

## IN VITRO SUN PROTECTION FACTOR EVALUATION AND ANTIOXIDANT, ANTIBACTERIAL ACTIVITY OF AQUEOUS AND N-HEXANE FREQUENCY EXTRACTS OF *SALSOLA TETRAGONA* DEL.

Nezar CHERRADA<sup>1\*</sup>, Noura GHERAISSA<sup>1</sup>, Ahmed Elkhalfa CHEMSA<sup>1</sup>.

<sup>1</sup> *Laboratory of biodiversity and application of biotechnology in agriculture, Echahid Hamma Lakhdar University 39000, El-Oued, Algeria*

Email\*: [/nouragherr@gmail.com](mailto:/nouragherr@gmail.com) [/chemsakhalfa@gmail.com](mailto:/chemsakhalfa@gmail.com)

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#### Introduction & Objectives:

For the valorization of medicinal wild herbs growing in the north-east of the Algerian Sahara, we conducted a phytochemical study and estimated the antioxidant capacity of *Salsola tetragona* Del, which belongs to the Amaranthaceae family and is widely distributed in the hypersaline semiarid and arid areas across the world, It is also distinguished by its wide therapeutic uses. It is also considered one of the most famous herbs used in the treatment of skin diseases.

#### Methodology (Material and methods):

The antioxidant capacity was determined by using DPPH• and HO• radical scavenging and anti-hemolysis activity, their efficacy in protecting ultraviolet (UV) radiation by determining the sun protection factor. The antibacterial activity was evaluated by the sensitivity testing disk diffusion method of six types of pathogenic bacteria.

#### Results and Discussion:

In general, the antioxidant and anti-bacterial results and sun protection factor were very significant, as the hexane extract of *S. tetragona* outperformed the aqueous extract of the same plant in all tests, which was directly proportional to the quantitative content of phenolic compounds and flavonoids for the extracts.

#### Conclusion:

The antioxidant and antibacterial potential of the extract of *S. tetragona*, indicate the potential benefit of using this species as a source of bioactive compounds, which can be exploited in various fields, such as the food, pharmaceutical, and cosmetics industries.

**Keywords:** *Salsola tetragona* Del, *Amaranthaceae*, Antioxidant activity, Antibacterial activity, Sun protection factor, Phenolic compounds.

#### References

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