# Phytocidal





# **CLINICAL APPLICATIONS**

- Supports the Body's Defenses Against Immune Challenges
- Promotes Healthy Microbial Balance and Spirochete Load
- Helps Maintain Normal Inflammatory Balance
- Provides Antioxidant Support
- Often Used in Conjunction with Cryptolepis

# IMMUNE HEALTH

Phytocidal is a blend of powerful botanicals formulated to aid in reducing immune burden in those with high spirochete load and provide potent antioxidant support to help fend off microbial challenges. Each two-capsule serving of Phytocidal contains *Andrographis*, cat's claw, Japanese knotweed and sweet wormwood, which are botanicals wellstudied for their strong microbial-balancing properties.

#### **Overview**

Phytocidal provides a blend of potent botanicals to promote healthy microbial balance and immune support for those with high spirochete load. Spirochetes are bacteria that have evolved a unique spiral shape and rotational motility that is highly effective at moving through tissue barriers. They use their chemotactic sensors to locate nutrients and employ toxin avoidance behaviors.<sup>1</sup> Spirochetes are often spread by tick bites and accompanied by associated microbes that can make recovery especially challenging.<sup>1</sup>

#### Andrographis paniculata Leaf Extract<sup>+</sup>

Andrographis paniculata is a plant that has been used in Asian medicine for centuries for its broad range of healthpromoting properties. Traditionally, the plant has been used as an infusion, decoction or powder, either alone or in combination with other herbs. In a study examining 158 patients, a standardized preparation of *Andrographis* dried extract administered for five days significantly supported immune response while decreasing throat irritations and nasal secretions.<sup>2</sup> An additional study examining the effects of *Andrographis* found that andrographolide administration significantly improved CD4+ lymphocyte count in patients with immune challenges.<sup>3</sup> *Andrographis* has also been reported to provide strong antioxidant support due to its ability to activate highly protective antioxidant reactions, including superoxide dismutase, catalase and glutathione-S-transferase.<sup>4</sup> In recent years, *Andrographis* has emerged as a potent activator of Nrf2.<sup>5</sup> Studies have shown that, when compared to other phenolic compounds, 60 mg of *Andrographis* induced the highest activation of Nrf2.<sup>6</sup> This activation helps reduce oxidative stress, quench free radicals, maintain endothelial health and support mitochondrial function.<sup>6-8</sup> In another study, *Andrographis* demonstrated strong activity against spirochetes.<sup>10</sup>

# Cat's Claw<sup>†</sup>

Cat's claw is an herbal medicine derived from the bark of the *Uncaria tomentosa* vine, and it is used for its inflammatory support and immune-balancing effects. It has demonstrated support for fever and fatigue by suppressing TNF-alpha synthesis and raising CD57 counts.<sup>9</sup> In other studies, cat's claw has shown strong activity against spirochetes.<sup>10</sup>

#### Japanese Knotweed<sup>+</sup>

Resveratrol, the most well-researched stilbene, is found in many plants and red wines. Studies of resveratrol have found it enhances the potential of antioxidant and detoxification activity through Nrf2 activation.<sup>13</sup> Other studies have linked resveratrol to improving blood sugar balance, maintaining normal inflammatory balance and reducing oxidative stress.<sup>12,13</sup> Japanese knotweed (*Polygonum cuspidatum*) has also demonstrated strong activity against spirochetes as well as other associated microbes.<sup>10,16</sup>

† These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.



#### Sweet Wormwood<sup>+</sup>

Sweet wormwood (*Artemisia annua*) is a fern-like plant commonly found throughout Asia, and artemisinin is its active constituent. Artemisinin is a sesquiterpene lactone, which is a special compound shown to have strong microbial-balancing properties. It is known to interfere with microbial metabolism by causing structural changes to unfriendly organisms that prevent them from maturing in the body. This effect is facilitated by the production of free radicals and reactive aldehydes within the microbes that disrupt their growth.<sup>14,15</sup> In other studies, artemisinin demonstrated potent activity against spirochetes and associated microbes.<sup>10,16</sup>

### Directions

2 capsules per day or as recommended by your health care professional.

# **Does Not Contain**

Gluten, yeast, artificial colors and flavors.

### Cautions

Do not consume this product if you are pregnant or nursing. Consult your physician for further information.

# Supplement Facts

Serving Size 2 Capsules

Servings Per Container 60

|   | Amount Per<br>Serving | % Daily<br>Value |
|---|-----------------------|------------------|
| 6   | 5                     |                  |
| arbohydrate   | 1 g                   | <1%*             |
| raphis ( <i>Andrographis paniculata</i> )<br>Extract (Standardized to contain | •                     | **               |
| law (Uncaria tomentosa) Extract   | (Bark) 400 mg         | **               |
| se Knotweed ( <i>Polygonum cuspid</i><br>Extract (Standardized to contain     |                       | **               |
| Normwood ( <i>Artemisia annua</i> ) Ex<br>al Portion) (Standardized to cont   |                       | **               |
|   | ain 5% Artem          | nisinin)         |

\*\* Daily Value not established.

#### ID# 174120 120 Capsules

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