

## **Antioxidants in plants as a valorization pattern emphasizing the need for the Conservation of Plant Biodiversity: *Algeria as a case.***

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Plants are phytochemical hubs containing antioxidants, essential for normal plant functioning and adaptation to environmental cues and delivering beneficial properties for human health. Therefore, knowledge of the antioxidant potential of different plant species and their nutraceutical and pharmaceutical properties is of utmost importance. Exploring this scientific research field provides fundamental clues on (1) plant stress responses and their adaptive evolution to harsh environmental conditions and (2) (new) natural antioxidants with a functional versatility to prevent and treat human pathologies. Algeria is a massive country with a wide variety of landscapes, ecological zones, nature reserves, and national parks. It is particularly considered by many to be the most unique natural country in the Mediterranean with rich plant biodiversity harboring a great antioxidant potential. However, the biodiversity of these plants is largely unknown and therefore underexploited. This natural antioxidant reservoir can be valorized via plant-derived foods and products in local areas. Besides opening new avenues for the implementation of sustainable agroecological practices in crop production, it will also contribute to new strategies to preserve plant biodiversity and simultaneously improve nature management policies in Algeria. This study provides an overview of the beneficial properties of antioxidants for plant protection and human health and is directed to the valorization of these plant-derived antioxidants, emphasizing the need for biodiversity conservation practices in Algeria.

**Keywords:** antioxidants; secondary metabolites; Algeria; plant biodiversity; plant protection; human health; nutraceutical; pharmaceutical.