

ANATOMICAL AND BIOCHEMICAL STUDY OF *LACTUCA SERRIOLE* L. FROM THE ASTERACEAE SPECIES GROWN IN THE WEST OF IRAQ

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ABSTRACT : The present study was aimed to explore the important of *Lactuca serriole* L. (Synonym : *Lactuca scarioala* L.), were growth wildly in west of Iraq and used un traditional medicine. When we studied anatomical and Biochemically, the anatomically study description different internal tissues of the plant organs (leaf blades, petioles, stems and roots) and measured the details. These characteristics have include epidermis studies are considered important characters like cell forms which were square and compact with non- divisible bristles. The vascular system of the root, stem, petioles and leaves was of good structure with wide ribs and thick fibers. The chemical characteristics of the plant include a qualitative and quantitative identification of some active components such as alkaloids, glycosides, saponins and tannins has been carried out, Phenols with the highest ratio (7.88%) have been pathogenic tested for some pathogenical bacteria using the minimum inhibitory concentration method. A good inhibition activity was found on *Pseudomonas aeruginosa* with a rate of 603 mg/ml. This has been compared with some antibiotics, including ciprofloxin and erythromycin.

Key words : *Lactuca serriole* L., traditional medicines, Asteraceae species.

INTRODUCTION

Several types of plants are common in Iraq due to environmental and typographical variation extending from the north to the south passing through the middle regions of the country (Al-Rawi, 1964). In this regard, Reching (1968) states that anatomical characteristics have been used for classification purposes tens of years ago some modern classification for classification ranking have been adopted. The accurate active chemical content has a relationship with plant classification taxa. Moreover, it helps in differentiation between plants depending on the smell, tats, or both together. (Reasume, 2010). *Lactuca serriole* Linn. (Synonym: *Lactuca scarioala* L.) is a member of the Asteraceae family is one of such plants used in traditional medicine widely grown in Iraq and world (Uniyal *et al*, 2006). It is commonly called prickly lettuce, wild lettuce or milk thistle and has various local names among Nigerians. It is native to Europe, Africa, and Asia including Iraq. Mohammad (2013) and Al-Rajab (2015), furthermore the leaves are oblong or lanceolate, pinnated with fine spines along the veins and edges. They get progressively smaller as they reach the top of the

plant and measure 3.5 – 25cm long by 1 – 20cm wide 3.4. The young leaves are eaten raw as salad or cooked, although it has somewhat bitter taste (Blamey, 2003). Prickly Lettuce is one of the medical wild herbs an antibiotic against inflammation, bacterial diseases, allergy, muscle activation, immunity, enhancer and antioxidant (Kim, 2001). This significance can be attributed to the active chemical content of *Lactuca serriole* particularly lactucine, lactucone, saponin, phenols, vitamins, beta carotene, iron and triterpenoid (Marco *et al*, 1992; Abiach and Marco, 2008).

MATERIALS AND METHODS

The plant aerial part of Prickly Lettuce collected from desert of western Iraq among flowering period in June 2017, after war the samples were dried under and then homogenized into fine powder using a mortar and pestle then stored in airtight (Sofowore, 2002).

Anatomical study: the fresh plant part is used in anatomical process. Studying the cross sections of species has depended on taking samples from roots, leaves and petioles from specific unified regions during field visits. These samples have been kept in FAA solution by adding