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REVIEW PAPER

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Herbarium – Summer 2021

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ABSTRACT

Introduction. Medicinal plants are perfectly suited to interact with biological macromolecules like proteins and nucleic acids. All sources of natural products such as plants, microorganisms, animals, etc. are therefore biochemical potential.

Aim. The goal was to present a typical plant often found in abandoned places, fields, meadows in the Podkarpacie region of Poland. Medicinal plants presented here were collected in Summer 2021 close to the city Jarosław.

Material and methods. Plants collected for herbarium, immediately after harvest, are laid out between paper sheets that absorb moisture. Dried plants retain the shape of individual organs and usually also the colors. As the result of our collection, in this article are presented *Papaver rhoeas* L., *Centaurea cyanus* L., *Capsella bursa – pastoris* L., *Taraxacum officinalle* F.H., Wigg Coll and *Lamium album* L.

Analysis of the literature. The desire to summarize information for future generations and to present the writings of the classical scholars to a wide audience was the major stimulations for presenting a most popular medicinal plants to the reader. The plants most often obtained for pharmaceutical purposes include: chamomile, fennel, St. John's wort, nettle, mint, dandelion, yarrow, marshmallow, sage, foxglove, lemon balm, dandelion, rosehip, aloe, ginseng, and milk thistle.

Conclusion. The history of plants collections is well documented.

Keywords. biochemistry, herbarium, medicinal plants

Papaver rhoeas L.

Family: *Papaveraceous* - poppy family

Medicinal Raw Material: *Flos Rhoeados* - field poppy flower (Fig. 1)

Active compounds: For the active compounds of poppy field include alkaloids (mainly readina), isoquinoline alkaloids, anthocyanins, acids organic, phytosterol, mucus compounds and salts mineral.

Pharmacological action: It has a mild effect calming, analgesic and expectorant. It is used for catarrhs of the mouth, like also for sore throat, hoarseness and troublesome cough. The field poppy also has properties anti-inflammatory and regenerating, that's why it is used as an aid in inflammation of the mucous membranes and skin. Poppy seed decoctions are used to rinse the throat and cavity orally to eliminate irritation.[1-14]

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Fig. 1. *Papaver rhoeas*, with common names including common poppy, corn poppy, corn rose, field poppy, Flanders poppy, and red poppy, is an annual herbaceous species of flowering plant in the poppy family *Papaveraceous*

Centaurea cyanus L.

Family: *Asteraceae* (Compositae) - Asteraceae (complex)

Name of the medicinal raw material: Flos Cyani - cornflower flower (Fig. 2)

Active compounds: Until the active compounds present the flowers of cornflower blueberry include: cyanine, pelargonidine, copigment (flavone glycoside Apigenin 4ß-D-glucose-7ß-D-glucoronide), centaurin, sesquiterpene lactones and minerals, among which manganese is very important.

Pharmacological action: In cosmetology cornflower flower extract was used, which is a moisturizing ingredient. Additionally, this extract is also potent strengthening as well as calming. The centaurin contained in the flowers exhibits anti-radical, soothing and anti-inflammatory properties. Aqueous cornflower flower extract is used to make eye drops - decongestant, anti-irritation. Cornflower flowers are also included often used in digestive and soothing mixtures gastric disorders as well as diuretics. Are also an additive to creams and ointments used for brittleness blood vessels.[1-14]

Fig. 2. *Centaurea* is a genus of between 350 and 600 species of herbaceous thistle-like flowering plants in the family *Asteraceae*

Capsella bursa-pastoris L.

Family: *Brassicaceae - cruciferous*

Name of the medicinal raw material: *Herba Bursae pastoris* - grass of the grass cutter (Fig. 3)

Active compounds: Amines are present in the grass of the grasshopper biogenic (choline, acetylcholine, tyramine, histamine), aliphatic acids (fumaric acid), aromatic acids (chlorogenic, syringic, vanilla, coumarin), flavonoids (mainly diosmin and rutin), phytosterols, vitamins: A, K and C, potassium and calcium and essential oils.

Pharmacological action: *Capsella bursa-pastoris* herb has a strong anti-inflammatory effect, supporting the work of the heart muscle and uterus and properties anti-cancer. Thanks to the routine contained in the grass, the raw material this improves the functioning of the circulatory system, and women use it in to relieve menstrual discomfort. *Capsella bursa-pastoris* also has a soothing effect on the urinary system, which is why it is used in inflammation of the gland the prostate, bladder and kidneys.[1-14]

Fig. 3. *Capsella bursa-pastoris L.*

Fig. 4. *Taraxacum officinalle* F.H. Wigg. Coll

Taraxacum officinalle F.H. Wigg. Coll

Family: *Asteraceae* (Compositae) – *Asteraceae* (folded)
Name of the medicinal raw material: *Taraxaci officinalis radix* – dandelion root (FP XI) *Taraxaci officinalis herba cum radice* – herb nun with root (FP XI) (Fig. 4)
Active compounds: Until the active compounds present in the dandelion root there are lactones sesquiterpene. However, milk juice contains triterpene alcohols, and flowers – 16-hydroxy derivatives of taraxasterols, β-sitosterol, stigmasterol and campesterol. Very important active compounds the leaves contain flavonoids (derivatives of, among others, luteolin and quercetin). The substances that are present in the whole plant are polyphenolic acids (acid chicory, chlorogenic, caftar, coffee). The dandelion contains also numerous carotenoids, coumarins, carbohydrates, waxes and choline.
Pharmacological action: This raw material acts as a gentle agent choleretic and diuretic. Due to the numerous substances turpentine, with a bitter taste, perfectly stimulates the appetite. In many countries, including France, fresh young leaves are recommended as salad for the so-called spring treatments. The root of the common dandelion is also used for supportive treatment in diseases liver, gallbladder and digestive disorders. Moreover, *Taraxacum officinale* has been reported to possess antioxidant activities. Due to the content of flavonoids, this plant also has potential anti-glycation properties.[1-16]

Lamium album L.

Family: *Lamiaceae (Labiatae) – Lamiaceae (labial)*
Medicinal Raw Material: *Lamii albi flos* – the flower of light *Lamii albi herba* – herb of luminosity (Fig. 5)
Active compounds: White jasmine contains compounds active substances such as flavonoids (rutin and quercetin), organic acids (acid cinnamon, rosemary, p-coumarin, chlorogenic, caffeoylquinic acid), numerous iridoid glycosides, tannins, saponins, mucus compounds and essential oils. Herb white light additionally contains vitamin C and provitamin A.
Pharmacological action: White light herb found wide anti-hemorrhagic, astringent, anti-inflammatory, choleretic use, diastolic, antibacterial and facilitating digestion. Thanks to these teas containing white light herb help with plenty menstruation and have a positive effect on the functioning of the system digestive system – support the work of the liver and pancreas. In medicine white light rinses are also used to facilitate healing wounds in the mouth and help with pharyngitis and laryngitis. In addition, jasmine is also added to facilitating syrups expectoration. It is also used in wall strengthening agents.[1-14]

Fig. 5. *Lamium album* L.

Conclusion

In this album the pharmaceutical most important families were presented and highlighted. Since these species are mostly known as a botanical medicinal plants.

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