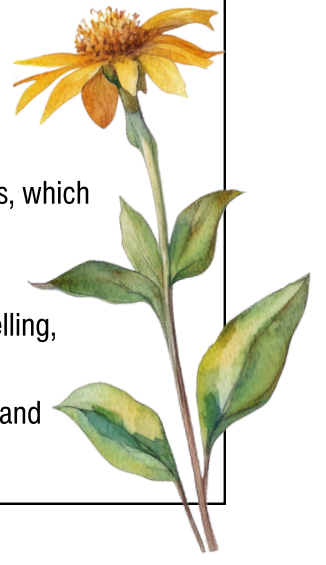
Arnica Montana

ardanatura

Arnica montana, a perennial herbaceous plant from the Asteraceae family, has long been considered a true gem of herbal medicine. Native to the mountainous regions of Europe, it grows spontaneously at altitudes between 500 and 2500 meters, thriving in acidic and low-nutrient soils. Its bright yellow, daisy-like flowers are rich in highly effective active compounds.



Traditionally used to treat bruises, contusions, muscle inflammation, and joint pain, Arnica montana stands out for its powerful anti-inflammatory, antioxidant, and soothing properties, all supported by extensive clinical research. Its effectiveness is mainly attributed to the presence of sesquiterpene lactones, flavonoids, and phenolic compounds, which deeply penetrate the skin and underlying tissues.

Available in gels, creams, tinctures, and homeopathic remedies, Arnica montana is now widely appreciated in the cosmetic, sports, and therapeutic fields, offering from pain, swelling, and stiffness. Choosing Arnica montana means relying on one of the most renowned and extensively studied medicinal plants, with a well-documented safety and efficacy profile.

ARDA NATURA PROPOSAL

- 009449 E.L. ARNICA MONTANA TRIGLICERIDI - Caprylic/Capric Triglyceride, Arnica montana Flower Extract
- 009374 E.L. ARNICA MONTANA 1:2- Helianthus annuus Seed Oil, Arnica montana Flower Extract
- 009373 E.G. ARNICA MONTANA 1:2 PE - Propylene Glycol, Aqua, Arnica montana Flower Extract
- 009372 E.GLICERICO ARNICA MONTANA U.C. PE - Glycerin, Aqua, Arnica montana Flower Extract
- 009089 ACQUA DI ARNICA MONTANA PE - Arnica montana Flower Water
- 009089 E.GLICERICO ARNICA MONTANA 1:10 - Glycerin, Aqua, Arnica montana Flower Extract
- 011827 E.G. ARNICA MONTANA 1:10 PF - Propylene Glycol, Aqua, Arnica montana Flower Extract

COSMETIC EFFICACY*

- [x] ANTIOXIDANT
- [x] ANTINFLAMATORY
- [x] HYPOPIGMENTING
- [x] TONIC, STIMULANT
- [x] GLYCOLIC EXTRACT AT 2% (MAX): used in scalp stimulants, massage oils and emulsions, post-sport body cleansers.

*claim derived and synthesized, see bibliography

The Asteraceae family, also known as aster, composite daisy or the sunflower family is one of the largest families of flowering plants and contains about 1600 genera, more than 23,000 species and 13 subfamilies.

The name “Asteraceae” comes from “Aster”, one of the genera of this family, which in turn comes from the Greek name ‘αστήρ’, meaning *star*, which emphasizes the profile of the inflorescence.

Its petals open in the morning and close in the evening and for this reason the members of this family are also called Daisy, from the English name *daegesege*, which stands for day’s eye, that is, *eye of the day*.

A. montana (Asteraceae) is a high-altitude perennial plant, indigenous to the mountain slopes of Europe, northern Asia, Siberia and America also known as fall-kraut, leopard's bane, sneezeweed and mountain tobacco and is traditionally renowned as a medicinal plant.

Botanical description and ethnopharmacology[1], [2], [3]

Arnica montana has been used for centuries in homeopathic medicine. In medieval texts the name “Arnica” is not mentioned, this name was given in 1533 and then used in the 16th century by Dalechamps, who thought it derived from the Greek word "Ptarmika" meaning something that causes sneezing.

Haller and Linnaeus were the first to use the name “Arnica” both in pharmacy and botany. In northern Spain, Arnica montana L. has been called: ‘betonica de los montes’, ‘tobaco de montana’, ‘talpa’ or ‘talpica’ and in 1785, the plant was successfully used in hospitals for the treatment of amaurosis fugax, also called transient monocular blindness, a disorder affecting the sight, for which the use of sight in one eye is temporarily lost.

The 32 species known as “Arnica” belong to six botanical families and five subgenera. The plant grows preferably at an altitude of 500–2500 m in poorly fertile meadows and on acid soils in alpine meadows and bogs.

Arnica Montana L. is a herbaceous, perennial plant, 1–2 feet tall, with a dark green base, cauline leaves (obovate or elliptic to blanceolate), hairy stems and bright yellow daisy-like ray flowers.

BIOACTIVITY AND CLINICAL STUDIES[1], [2], [3]

ANTI-INFLAMMATORY

Arnica Montana has significant anti-inflammatory potential. Huber et al. in 2011 they discovered and disclosed that the molecular mechanism of sesquiterpene lactones (of which Arnica Montana is rich) differs from that of other nonsteroidal anti-inflammatory drugs such as indomethacin and acetylsalicylic acid.

These lactones significantly decrease NFkappaB-mediated inflammation due to their ease of skin absorption.

Phosphorylation and thus degeneration of IkappaB, an inhibitory subunit of NFkappaB, stimulates NFkappaB.

Activation of NFkappaB by T, B and epithelial cells is inhibited by helenalin which also blocks kappaB gene expression.

ANTIOXIDANT

Arnica Montana shows significant antioxidant potential. The antioxidant capacity has been evaluated by several studies using the instrumental methods of the DPPH test and the phosphomolybdate method.

At a concentration of 5 mg/ml, A. Montana shows 71.52% of DPPH scavenging potential and 63.68% of total antioxidant activity (phosphomolybdate method) attributable to the presence of flavonoids and phenolic compounds.

In 2013, Camargo et al. evaluated the homeopathic effect of Arnica Montana on Ca^{2+} and mitochondrial oxidative stress induced by inorganic phosphate and/or on lipid peroxidation mediated by Fe^{2+} citrate by evaluating the alterations in the rate of mitochondrial oxygen consumption.

Arnica 30 cH demonstrated a significant reduction in mitochondrial O2 consumption.

HYPOPIGMENTING

In 2015, Kazuhisa et al. found that Arnica Montana flower contains a melanin biosynthesis inhibitor that was isolated and identified: 3β ,16β -dihydroxy-21α-hydroperoxy-20(30)-taraxastene with IC50=0.04 μM.

Its inhibitory efficacy against melanin is not due to its cytotoxicity because the assay was performed by adjusting the number of cells and the inhibition of cell growth was observed at a concentration of 0.25 μg/mL (= 0.53 μM).

CLINICAL STUDIES[2]

Author (year)	Study design control type	Duration of treatment	Study and control drugs	Panelists	inclusion criteria	Exclusion criteria	Results
Albertini and Goldberg et al. (1986)[4]	Randomized placebo controlled Trial		1) Arnica 7c and Hypericum 15c 2) Placebo	30 Patients	Dental neuralgic pain after tooth extraction		76% of the patients treated with homoeopathic remedies had pain relief vs 40% of patients receiving placebo
Dorfman et al. (1988)[5]	Double-blind, placebocontrolled clinical study		1 Arnica 5c	39 Patients	Prolonged venous perfusion		L'arnica ha ridotto il dolore, l'iperemia, l'edema e la formazione di ematomi. Dopo il trattamento con arnica sono stati osservati un miglioramento del flusso sanguigno e un leggero aumento dei fattori della coagulazione e dell'aggregazione piastrinica.
Tveiten et al. (1998)[6]	Studio randomizzato in doppio cieco	5 days (1 day before marathon	1 Arnica D30 2 placebo	24 in group A (27–54 years)	Muscle soreness	Not reported	Arnica D30 has positive effect on muscle soreness than

		running and 3 days after the run		22 in group in group B (31–50 years)			placebo but not on cell damage
Brock (2001)[7]		3 weeks	570) 100 g Arnica gel (contained 25 g Arnica tincture) 2) placebo	50 per group; 77 woman; 23 men; age in average 59.2	Chronic venous Insufficiency	Not reported	Statistically significant improvement in both groups; a significant better effect in the verum group
Knuesel et al. (2002)[8]	This open multicentre trial	Applied twice daily for 6 weeks	1 Arnica montana fresh plant gel	26 men and 53 women	Mild-to-moderate osteoarthritis (OA) of the knee	Not reported	Arnica gel was found to be effective in treating mild-tomoderate osteoarthritis
Jeffrey and Belcher (2002)[9]	Randomized double-blind, placebo-controlled study		1 Arnica 6D tablets 2 Arnica Ointment 3 placebo	37	Hand surgery (endoscopic carpal tunnel release)		No difference in grip strength or wrist circumference was found between Arnica and placebo. A significant reduction in pain was observed in the Arnicatreated group vs placebo. (P 5 0.03)
Totonchi et al. (2005)[7]	Double-blinded placebocontrolled	6 days, resp. 4 days	1 Intravenous dexamethasone intraoperatively, followed by a 6-day dose of prednisone 2 Arnica SinEcch 3 none (as control)	48 overall; 11 male; 37 female; age from 15 to 65	Primary rhinoplasty with Osteotomy	Not reported	Statistically no significance between the groups in ecchymosis; statistically significance in reducing oedema in both groups
Leivers (2005) [10]	Double-blind, placebocontrolled, randomized, clinical trial	6 weeks	1 Arnica gel (20% tincture) 2 placebo	89 patients	Venous insufficiency	Not Reported	There was improvement in venous tone and oedema in patients on Arnica treatment than on placebo
Leivers (2005) [10]	Open, multicentre trail	6 weeks	1) Arnica gel (20% tincture) Placebo	79 patients	Mild-to-moderate knee osteoarthritis	Not reported	Arnica decreased the pain, stiffness of knee and was effective than placebo
Widrig et al. (2007) [11]	Double-blind		Gel preparations 1 Ibuprofen (5%) 2 Arnica (50 g tincture/100 g, DER 1 : 20)	204 patients	Osteoarthritis of hands	Not reported	Preparation of arnica is not inferior to ibuprofen when treating osteoarthritis of hands
Totonchi and Guyuron et al. (2007) [12]	Randomized double-blind clinical study		1 Arnica 2 Intravenous dexamethasone plus oral tapering dose of methylpred-nisone or no treatment (control group)	48 patients	Rhinoplasty		Arnica and dexamethasone reduced swelling oedema if compared with control (P, 0.0001). Arnica and control group exhibited more resolution of ecchymosis if compared with dexamethasone
Karow et al. (2008) [13]	Randomized double-blind, parallel-group study		Arnica 4d Diclofenac sodium	88 patients	Hallux valgus surgery		Arnica and diclofenac had equivalent efficacy on wound irritation,

							patient mobility and use of analgesics. Diclofenac was more effective in reducing pain if compared with Arnica
Adkison et al. (2010)[14]	Randomized, double-blind, placebo-controlled trial		1) Arnica cream 2) Placebo	53 patients	Leg pain after calf raises		Arnica increased pain scores if compared with placebo. No difference in muscle tenderness and ankle motion was observed
Kucera et al. (2011) [15]	Double-blind placebo-controlled study	10 days	1 Combination of Arnica tincture and HES (spray) 2 Arnica or HES or placebo	570 patients	Acute ankle joint distortion	Patients with fractures or complete tears of ligaments, sports professionals and pregnant women	On days 3–4, improvement in pain on active motion was significantly higher in the Arnica + ES group if compared with the other three groups

Tabella 1: Some Arnica Montana Clinical Studies

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