



References

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The Science Behind our Products

Prickly ash

Prickly ash is an aromatic plant of the Rutaceae family native to Korea, China, and Japan. It has been used traditionally as a medicinal plant against colds, gastritis, and neuralgia.

German Chamomile (*Matricaria recutita*)

In traditional medicine, the dried flower heads of German chamomile are generally used to obtain sedative, spasmolytic, and anti-inflammatory effects. Indeed, animal research has confirmed the herb's depressive activity on the central nervous system and validated its widely traditional use as a mild sedative agent.¹ Apigenin is the most studied compound of chamomile. Scientific evidence has shown this flavonoid has inhibitory effects on prostaglandin (PG) E₂,^{2,3} cyclooxygenase (COX)-2 and the production of the proinflammatory cytokine interleukin (IL)-6.³ Beneficial phenolic acids including caffeic, chlorogenic acids and ferulic acid derivatives have also been found in the flowers of chamomile.⁴

Burdock (*Arctium lappa*)

Burdock is among the most popular plants in traditional Chinese Pharmacopoeia. Pharmacological studies and clinical trials indicated that burdock roots have hepatoprotective, anti-inflammatory and free radical scavenging activities.⁵ Burdock has been shown to possess significant free radical scavenging activity, which is mainly attributed to the phenolic compound chlorogenic acid, whose free radical scavenging activity is similar to that of caffeic acid and higher than that of vitamin E.⁶ Harmful oxygen species such as superoxide radical and hydroxyl radical have been implicated in the inflammation process and many clinical disorders.

Devil's claw (*Harpagophytum procumbens*)

Devil's claw appears to exert a peripheral analgesic effect. Although the mechanism behind this is not clear, it is thought to be closely connected to the herb's anti-inflammatory properties.⁷ A 2007 review of the published literature found 10 randomized, controlled trials utilizing various extracts of devil's claw helped improve nonspecific low-back pain.⁸ In one trial, 118 patients (59 in each group to begin; 51 in treatment group and 54 in placebo group actually completed the study) ages 18-75 with a six-month history of nonspecific low-back pain were given 6g devil's claw or placebo. After just four weeks, 9 out of 51 in the treatment group compared to only 1 out of 54 in the placebo group were pain-free.⁹ Another randomized, controlled trial found devil's claw was just as effective as the anti-inflammatory drug Vioxx® (before it was pulled off the U.S. market) in alleviating low back pain.¹⁰