

# Candida Therapy I

## ADVANCED Naturals PRODUCT MONOGRAPH

### Product composition

Medicinal Ingredients:

Each capsule contains:

Uva Ursi leaf ( <i>Arctostaphylos uva-ursi</i> ) standardized extract 20% arbutin.....	150 mg
Garlic bulb ( <i>Allium sativum</i> ) standardized extract 200 ppm (0.015 mg) allicin .....	75 mg
Caprylic acid (magnesium caprylate).....	75 mg
Grapefruit seed ( <i>Citrus paradisi</i> ) standardized extract 47.5% flavonoids .....	37.5 mg
Pau D'Arco root bark ( <i>Tabbebuia heptaphylla</i> ) 4:1 extract; equivalent to 150 mg .....	7.5 mg
Barberry root ( <i>Berberis vulgaris</i> ) standardized extract 6% alkaloids.....	25 mg
Neem leaf ( <i>Azadirachta indica</i> ) 5:1 extract; equivalent to 125 mg .....	25 mg
Olive leaf ( <i>Olea europaea</i> ) standardized extract 18% oleuropein .....	25 mg
Berberine sulfate.....	12.5 mg

Non-medicinal ingredients: Hypromellose, water

Recommended dose: Adult: Take 2 capsules in the morning and 2 capsules in the evening, on an empty stomach.

Duration of use: For prolonged use, consult a health care practitioner.

Indication: Provides Uva-Ursi which has been traditionally used in herbal medicine for inflammatory disorders of the efferent urinary tract.

Contraindications: Do not use if you are pregnant or breastfeeding.

Warnings: Keep out of reach of children.

Consult a health care practitioner prior to use if you have diabetes.

Precautions: Consult a health care practitioner prior to use if you have diabetes. Consult a health care practitioner prior to use if you are taking blood thinners or protease inhibitors. Not to be used by children.

Adverse Effects: Hypersensitivity (e.g. allergy) has been known to occur; in which case discontinue use.

Overdose: For management of suspected product overdose it is recommended to contact your physician.

Symptoms of Overdose: Has not been investigated nor any reports have been filed.

### Supporting Research and Traditional Evidence

#### Uva Ursi leaf (*Arctostaphylos uva-ursi*) standardized extract 20% arbutin

Uva Ursi has been used traditionally as a mild antiseptic for moderate inflammatory conditions of the urinary tract and bladder, such as cystitis, urethritis and dysuria (**WHO Monograph; Blumenthal et al, 2000**) and has been approved by the Commission E for use in inflammatory disorders of the urinary tract. In folk medicine, uva ursi is used as a diuretic to stimulate uterine contractions and to treat diabetes, poor eyesight, renal or urinary calculi, rheumatism, and venereal disease. (**WHO Monograph**)

Uva ursi is the primary ingredient in the product, delivering a therapeutic dose in support of the claimed action.

#### Garlic bulb (*Allium sativum*) standardized extract 200 ppm (0.015 mg) allicin

Garlic has been used traditionally to help relieve symptoms associated with upper respiratory tract infections and

catarrhal conditions (inflammation of the mucus membranes), reduce elevated blood lipid levels/hyperlipidaemia in adults, and to help maintain cardiovascular health in adults. (**NHPD Monograph**)

Garlic has appetite stimulating properties and digestion promoting effects. Additionally, the herb has antimicrobial, anthelmintic, and insecticidal properties. Garlic has been used in folk medicine for gastrointestinal (GI) disorders, especially for flatulence and colic, to promote the flow of bile (cholagogue) and as an anthelmintic, among many other indications. Garlic also plays a large role in the prevention of intestinal infections, especially in warmer climates. (**Teuscher, 2006; Newall, 1996**)

In a study to investigate effects of garlic oil (GO) on *H. Pylori*, time-course viability experiments were undertaken to assess anti-*H. pylori* activity (16 and 32 microg mL(-1)) in simulated gastric environments. Rapid anti-*H. pylori* action was observed in artificial gastric juice in the presence of GO; anti-*H. pylori* activity of GO was noticeably affected by food materials and mucin. Researchers concluded that garlic oil may be useful as an alternative treatment against *H. pylori*, a major cause of gastrointestinal infections in humans. (**O'Gara et al, 2008**)

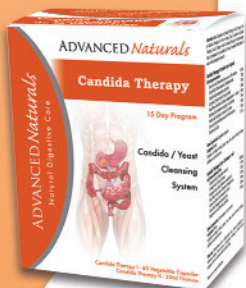
#### Caprylic acid (magnesium caprylate)

Caprylic acid is the common name for the eight-carbon saturated fatty acid known by the systematic name octanoic acid. It is found naturally in the milk of various mammals, and it is a minor constituent of coconut oil and palm kernel oil. Due to its relatively short chain length, it easily penetrates fatty cell wall membranes, and consequently is used against certain lipid-coated bacteria such as *Staphylococcus aureus* and various species of *Streptococcus*. (**Nair et al, 2005**)

In a study to investigate the antimicrobial properties of caprylic acid when added to infant formula, 3 samples containing a mixture of 3 strains of *Cronobacter* spp. (10(7) to 10(8) CFU/ml) were prepared with various concentrations of caprylic acid (5, 10, 20, and 30 mM). Samples were then heated to 45, 50, and 55°C. The inhibitory effect of the combined treatment resulted in a synergistic effect; *Cronobacter* spp. numbers were reduced more rapidly with increased temperatures and concentrations of caprylic acid. Samples treated with 30 mM caprylic acid, showed a decrease in *Cronobacter* spp. cell numbers to 7.8 log CFU/mL at 60 min when heated to 45°C and at 10 min when heated to 55°C. The data showed that addition of caprylic acid may have potential use for controlling microbes prior to consumption at lower heating temperatures. (**Jang et al, 2009**)

#### Grapefruit seed (*Citrus paradisi*) standardized extract 47.5% flavonoids

Preliminary data from a case study examining the use of grapefruit seed in urinary tract infection (UTI), suggested a potential role for grapefruit seed as an antibacterial agent. Four adults with diagnosed UTI received 5 to 6 dried or fresh grapefruit seeds (*Citrus paradisi*) every 8 hours orally for 2 weeks. Baseline urine samples showed *Pseudomonas aeruginosa*, *Klebsiella* species, *Staphylococcus aureus*, and *Escherichia coli* in each subject, respectively. Three of the four subjects responded satisfactorily to treatment; the subject with urinary *P. aeruginosa*, which was resistant to gentamicin, tarivid, and augmentin, did not respond to treatment with grapefruit seeds. (**Oyelami et al, 2005**)



**Pau D'Arco root bark (*Tabbeuia heptaphylla*) 4:1 extract; equivalent to 150 mg**

In its country of origin, pau d'arco is used to improve endurance, concentration, and well being, and for feverish colds, stomach pains, eczema, fungal infections, and ulcus cruris (foot ulcers). (Wichtl, 2002)

**Barberry root (*Barberis vulgaris*) standardized extract 6% alkaloids**

Barberry root has been used traditionally in hepatic or biliary disorders including gallstones, cholecystitis, jaundice and biliousness; as a bitter stomachic tonic for dyspepsia. The herb has also been used for protozoal infections. (Bradley, 2006)

**Neem leaf (*Azadirachta indica*) 5:1 extract; equivalent to 125 mg**

Neem leaf has been used traditionally as a discutient (dispersant of pathological accumulation), emmenagogue (inducing menstrual flow), antiviral and disinfectant. (Swami, 2005)

**Olive leaf (*Olea europaea*) standardized extract 18% oleuropein**

In an in-vitro study to investigate the use of olive leaf as an antimicrobial agent, olive leaf showed appreciable activity against *H. pylori*, *C. jejuni*, *S. aureus* and methicillin-resistant *S. aureus* (MRSA). A commercial extract derived from the leaves of *Olea europaea* (olive) was tested against a wide range of microorganisms (n=122) using agar dilution and broth microdilution techniques. Olive leaf extract was found to be most active against *Campylobacter jejuni*, *Helicobacter pylori* and *Staphylococcus aureus* [including MRSA], with minimum inhibitory concentrations (MICs) as low as 0.31-0.78% (v/v). The extract showed little activity against all other test organisms (n=79), with MICs most ranging from 6.25% to 50% (v/v). Given this specific activity, olive leaf extract may have a role in regulating the composition of the gastric flora by selectively reducing levels of *H. pylori* and *C. jejuni*. (Sudjana *et al*, 2009)

**Berberine sulfate**

In a study to evaluate the antisecretory activity of berberine sulfate, 165 patients with either acute diarrhea due to enterotoxigenic *E. coli* (ETEC) or *Vibrio cholera*, received either 400 mg berberine sulphate as a single dose or placebo. In patients with ETEC treated with berberine sulphate, mean stool volumes were significantly decreased during three consecutive 8-hr periods and at 24 hours following treatment compared to controls. In patients with cholera who received berberine sulphate, the mean 8-hr stool volume during the second 8-hr period after treatment decreased significantly compared to controls. Results showed that berberine sulfate was an effective and safe antisecretory drug for ETEC diarrhea. (Rabbani *et al*, 1987)

**Ingredient Summary:**

**Uva Ursi leaf (*Arctostaphylos uva-ursi*) standardized extract 20% arbutin**

- Provides Uva-Ursi which has been traditionally used in herbal medicine for inflammatory disorders of the efferent urinary tract.

**Garlic bulb (*Allium sativum*) standardized extract 200 ppm (0.015 mg) allicin**

- Garlic has been used in folk medicine for gastrointestinal (GI) disorders, especially for flatulence and colic, to promote the flow of bile (cholagogue) and as an anthelmintic.

**Caprylic acid (magnesium caprylate)**

- Caprylic acid is used against certain lipid-coated bacteria

such as *Staphylococcus aureus* and various species of *Streptococcus*.

**Grapefruit seed (*Citrus paradisi*) standardized extract 47.5% flavonoids**

- Grapefruit seed has shown potential as an antibacterial agent.

**Pau D'Arco root bark (*Tabbeuia heptaphylla*) 4:1 extract; equivalent to 150 mg**

- Pau D'Arco has shown potential against fungal infections.

**Barberry root (*Barberis vulgaris*) standardized extract 6% alkaloids**

- Barberry root has been used traditionally in hepatic or biliary disorders and for protozoal infections.

**Neem leaf (*Azadirachta indica*) 5:1 extract; equivalent to 125 mg**

- Neem leaf has been used traditionally as a discutient, emmenagogue, antiviral and disinfectant.

**Olive leaf (*Olea europaea*) standardized extract 18% oleuropein**

- Olive leaf has shown potential in regulating the composition of gastric flora.

**Berberine sulfate**

- Berberine sulfate has shown potential as an antisecretory agent against certain bacteria.

**References**

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# Candida Therapy II

## Product composition

Medicinal Ingredients:

1 mL (20 drops) contains:

Oregano leaf ( <i>Oreganum vulgare</i> ) .....	39.6 mg
Orange peel ( <i>Citrus sinensis</i> ) .....	33 mg
Oregon grape root ( <i>Mahonia aquifolium</i> ) .....	33 mg
Pau D'Arco root bark ( <i>Tabebuia heptaphylla</i> ).....	33 mg
Cinnamon bark ( <i>Cinnamomum cassia</i> ) .....	20 mg
Clove bud ( <i>Syzygium aromaticum</i> ) .....	20 mg
Peppermint leaf ( <i>Mentha piperita</i> ).....	20 mg

Non-medicinal ingredients: Ethyl Alcohol

Recommended dose: Adult: Take 20 drops (1 mL) in the morning and 20 drops (1 mL) in the evening on an empty stomach.

Duration of use: For prolonged use, consult a health care practitioner.

Indication: Orange peel, Cinnamon bark, Clove bud, and Peppermint leaf have been traditionally used in Herbal medicine to aid digestion.

Contraindications: Do not use if you are pregnant or breastfeeding.

Warnings: Keep out of reach of children.

Consult a health care practitioner if symptoms persist or worsen.

Consult a health care practitioner prior to use if you have gallstones or anaemia.

Precautions: Not to be used by children.

Adverse Effects: None reported.

Overdose: For management of suspected product overdose it is recommended to contact your physician.

Symptoms of Overdose: Has not been investigated nor any reports have been filed.

## Supporting Research and Traditional Evidence

### Oregano leaf (*Oreganum vulgare*)

Oregano leaf has shown potential as a bacterial agent. The principal compounds believed to be responsible for the antibacterial properties, and for antifungal and antioxidant properties are carvacrol, thymol, eugenol and their precursors.

In a 6-week study to assess the effects of oregano on enteric parasites, 14 patients diagnosed with enteric parasites (*Blastocystis hominis*, *Entamoeba hartmanni* and *Endolimax nana*) received oil of Mediterranean oregano (*Oreganum vulgare*) 600mg emulsified oil orally per day. Complete disappearance of *E. hartmanni* (four cases), *E. nana* (one case), and *B. hominis* in eight cases was observed. Further, *B. hominis* scores were decreased in three additional cases. Gastrointestinal symptoms improved in seven of 11 patients who had tested positive for *Blastocystis hominis*. (Force et al, 2000)

In a preclinical study to investigate the use of oregano in diarrhea, results showed that dried oregano leaves administered as an oral solution to calves with diarrhoea

may be as effective in the treatment of colibacillosis as neomycin. A total of 30 Holstein calves with clinical signs of diarrhea (i.e., fecal score >2) received either dried oregano leaves (10mg/kg/day) or neomycin (10mg/kg/day; positive control). Number of days scouring, severity of scours due to *Escherichia coli*, and mortality were monitored and found to be similar between the treatments. (Bampidis et al, 2006)

The antilisterial activities of *O. vulgare* and *Thymbra capitata* essential oils were tested against 41 strains of *Listeria monocytogenes*. Oil of *T. capitata* was composed mainly of carvacrol (79%); *O. vulgare* was composed of thymol (33%), gamma-terpinene (26%), and p-cymene (11%). *T. capitata* essential oil showed significantly higher antilisterial activity compared to *O. vulgare* oil, and both oils were considered to be potentially powerful tools in the control of *L. monocytogenes* in food and other industries. (Faleiro et al, 2005)

### Orange peel (*Citrus sinensis*)

Orange peel has been used traditionally for its bitter principles, for loss of appetite and dyspeptic ailments. (Blumenthal, 1998) In TCM, orange peel is used to break up stagnant qi and reduce accumulation: for epigastric or abdominal pain and distention or indigestion with focal distention or gas. The herb is also used with other qi-tonifying herbs for gastrectasis. (Bensky et al, 2004)

### Oregon grape root (*Mahonia aquifolium*)

Oregon grape root has synergistic antibacterial, anti-inflammatory, and bile-stimulating properties (Dattner, 2003) and extracts or alkaloids isolated from *Mahonia aquifolium* exhibit antimicrobial activity against Gram-positive and Gram-negative bacteria, fungi, and protozoa (Rohrer et al, 2007).

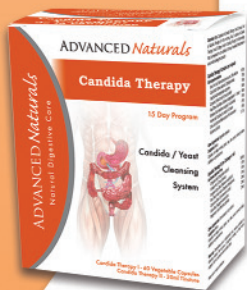
In a study to investigate the bacteriostatic and bacteriocidal activities of *M. aquifolium* extract and two of its major alkaloids, berberine chloride and oxyacanthine sulphate, in vitro tests were conducted against nine different oral bacteria. Minimum inhibitory concentrations (MIC) were 0.0031% to 0.1993% for *M. aquifolium* extract; 0.002% to 0.125% for berberine chloride; and 0.0156% to 0.0625% for oxyacanthine sulphate. Values of MIC were in the same range and researchers concluded that the test substances most probably acted in a bactericidal manner. (Rohrer et al, 2007)

### Pau D'Arco root bark (*Tabebuia heptaphylla*)

In its country of origin, pau d'arco is used to improve endurance, concentration, and well being, and for feverish colds, stomach pains, eczema, fungal infections, and ulcus cruris (foot ulcers). (Wichtl, 2002) The herb, the Paraguayan crude drug "tayi pyta" is used in folk medicine for wounds and inflammation. (Schmeda-Hirschmann G et al, 2003)

### Cinnamon bark (*Cinnamomum cassia*)

Cinnamon has been used traditionally as an antispasmodic, carminative, orexigenic, antidiarrhoeal, antimicrobial, refrigerant, and anthelmintic properties. The herb has been used for anorexia, intestinal colic,



infantile diarrhoea, common cold, influenza, and nausea. (Newall *et al*, 1996; Bradley, 2006)

### Clove bud (*Syzygium aromaticum*)

Clove has been used traditionally for digestive complaints such as flatulence, colic, abdominal bloating, languid digestion, and nausea or emesis. (Bradley, 2006) Clove has been traditionally used as a carminative, antiemetic, toothache remedy, and counter-irritant. (Newall *et al*, 1996) Use of clove as an oil is an age old remedy practiced still today for periodontal problems (Kumar *et al*, 2009).

In a study testing the composition and antifungal activity of clove essential oil (EO), results showed considerable antifungal activity against clinically relevant fungi. EO was obtained from *Syzygium aromaticum* and showed a high content of eugenol (85.3 %). MICs and minimum fungicidal concentration were used to evaluate the antifungal activity of the clove oil and its main component, eugenol, against *Candida*, *Aspergillus* and dermatophyte clinical and American Type Culture Collection strains. The EO and eugenol showed inhibitory activity against all the tested strains. The fungicidal effect resulted from an extensive lesion of the cell membrane; clove oil and eugenol also caused a considerable reduction in the quantity of ergosterol, a specific fungal cell membrane component. Germ tube formation by *Candida albicans* was completely or almost completely inhibited by oil and eugenol concentrations below the MIC values. Clove oil and eugenol have considerable antifungal activity against clinically relevant fungi, including fluconazole-resistant strains. (Pinto *et al*, 2009)

### Peppermint leaf (*Mentha piperita*)

Peppermint leaf has been used traditionally to aid digestion (stomachic), relieve flatulent dyspepsia, and to help relieve nausea and vomiting. (NHPD monograph; Bradley, 1992; Blumenthal *et al*, 2000)

#### Ingredient Summary:

#### Oregano leaf (*Origanum vulgare*)

- Oregano leaf has shown potential as a bacterial agent.

#### Orange peel (*Citrus sinensis*)

- Orange peel, Cinnamon bark, Clove bud, and Peppermint leaf have been traditionally used in Herbal medicine to aid digestion.

#### Oregon grape root (*Mahonia aquifolium*)

- Oregon grape root has synergistic antibacterial, anti-inflammatory, and bile-stimulating properties.

#### Pau D'Arco root bark (*Tabebuia heptaphylla*)

- Pau D'Arco has shown potential against fungal infections.

#### Cinnamon bark (*Cinnamomum cassia*)

- Orange peel, Cinnamon bark, Clove bud, and Peppermint leaf have been traditionally used in Herbal medicine to aid digestion.

#### Clove bud (*Syzygium aromaticum*)

- Orange peel, Cinnamon bark, Clove bud, and Peppermint leaf have been traditionally used in Herbal medicine to aid digestion.

#### Peppermint leaf (*Mentha piperita*)

- Orange peel, Cinnamon bark, Clove bud, and Peppermint leaf have been traditionally used in Herbal medicine to aid digestion.

#### References

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