

# Osha

**Scientific Name:** *Ligusticum porteri*

**Common Names:**

Bear Root, Chuchupate, Colorado Cough Root, Indian Parsley, Mountain Lovage, Porter's Licorice Root, Wild Celery Root, Porter's Lovage, Mexican ginseng<sup>1-6</sup>

also: Ha-chi-de, Kwimi dechi, Pah-net-snap, Raiz angelica, Raiz de cochino, Wadda-e-gopa, Wasia, Yerba de cochino<sup>3</sup>

**Description of Active Ingredients:**

- ligustilide (root)<sup>1</sup>; furanocoumarins (psoralen and bergapten)<sup>2</sup>; pyranocoumarins<sup>2</sup>, phthalides<sup>2</sup>
- unique resinous odor, considered "hot or caliente"<sup>3</sup>
- in animal studies and tissue cultures, psoralen has been shown to have antitumor/antibiotic properties after exposure from ultraviolet light<sup>2</sup>
- psoralen and bergapten have been shown to help re-pigment skin (topical healing)<sup>2</sup>
- *Ligusticum* species pyranocoumarin extracts (anomalin, pteryxin, khellactone) have been shown to have vasodilatory effects in rabbit studies<sup>2</sup>
- phthalides (butylidenephthalide, ligustilide, butylphthalide isolates) from *Ligusticum* species have been shown to inhibit smooth muscle activity (antispasmodic agent) in rat studies (specifically uterine contractions induced by PGs, oxytocin and ACh)<sup>2</sup>

**MOA:**

- ligustilide – antimicrobial, antiviral, inhibits viral protease (preliminary evidence), inhibits influenza virus- but no explanation how (preliminary evidence)<sup>1</sup>; antispasmodic activity by inhibiting PG, oxytocin and ACh<sup>2</sup>; no clinical trials human<sup>1</sup>
- furanocoumarins (psoralen and bergapten)- antibiotic, antitumor, antiviral activity via intercalating w/ DNA and RNA molecules to inhibit cellular growth following excitation of molecules<sup>2</sup>
- pyranocoumarins- no MOA given for vasodilatory effect<sup>2</sup>
- phthalides- antispasmodic activity by inhibiting PG, oxytocin and ACh (exact mechanism not reported)<sup>2</sup>

**Current Indications and Efficacy:**

- internally: sore throat, bronchitis, cough, loosens phlegm, common cold, influenza, pneumonia, lung infections, bronchial inflammation, indigestion, flatulence, ulcers, stomach ache, diarrhea, herpes, AIDS/HIV, tuberculosis, hay fever, diaphoretic, carminative, analgesic, emetic, viral infections, food/spice (leaves)<sup>1-5</sup>
- topically: prevents wound infections, antirheumatoid infusion preparation, poultice for scorpion and insect bites, infusion for cleaning ears with ticks and killing lice, crushed root and water gargle for sore throat<sup>1-4</sup>
- reported efficacy is high among those familiar with its uses<sup>2</sup>; documented use since 1777 when Franciscan and Jesuit missionaries categorized medicinal plants<sup>3</sup>; UCHSC School of Pharm, Boulder interviewed families in the San Luis Valley (CO) regarding customary use and efficacy<sup>2</sup>

**Contraindications/allergies:**

- none reported<sup>1,5</sup>

**Dosage Forms, recommended doses, duration:**

- forms: 1:2 tincture (fresh root), 1:5 tincture (dried root), often in multi-ingredient products, tea, infusion, syrup, salve of pine pitch + root pulctice<sup>1,3-6</sup>
- doses: tincture 20-60 gtts up to 5x/d, 30-90 gtts in hot water, strong decoction 2-4 oz up to QID, simple tea ½ c up to QID<sup>1,4</sup>

**Drug interactions and Drug-Disease interactions:**

- none known, little known<sup>1,6</sup>

**Other safety issues:**

- avoid in pregnancy + lactation (reported abortifacient, stimulates menstruation)<sup>1</sup>

**Other Comments:**

- commonly used in Native American (Tarahumara, Tewa, Apache, Zuni, Paiute, Yavapai) + Hispanic cultures<sup>1-6</sup>
- commonly used as talisman in Native and older Hispanic culture<sup>3</sup>
- leaves similar to poison hemlock- identify by root (malodorous, strong celery like odor), do not confuse w/ poison hemlock when harvesting<sup>1,5,6</sup>
- wild grown, perennial, higher elevations, western + southwestern US in pine-oak forests, endangered plant<sup>1,3,6</sup>

<sup>1</sup>Therapeutic Research Faculty. Natural Medicines Comprehensive Database. Available at: <http://www.naturaldatabase.com>. Accessed January 22, 2003.

<sup>2</sup>Appelt GD. Pharmacological aspects of selected herbs employed in Hispanic folk medicine in the San Luis Valley of Colorado, USA: I. *Ligusticum porteri* (Osha) and *Matricaria chamomilla* (Manzanilla). J of Ethnopharm 1985;13:51-5.

<sup>3</sup>Linares E, Bye RA. A study of four medicinal plant complexes of Mexico and adjacent United States. J of Ethnopharm 1987;19:153-83.

<sup>4</sup>Moerman DE. Native American ethnobotany. Portland (OR): Timber Press; 1998.

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<sup>5</sup>Moore M. Los remedios- traditional herbal remedies of the southwest. 1<sup>st</sup> ed. SantaFe (NM): Red Crane Books; 1995.

<sup>6</sup>Moore M. Medicinal plants of the mountain west. Santa Fe (NM): Museum of New Mexico Press;1979.