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Ministry Of Higher Education and Scientific Research  
Constantine 1, frères Mentouri University  
Faculty of Exact Sciences



The First International Congress on Recent Advances in Mathematical,  
Physical and Chemical Sciences  
(1<sup>st</sup>-ICRAMPCS 2024)

## ***CERTIFICATE OF ATTENDANCE***

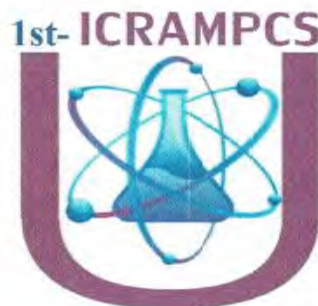
The scientific committee of 1st-ICRAMPCS 2024 certifies that: **Aida KEMMOUNDJI**

has attended the congress with **a poster presentation** entitled:

***In vitro anti-inflammatory, antioxidant, and antibacterial activities of n- Butanol Extract from Indigenous Algerian Ficus***

Co-authors are respectively: **Abdallah KHERBACHE, Thamere CHEREIT, Ramdane SEGHIRI**

Chairman of the Congress  
**Prof. Mahfoud DJEZZAR**

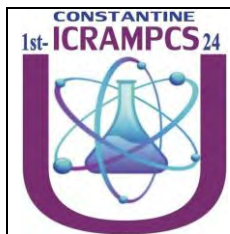


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**The First International Congress on Recent Advances  
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December 15-17, 2024. Constantine. Algeria**



**In vitro anti-inflammatory, antioxidant, and antibacterial activities of *n*-Butanol Extract from Indigenous Algerian *Ficus***

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Exploring natural products for their potential health benefits has increased interest in the phytochemical properties of various species extracts. This study investigates the antibacterial, anti-inflammatory and antioxidant activities of the *n*-butanol extract from an endemic Algerian *ficus*, prepared from the dried *ficus* plant and subjected to various in vitro assays to evaluate its biological activities[1].

The antibacterial activity they assessed using the well-diffusion method in DMSO, against a panel of gram-positive and three gram-negative bacteria, including *Staphylococcus aureus*, *Escherichia coli*, *Morganelle morganii*, and *Pseudomonas aeruginosa*. The extract demonstrated significant antibacterial activity, particularly against *Pseudomonas aeruginosa* and *Escherichia coli*.

The membrane stabilizing activity of *n*-butanol extract was evaluated by using hypotonic solution-induced human erythrocyte hemolysis[2], and the results showed a 100% inhibition at 3 mg/mL and 2mg/ml in comparison with 96.54 ± 2.14% observed with diclofenac in tested doses.

The Antioxidant activity was evaluated using a DPPH (2, 2-diphenyl-1-picrylhydrazyl) radical scavenging assay[3]. The *n*-butanol extract exhibited strong DPPH radical scavenging activity with 84.13% at 0.5 mg/ml with an IC<sub>50</sub> value of 0.218 mg/ml, indicating its potential as a natural antioxidant.

The results suggest that the *n*-butanol extract from *ficus species* possesses potent anti-inflammatory and antioxidant properties, making it a promising candidate for further development in pharmaceutical and nutraceutical applications.

## References:

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- [3] Sanchez-Moreno C (2002) Methods used to evaluate the free radical scavenging activity in foods and biological systems. *Internat J Food Sci Technol* 8: 121–37