**Investigation of physico-chemical and medicinal properties of purslane**

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**Statement of Problem:** Purslane is a common weed that grows all over the world and is one of the most widespread weed species in summer crops. However, it has great potential to develop as a new crop since its identification as one of the best plant sources of α-linolenic acid, ω-3 fatty acid, as well as some antioxidants such as ascorbic acid, α-tocopherol, β-carotene, and glutathione.

**Research Purpose:** Purslane is an herbaceous plant consumed in Iran, Italy, the United Kingdom, Greece, Spain, Turkey, China, Malaysia, North Africa, the Philippines, Australia, the United States, Mexico, and Brazil. Purslane provides considerable contributions of polysaccharides, minerals, proteins, fatty acids, terpenoids, alkaloids, phenols, sterols, flavonoids, and vitamins, which together or individually create antioxidant, neuroprotective, antimicrobial, anti-inflammatory, antidiabetic, anticancer, antiulcerogenic, and anticholinesterase properties.

**Research Method:** New phytochemical compounds have been recognized in purslane through gas chromatography-mass spectrometry (GC–MS), high-performance liquid chromatographic (HPLC), spectroscopic methods, nuclear magnetic resonance (NMR), and etc.

**Results and Conclusion:** Purslane cultivation is a production alternative as it shows many expectations given its nutritional and nutraceutical properties, low production costs, and high productivity. Therefore, the consumption of the plant in human diets is recommended.

**Keywords:** Purslane, Physico-chemical, Medicinal properties.