# Microcidin



# Broad-Spectrum Anti-microbial Formula | VA-109 / VA-904

## **Key Features:**

- Coptis (Huang Lian), rich in berberine, is the king herb for detoxification in Traditional Chinese Medicine, especially during infections and inflammation.
- Contains lab-standardized high allicin content from freeze-dried garlic concentrate. Allicin is a potent natural antibiotic that does not cause dysbiosis.
- Synergized with highly concentrated oregano & clove extracts for broad spectrum microcidal effect in prevention and eradication of microbial infections.

### Indications:

- Small intestine bacterial or fungal overgrowth (SIBO or SIFO), Dysbiosis, Candidiasis
- · H.pylori-induced gastritis
- · Gastroenteritis, food poisoning (prevention and treatment)
- Irritable Bowel Syndrome (IBS)
- Upper Respiratory Tract Infections (URTI), Cold/Flu

### **Description:**

**Microcidin** contains multiple antimicrobial ingredients with different mechanisms to inhibit and destroy pathogenic bacteria, fungi and parasites.

#### Coptis chinensis (Huang Lian) Extract

Coptis chinensis (Huang Lian) is the most commonly used herbs for detoxification in Traditional Chinese Medicine (TCM). Coptis has similar properties as Goldenseal, but it is much richer in berberine content (4-7%) than its counterpart (1.5-4%).

Like many other berberine-containing herbs, Coptis is largely used to treat various infections, such as vaginal bacteriosis, fungal infections, acute gastroenteritis, cholera, bacterial dysentery, and SIBO. It has been shown to exert antimicrobial activity on a number of common pathogens, such as E. coli, K. pneumonia, Salmonella typhi, Enterobacteria, Vibrio cholera, and Candida albicans.<sup>1,2</sup>

Other than berberine, Coptis also contains other major therapeutic constituents like **palmatine**, coptisine, and jateorrhizine.<sup>3</sup> Research has shown that **palmatine** from Coptis carries better potential in inhibitory activity against H. pylori than berberine.<sup>4</sup> It also protects against gastric damage from HCl and promotes healing of ulcers. The study suggests that **Coptis is the more effective agent** 

#### Quantity: 84 Vegetarian Capsules

#### Ingredients (per 3 capsules):

(flower) (30% volatile oil) (equivalent to 450 mg dried herb)

**Non-medicinal Ingredients:** magnesium caprylate, silicon dioxide, L-leucine, pullulan (capsule)

**Suggested Use:** Adults - Take 1 capsule with meal, 2-3 times per day, or as directed by your health care practitioner.

# than berberine in treating H. pylori-induced gastritis/gastric ulcer.4

In TCM paradigm, Coptis provides a wider range of applications than berberine isolate. It is bitter and very cooling in nature and used to clear heat/fire, dry damp, descend Yang and eliminate toxins (i.e. pathogens). From the western medical perspective, "heat/fire" can be seen as inflammation in the body, whether it is caused by environmental triggers or infections.

Coptis enters the Heart, Liver, Stomach, and the Large Intestine meridians to address infection and inflammation associated with these organ systems. Therefore, in addition

to its antimicrobial effect, it also exerts hepato-protective, hypotensive, anti-diabetic, anti-inflammatory (reducing gut hyper-permeability), anti-atherosclerotic, styptic/vulnerary, uterine-tonic, and anti-diarrheal actions.

## Garlic Concentrate (Freeze-Dry)

Garlic is one of the most renowned antimicrobial herbs. It has also been shown to exert anti-atherosclerotic and serumlipid-lowering actions.



Garlic's medicinal effects mainly came from its sulfurcontaining constituents including alliin (allicin) and ajoene. Allicin is the most potent antimicrobial constituent of all. It is derived from alliin via the action of alliinase when garlic is crushed or damaged. However, allicin is a very unstable molecule, degrading at 23oC within hours upon exposure to air. Utilizing freeze-dry process can preserve alliin and alliinase activity, allowing the two to be re-activated upon ingestion.

**Ajoene** is another potent, but more stable constituent. It has been shown to also exert anti-bacterial actions against pathogenic microbes, such as S. aureus, E. coli, Klebsiella pneumonia, and Candida albican.<sup>7</sup>

#### **Oregano Extract**

The oregano extract has been shown to exert cytotoxic, antioxidant, and antibacterial activities, which mostly attributed to **carvacrol and thymol.**<sup>8</sup> It has been shown bacteriocidal and bacteriostatic to some clinically significant pathogens such as Pseudomonas aeruginosa, E. coli, Acinetobacter baumannii, Candida albicans and S. aureus (including MRSA).

#### **Clove Extract**

Clove has been traditionally used to treat fungal infections of skin, mouth, urinary, and vaginal tracts. Candida albicans with matured biofilm formation showed > 1024 times increased resistance to antifungal drugs, such as fluconazole. Clove has demonstrated promising antibiofilm activity against Candida albicans.<sup>9</sup>

#### Caution:

Do not use if you are pregnant or breastfeeding; or if you have hypersensitivity to herbs in Lamiaceae family. Consult a health care practitioner if symptoms persist or worsen. Consult a health care practitioner prior to use if you have diabetes; or if you are taking blood thinners or protease inhibitors. Hypersensitivity (e.g. allergy) has been known to occur; in which case discontinue use.

#### Reference:

- Mekseepralard C, Poonpon P, Kamkaen N. Antibacterial activities of Coptis chinensis and Glycyrrhiza glabra against seven bacteria associated with human gastrointestinal infections. Planta Med (2007). 73: 140.
- Zhao YL, Yan D, Wang JB, Zhang P, Xiao XH. Anti-fungal effect of berberine on Candida albicans by microcalorimetry with correspondence analysis. Journal of Thermal Analysis and Calorimetry (2010). 102(1):49-55.
- Liu SC, Zhang XF, Qui FR, Miao P, Shen SJ, Zhu LL, Zeng J, Jiang J. Metabolic interaction of the active constituents of Coptis chinensis in human liver microsomes. Evidence-Based Complementary and Alternative Medicine (2015).
- Jung J, Choic JS, Jeong CS. Inhibitory activities of palmatine from Coptis chinensis against Helicobactor pylori and gastric damage. Toxicol. Res. (2014). 30(1): 45-48.
- Matsumoto S, Nakanishi R, Li D, Alani A, Rezaeian P, Prabhu S, Abraham J, Fahmy MA, Dailing C, Flores F, Hamal S, Broersen A, Kitslaar PH, Budoff MJ. Aged garlic extract reduces low attenuation plague in coronary artiers of patients with metabolic syndrome in a prospective randomized double-blind study. J Nutr. (2016). 146(2): 427S-432S.
- Jung ES, Park SH, Choi EK, Ryu BH, Park BH, Kim DS, Kim YG, Chae SW. Reduction of blood lipid parameters by a 12-wk supplementation of aged black garlic: a randomized controlled trial. Nutrition (2014). 30(9): 1034-9.
- Naganawa R, Iwata N, Ishikawa K, Fukuda H, Fujino T, Suzuki A. Inhibition of microbial growth by ajoene, a sulfur-containing compound derived from garlic. Appl Environ Microbiol (1996). 62(11): 4238-4242.
- Coccimiglio J, Alipour M, Jiang ZH, Gottardo C, Suntres Z. Antioixdant, antibacterial, and cytotoxic activities of the ethanolic Origanum vulgare extract and its major constituents. Oxid Med Cell Longev. (2016). DOI: 10.1155/2016/1404505.
- Khan MSA, Ahmad I. Biofilm inhibition by Cymbopogon citratus and Syzygium aromaticum essential oils in the strains of Candida albicans. J Ethnopharm (2012). 140(2): 416-423.

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