

Aloe dhufarensis - Antioxidant and Anti-inflammatory properties

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Abstract

Aloe dhufarensis Lavranos a threatened species, is a near endemic to Southern Dhofar province of Oman and neighbouring eastern Yemen. *Aloe dhufarensis* is the most xerophytic of all the *Aloe* species found in Oman, this evergreen succulent stemless perennial, locally called Subr or Sakkal is known for centuries in Oman for its medicinal values, but the pharmacological effects of this important species have not been fully explored. This research was undertaken to validate the traditional use of *Aloe dhufarensis* in wound healing, to treat diabetes, fever and headache. The phyto-constituents, total phenolics, total flavonoid content, antioxidant, anti-inflammatory and anti-microbial activity of *Aloe dhufarensis* was evaluated. In the present findings considerable antioxidant potential was depicted by the methanolic extracts of *Aloe dhufarensis*, the leaf extracts exhibited considerable DPPH scavenging activity (IC_{50} value of $83.46 \mu\text{g/ml}$), a strong hydrogen peroxide scavenging activity (IC_{50} value of $289.786 \mu\text{g/ml}$) and a high total antioxidant capacity ($256 \pm 1.4 \text{ mg AAE/g}$). The total phenolic content and the total flavonoid content was observed to be $452 \pm 3.2 \text{ mg GAE/g}$ and $44.16 \pm 0.9 \text{ mg of QE/g}$ of dry extract. Leaf extract displayed significant protein denaturation inhibition and a marked anti-proteinase activity.



Biography:

Neelam Sherwani is a consultant with Department of Biology, Sultan Qaboos University, Oman. She has completed her PhD from Punjabi University, India. She has published 15 papers in reputed journals.

Speaker Publications:

1. "Diversity and Biological Spectrum of Family Asteraceae in Oman"
2. "Flora, Life-forms and Biological Spectrum of Muscat Governorate"
3. "Impact of Habitat Heterogeneity on Growth Dynamics and Physiological Responses of *Dipterygium glaucum*, Asian Journal of Plant Sciences Research"
4. "Impact of Habitat Heterogeneity on Growth Dynamics and Physiological Responses of *Dipterygium glaucum*"
5. "Antibacterial and Antifungal Activities of Cyanobacterial Strains Isolated from Hot Springs in Oman"

[21st World Conference on Pharmaceutical Chemistry and Drug Design](#); Webinar, December 16, 2020.

Abstract Citation:

Neelam Sherwani, *Aloe dhufarensis* - Antioxidant and Anti-inflammatory properties, Drug Chemistry 2020, 21st World Conference on Pharmaceutical Chemistry and Drug Design; Webinar, December 16, 2020.

<https://drug-chemistry.pharmaceuticalconferences.com/>