A Review: Uses and Pharmacological Activity of *Matricaria Chamomilla*  

Imad Hadi Hameed¹, Ghaidaa Jihadi Mohammed², Sabreen A. Kamal³  

¹Biomedical Science Department, University of Babylon, College of Nursing, Hillah city, Iraq;  
²Department of Biology, College of Science, University of Al-Qadisiyah, Hillah city, Iraq;  
³Department of Biology, College of Science for Women, University of Babylon, Hillah city, Iraq  

**ABSTRACT**  
*M. chamomilla* has a branched, erect and smooth stem, which grows to a height of 15–60 cm (6–23.5 in). The long and narrow leaves are bipinnate or tripinnate. The flowers are borne in paniculate flower heads (capitula). The white ray florets are furnished with a ligule, while the disc florets are yellow. The hollow receptacle is swollen and lacks scales. It can be taken as an herbal tea, two teaspoons of dried flower per cup of tea, which should be steeped for 10 to 15 minutes while covered to avoid evaporation of the volatile oils. For a sore stomach, some recommend taking a cup every morning without food for two to three months.  

**Keyword:** A review, Pharmacological activity, *Matricaria chamomilla*, Bioactive compounds, Applications.  

**INTRODUCTION**  
*Matricaria recutita*, commonly known as chamomile (also spelled camomile), Italian camomilla, German chamomile, Hungarian chamomile (kamilla), wild chamomile or scented mayweed, is an annual plant of the composite family Asteraceae. M. *chamomilla* is the most popular source of the herbal product chamomile, although other species are also used as chamomile. *M. chamomilla* can be found near populated areas all over Europe and temperate Asia, and it has been widely introduced in temperate North America and Australia. It often grows near roads, around landfills, and in cultivated fields as a weed, because the seeds require open soil to survive. One of the active ingredients of its essential oil is the terpene bisabolol. Other active ingredients include farnesene, chamazulene, flavonoids (including apigenin, quercetin, patuletin and luteolin) and coumarin. Dried chamomile has a reputation (among herbalists) for being incorrectly prepared because it is dried at a temperature above the boiling point of the volatile components of the plant.  

**Uses and Pharmacological activity:** The flower has been approved for use in baths, as irrigation for anogenital inflammation, and for use internally to treat GI spasms and inflammatory diseases.  

**Anti-inflammatory:** Chamomile has purported anti-inflammatory effects, but there are no published clinical trials supporting the findings of animal experiments. Chemical constituents of chamomile, such as bisabolol, chamazulene, and the flavonoids apigenin and luteolin, possess anti-inflammatory properties.  

**Antispasmodic/antidiarrheal:** Chamomile infusions have been used traditionally as GI antispasmodics despite the lack of rigorous trials to support this use. A small trial of a tea containing chamomile and other herbs was effective in treating infantile colic, but the volume of tea required for effect limited its usefulness.  

**Skin: Eczema:** In a study designed to evaluate the effect of massage with chamomile essential oil versus massage only, no difference was found for the study arms. Additionally, further use of the essential oil after the study period showed a decline in eczema severity, suggesting possible sensitization to the oils over time.  

**Skin: Radiation dermatitis:** In a study designed to investigate the efficacy of chamomile cream in acute radiation dermatitis, no difference was found between
chamomile and almond creams. Furthermore, review of the data did not reveal any additional trials; therefore, the use of chamomile cream for this condition is discouraged47-51.

**Estrogenic activity:** An ethanolic extract of chamomile containing primarily apigenin demonstrated weak estrogenic and progestational activity in an in vitro tissue system52-58. An aqueous extract of chamomile demonstrated antiestrogenic activity on breast cell tissue and demonstrated a nonproliferative effect on cervical cancer cells in a study designed to measure the stimulatory effect of chamomile on bone osteoblasts58-62.

**Mouth (mucositis):** Use of chamomile in radiation- and chemotherapy-induced mucositis have been studied in several trials with conflicting results.

**Dosage:** Chamomile has been used as a tea for various conditions and as a topical cream. Typical oral doses are 9 to 15 g/day63-69. Gargles made from 8 g chamomile flowers in 1,000 mL water have been used in trials.

**CONCLUSION**

This *Matricaria chamomilla* derived bioactive compounds used as source of antibiotic properties and pharmaceutical industries used for drug formulation. *Matricaria chamomilla*, is widely used in the treatment of diabetes, anti-inflammatory effects, and Estrogenic activity.

**Financial Disclosure:** There is no financial disclosure.

**Conflict of Interest:** None to declare.

**Ethical Clearance:** In our review, all these major pharmacological activity were complete analysis under the biological department of College of Science for Women in Hillah city.

**REFERENCES**


59. Kadhim WA, Kadhim, M.J., Hameed, I.H. Antibacterial Activity of Several Plant Extracts...


