus microsilis*, *Escherichia coli*, *Klebsiella pneumonia*, and *Pseudomonas aeruginosa*) and antifungal (*Fusarium sporotrichioides* and *Fusarium graminearum*). The culture medium used was nutrient broth Muller Hinton. The interaction between the bacteria and the essential oil is expressed by a zone of inhibition with diameters of MIC indirectly expression of. And we used the PDA medium to determine the fungal activity. The extraction of the aromatic fraction (essentially oil- hydrolat) of the fresh aërian part of the *Eucalyptus camendulensis* was performed by hydrodistillation. The average essential oil yield is 0.99%. The antimicrobial and fungal study of the essential oil and hydrosol showed a high inhibitory effect on the growth of pathogens.

**Keywords :** essential oil, *Eucalyptus camendulensis*, bacteria and fungi, red river gum

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