

## Lycium barbarum derivative Scopoletin product: its extraction, isolation and structure elucidation- Thukaa Zuhair Abdul-Jalil- Baghdad University

**Thukaa Zuhair Abdul-Jalil**

Baghdad University, Baghdad, Iraq

*Lycium barbarum* (Awsaj), a wild plant that have a place with Solanaceae family, fills in as a wellspring of notable bioactive mixes like coumarins which have numerous significant organic exercises. The berry is fusiform or elongated formed with a length going from 6-20 mm and width 3-10 mm. The orange or dull red berry has a little stylar scar projecting from the top, and skin having contracted appearance. The mash is beefy and delicate with a severe and sweet taste. The berry is eaten crude, expended in juice structure or added to tea or wine. The natural product is additionally handled to make colors, powders, and tablets. Also, it is utilized as food and therapeutic plant in East Asia. Since the start of the century, the plant is regularly called as Goji in China.

In present day medication, a few speculations propose that oxidative harm of biomolecules increments with age and is hypothesized to be a significant causal factor of different maturing issue. Invulnerable dysregulation, irregularity of apoptosis and DNA harm are contributing variables to age-related pathologies and their related horribleness and mortality. The idea of against maturing by cancer prevention agents, for example, *Lycium barbarum* has been upheld by a line of proof and has been explored in various models. In the interim, *Lycium barbarum* has an assortment of pharmacological capacities, including immunoregulative, against apoptotic exercises and lessening DNA harm, which can hinder organic maturing. Hence, countless confirmations propose that *Lycium barbarum* is a successful enemy of maturing specialist.

The leaves, natural products, and the root bark of *Lycium barbarum* contain bottomless polysaccharides, carotenoids, flavonoids, alkaloids, amides, peptides, anthraquinones, coumarins, lignanoids, terpenoids, sterols, steroids, natural acids, anthocyanins, fundamental oils, and glycolipids. *Lycium barbarum* has an expansive scope of pharmacological exercises, which is believed to be for the most part because of its high convergence of *Lycium barbarum* polysaccharides (LBPs).

*Lycium barbarum* have a high substance of phenolics, including caffeic corrosive, p-coumaric corrosive, rutin, scopoletin, N-trans-feruloyl tyramine, and N-cis-feruloyl tyramine, an unreported N-feruloyl tyramine dimer was portrayed as the most inexhaustible polyphenol disconnected from the berries. The polyphenolic constituents might be answerable for the hindrance of lipid peroxidation and upgrade the cancer prevention agent exercises of ethanol concentrate of *Lycium barbarum*

Scopoletin has cell reinforcement properties, calming action, and spasmolytic activity. It applies apoptotic and

antiproliferative impacts on prostate malignant growth cell line. Scopoletin is the dynamic segment of the product of *L. barbarum* for repressing PC3 cell multiplication. Scopoletin has likewise demonstrated to have cell reinforcement movement. The structure of scopoletin shows that the catechol bunch essentially adds to the cell reinforcement exercises of scopoletin. Scopoletin could apply a beneficial outcome on against maturing identified with autophagy through tweak of p53 in human lung fibroblasts. Moreover, scopoletin improves the degree of interpretation factors, for example, Nrf-2 and p-FoxO1 identified with hostile to maturing. Likewise, scopoletin balances the reinventing proteins

Techniques:

This objective was accomplished by contrasting the mass yield extraction by a brisk and simple methodology for recognizable proof and evaluation of bioactive scopoletin in four pieces of plant utilizing elite meager layer chromatography (HPTLC) which affirm the nearness of scopoletin in four pieces of *Lycium barbarum* plant.

Results:

The results show that the leaves of the plant extracted by probe UAE gave the highest concentration (0.1876 mg/ml) of scopoletin followed by fruits (0.145mg/ml), stems (0.1396mg/ml) and the least was roots (0.089mg/ml); according to these results; the isolation and purification of scopoletin from of *Lycium barbarum* leaves was done by silica gel column chromatography and the isolated compound (scopoletin) was identified by measuring melting point, Fourier transforms infrared spectroscopy (FT-IR), <sup>1</sup>H nuclear magnetic resonance spectroscopy (NMR) and liquid chromatography/ mass spectroscopy (LC/MS)

Biography:

Thukaa Z. Abdul-Jalil has completed her B.Sc at the age of 23 years from Baghdad University/College of Pharmacy and M.Sc and Ph.D from Baghdad University College of Pharmacy. She is the director of Pharmacognosy scientific labs and premier of the 2nd grade College of pharmacy, Pharmacognosy and medicinal plants students. She has published more than 7 papers in reputed journals.