

Cnidium M™

Organic Extract

Product Information Sheet



Cnidium M™ “Immune Boosting Zinc Extract” contains **Phytotherapeutic** Extracts of *Cnidium Monneri*, *Curcuma longa*, *Zingiber officinale* and *Cinnamomum verum*. The principal action of **Cnidium M** is to stop the P38 MAPK aging pathway which increase TIM4 thus causing the Macrophages population to increase.

Composite Bioactivities of *Cnidium Monneri* on Body System. Osthole the major component of Cnidium exerts a broad spectrum of biological and pharmacological activities. Osthole exhibits immunomodulatory and anti-inflammatory properties, by regulating the expression of a series of key factors, including TNF- α , NF- κ B, TGF- β , COX, NO, ERK, and JNK, involved in the process of immune response and other metabolic and biological processes. For instance, NF- κ B plays important role in modulating immunological response, and disturbance of NF- κ B expression has been linked to some autoimmune diseases, cancer, and many other diseases. Likewise, TGF- β is a cytokine involving in several key pathways which are related to the development of numerous diseases. In Traditional Chinese Medicine, Cnidium fruit helps to strengthen the kidneys, liver, and spleen. And Cnidium fruit is used as an anti-aging herb for long life and strength. Osthole exerted anti-inflammatory effects

by blocking the activation of the NF- κ B and MAPK/p38 pathways.

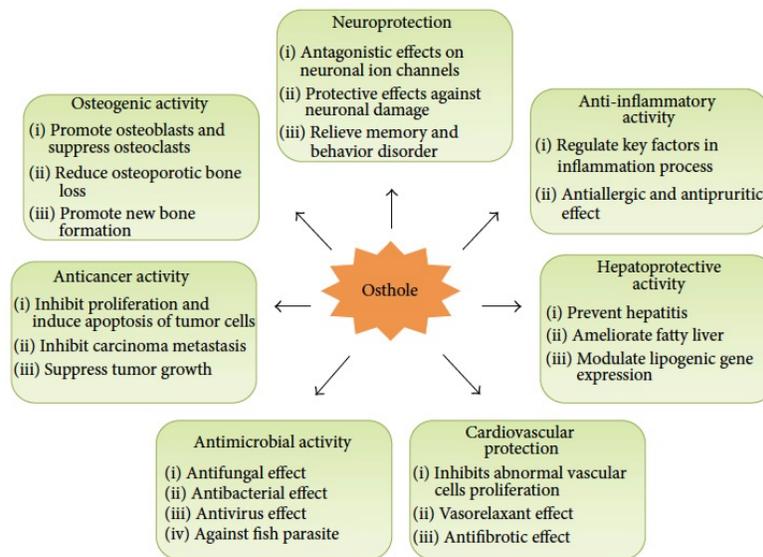


FIGURE 3: Multiple systemic pharmacological and beneficial effects and related experimental results.

Extended|Longevity

Heals Erectile Dysfunction - Studies show that the compound osthole dilates the corpus cavernosa of the penis with the release of nitric oxide allowing more blood to flow, thus allowing for firm-strong erections. And it's Fast Acting - Works within 30 minutes of taking the herb. And it may increase testosterone levels.

Libido Enhancer - Cnidium fruit also works well for inducing more sexual thoughts (libido). Protects Female **Sex Organs** - Cnidium fruit also helps to protect and strengthen female sex organs. Also helps with vaginal inflammation, vaginal discharge, and heals vaginal yeast infections.

Heals Infertility - In Traditional Chinese Medicine Cnidium fruit heals infertility in both men and women.

Antihistamine - Studies also show that Cnidium fruit works well as an antihistamine for allergies.

Heals Skin Rashes - Cnidium fruit heal outbreaks of skin rashes, dermatitis, eczema, and inflamed skin. Studies with 600 people showed that Cnidium fruit effectively healed pruritus.

Beta Blocker - Cnidium fruit also seems to work as a beta blocker thus opening up blood vessels and lowers blood pressure... more studies to be done.

Fatty Liver Disease - Cnidium fruit can also help with fatty liver disease by getting rid of fatty acids in the liver with the compound osthole.

Anti-Bacterial and Antifungal Agent - Cnidium fruit is also a good antifungal agent for external fungal infections and also kills some types of bacteria when taken internally.

Asthma and Bronchitis - Cnidium fruit also helps to open up the lungs. Studies with over 100 people showed that over a 10 day period Cnidium fruit was very effective in healing asthma.

Boosts Up Metabolism - Cnidium fruit contains osthole which causes the liver to use more glucose and thus boost up metabolism which leads to weight loss.

Osteoporosis - Studies with rats show that Cnidium fruit can improve bone strength and density.

Diabetes - Studies show that compounds found in Cnidium fruit can help with diabetes.

Cancer - Cnidium fruit has been shown to have some abilities to prevent the growth of cancer cells and stop the enlargement of tumors, and its cytotoxic to leukemia cells

COPD - There are some indications that Cnidium fruit can also help with COPD and bring more O2 into the blood.

Protects the Liver - Cnidium fruit contains agents called sesquiterpenes that protect the liver from the ravages of daily life and chemicals.

Cnidium monneri, contains Osthole known to stop the P38 MAPK aging pathway.

Curcuma longa a powerful anti-oxidant and has anti-inflammatory properties.

Zingiber officinale ginger extract was effective against several strains of drug-resistant bacteria. It may help inhibit the synthesis of certain markers of inflammation. It contains gingerol and other anti-inflammatory compounds like shogaol, paradol and zingerone.

Cinnamomum verum. Contains antioxidants, including polyphenols, phenolic acid and flavonoids

- **Highly bio-available due to heat and alcohol reflux extraction**
- Extracted in **Maui, Hawaii**.
- **Organic**, Non-GMO, Gluten free
- Extracted with **Maui-grown organic sugarcane alcohol** and deep ocean mineral water.

Review Article

Osthole: A Review on Its Bioactivities, Pharmacological Properties, and Potential as Alternative Medicine

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This paper reviews the latest understanding of biological and pharmacological properties of osthole (7-methoxy-8-(3-methyl-2-butenyl)-2H-1-benzopyran-2-one), a natural product found in several medicinal plants such as *Cnidium monnieri* and *Angelica pubescens*. *In vitro* and *in vivo* experimental results have revealed that osthole demonstrates multiple pharmacological actions including neuroprotective, osteogenic, immunomodulatory, anticancer, hepatoprotective, cardiovascular protective, and antimicrobial activities. In addition, pharmacokinetic studies showed osthole uptake and utilization are fast and efficient in body. Moreover, the mechanisms of multiple pharmacological activities of osthole are very likely related to the modulatory effect on cyclic adenosine monophosphate (cAMP) and cyclic adenosine monophosphate (cGMP) level, though some mechanisms remain unclear. This review aims to summarize the pharmacological properties of osthole and give an overview of the underlying mechanisms, which showcase its potential as a multitarget alternative medicine.

1. Introduction

Osthole (also known as osthol), 7-methoxy-8-(3-methyl-2-butenyl)-2H-1-benzopyran-2-one, is a natural coumarin first derived from *Cnidium* plant (Figure 1). High content of osthole is found in the mature fruit of *Cnidium monnieri* (Fructus Cnidii), which is commonly applied in clinical practice of Traditional Chinese Medicine (TCM) (Figure 2), while it is also widely found in other medicinal plants including *Angelica*, *Archangelica*, *Citrus*, *Clausena*. Fructus Cnidii strengthens immune system and improves male function, relieving rheumatic pain and eliminating dampness; most of these medicinal properties are considered to attribute to one of its major bioactive components, osthole [1, 2]. Modern researches have suggested that osthole exhibits antioxidant, anticancer, anti-inflammatory, and immunomodulatory properties [1, 3, 4]. With multiple bioactivities of osthole reported, developing osthole and derivatives as potential multitarget drug should be encouraged. Therefore, it is meaningful to summarize the pharmacological and biological researches on this coumarin, to review the mechanisms behind the effects and get a comprehensive picture of its miscellaneous functions.

2. Biological and Pharmacological Activities of Osthole

2.1. Nootropic and Neuroprotective Effect. The benefits of osthole and Fructus Cnidii (FC) extract on nervous system have been investigated in recent years. Osthole regulates ion channels and G protein-coupled receptor (GPCR) activities influencing neuronal and neuroendocrine function. Evidence suggested that osthole blocked L-type Ca^{2+} channel and Na^+ channels in mouse neuronal cells [5, 6]. Osthole increased the affinity of thyrotropin-releasing hormone (TRH) receptor (one of GPCR), hence decreasing the binding of TRH to its receptor and suppressing TRH-evoked production of triphosphoinositol (IP_3) and mobilization of sequestered Ca^{2+} in rat pituitary GH_4C_1 cells [7]. In addition, Wang et al. examined the effect of osthole and imperatorin (another coumarin isolated from FC) on glutamate release from rat hippocampal synaptosomes. The results suggested that both chemicals facilitated 4-aminopyridine- (4-AP-) evoked glutamate release by activating N- and P/Q-type Ca^{2+} channel through a signaling cascade involving protein kinase C (PKC) [8]. Lin et al. then suggested osthole-facilitated glutamate release was