

# Medical Herbalism

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## Anaphylactic response, food allergy and histamine

Mary W. Barnes RH (AHG), NAIMH

Biogenic amines are a group of chemicals that influence many body functions including blood circulation, blood pressure, intestinal motility, gastrointestinal fluid secretion, stress hormone response, immune response, cell growth and cell differentiation. One biogenic amine – *histamine* – is a mediator of anaphylaxis, vascular permeability, immune response, intestinal motility and fluid secretion. Histamine is formed from the amino acid precursor histidine. The enzymes diamine oxidase (DAO) and histamine N-methyltransferase (HNMT) function as the degrading enzymes for histamine.

Histamine-containing mast cells are found in most tissues of the body. They are especially prevalent where the external and internal boundaries form: the lungs, intestinal tract, nose, mouth, conjunctiva and skin. Mast cells are active players in inflammatory response. Under normal conditions, histamine is formed and either stored within the mast cells or quickly degraded by DAO and HNMT.

Histamine is released from the mast cells during inflammatory allergic immune response to a specific antigen trigger. Two examples are the response to pollen antigens, causing symptoms of seasonal allergies, and the response to peanuts or tree nut antigens causing symptoms of anaphylactic shock. Histamine is a natural product of protein metabolism. In optimally functioning tissues, normal DAO and HNMT enzyme response reduces histamine levels before they become problematic. When DAO or HNMT are deficient, excessive histamine accumulates. Histamine in some foods can also add to the histamine level in the digestive tract. Adverse reactions and symptoms express when toxic levels are reached. Symptoms are specific to the affected tissues:

*Continued on page three*

## Topical medicinal plants for herpes virus infection

By Paul Bergner

### ABSTRACT

Recent research into the activity of medicinal plants and their constituents against herpes virus, including acyclovir-resistant strains, is reviewed. In-vitro and human research trials are included for species of seventeen genera of medicinal plants. Research suggests that combinations of these aromatic plants, their volatile constituents, or the polysaccharides of *Prunella*, may make the most effective topical applications.

The effectiveness of aromatic plants of the Lamiaceae family against herpes virus have been known at least since 1964 (Cohen et al; Kucera and Hermann; Hermann and Kucera), and extracts of *Melissa officinalis* have been developed into commercial products for topical application in herpes infection. The chief drug used against the herpes virus is acyclovir, and the development of acyclovir-resistant strains (ACV) was noted shortly after its release (Furman et al). Incidence has increased, and presents a significant health problem today in immuno-compromised patients (Christophers et al.). Motivated by the need for new agents against herpes, and specifically ACV, researchers on four continents are now engaged in screening of medicinal plants for activity against these viruses (Allahverdiyev et al; Chiu et al; Schnitzler et al, 2007; Stránská et al; Vijayan et al; Xu et al; Zhang et al).

Perhaps the best known herb for treating herpes in North America today is *Melissa officinalis*, lemon balm. The effectiveness of extracts of the herb for killing herpes virus in lab dish experiments have been reported since 1964 (Cohen et al.), and commercial *Melissa* products have been available in Germany for the topical treatment of herpes since the 1980s. *Melissa* is not specifically superior to many other plants

*Continued on page eleven*

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## Histamine (from page one)

- Skin – hives, flushing, itching, tingling, burning sensations
- Nasal membranes – excessive mucous production, itchiness, swelling
- Conjunctiva – itchy, watery, swollen eyes
- Mouth – swelling, itching
- Throat – swelling, constriction
- Lungs – constriction, excessive mucous, congestion, broncho spasm
- Blood vessels – vasodilation, hypotension, heart palpitations
- Gastrointestinal – nausea, vomiting, diarrhea, abdominal cramping
- General – sweating, headache, systemic toxicity resulting in loss of consciousness

The severity of the symptoms is dependent upon the tissues affected and how systemic the reaction is.

Histamine may be produced in the mast cells, may be naturally occurring in foods, may be a chemical response to protein digestion, and may be a by-product of food spoilage. Fish is especially problematic, as spoilage begins and histamine is produced before spoilage is detectable by odor or color. Histamine is

high in any food subjected to microbial activity – fermented and aged foods contain high levels.

To reduce histamine intake, it is very important to choose and handle food carefully. Produce with signs of spoilage or bruising should be avoided. All leftovers need to be frozen promptly rather than refrigerated. Foods most frequently associated with anaphylactic reactions are cow's milk, eggs, nuts, peanuts, fish, sea-food, pollen-related fresh fruits and vegetables.

Food-derived histamine sensitivity is associated with non-allergenic, non-immune-modulated food sensitivity and may occur singularly or may occur in tandem with food allergies. The presence of more than one causative factor can increase the severity of the reaction. Decreased digestive enzyme activity increases risk. Intestinal inflammation causing increased gut permeability elevates risk. Altered bacterial balance in the GI tract increases risk.

Antacid medications, antibiotic medications, alcohol and stress are common causes of increased gut permeability and are triggers for food sensitivities and allergies. GI inflammation can inhibit enzyme production and activity, likewise inflammation can interfere with nutrient absorption. For these reasons it is important to correct intestinal health to decrease histamine toxicity.

The histamine level from food sources builds slowly in the body making it hard to track problematic foods. Anaphylactic episodes appear to be random because of varying amounts in the diet resulting irregular

### **Foods with naturally occurring histamine in quantities that may be problematic**

Fish with fins: tuna, halibut, salmon, etc.  
Shell fish  
Smoked fish  
Hard aged cheese  
Swiss cheese  
Milk  
Yogurt and other forms of fermented milk  
Pizza  
Eggs unless well cooked  
Soy foods  
Aged cured meats, ham, bacon, salami etc.  
Citrus fruits  
Bananas  
Berries  
Tomatoes

Eggplant  
Spinach  
Peanuts and other legumes, any bean  
Chocolate  
Coffee  
Vinegar  
Wheat based foods  
Beer  
Wine  
Fermented alcoholic or non alcoholic beverages  
Azo food dyes  
Benzoate (a class of food additive), sodium benzoate, benzoic acid  
Butylated hydroxyanisole (BHA)  
Butylated hydroxytoluene (BHT)  
Artificial food colorings especially tartrazine

timing of toxicity. A combination strategy of decreasing food sources, lowering the reactive state of the mast cells, removing food allergens and healing the gastrointestinal tract results in fewer severe reactions.

Gliadin is one protein responsible for gluten intolerance or celiac disease. Elevated histamine is found in the small intestine of individuals with celiac disease after ingestion of gliadin-containing foods. Increased numbers of mast cells are found at the site of gliadin-triggered inflammation in the small intestine. Celiac disease is often responsible for villous atrophy in the small intestine. Histamine is present throughout the intestinal tract with the highest concentration located in the villi of the small intestine. Celiac-mediated inflammation and tissue destruction has the potential to alter or prevent DAO enzyme activity as well as absorption of key minerals, in this case, copper, which is essential for DAO production. The gluten molecule is composed of a glutenin root with 3 different gliadin chains attached, glutenin peptides, also present in rice and corn, may also evoke an antibody response.

#### DIAMINE OXIDASE AND NUTRIENTS

Diamine oxidase is a copper containing amine. Research done to explore the use of DAO as a biomarker for copper deficiency in dialysis patients suggests a strong correlation between diamine oxidase deficiency and copper deficiency. The enzymes DAO and HNMT require vitamin B-6 (pyridoxine) to function, and therefore, a deficiency in B vitamins can be a contributing factor to histamine toxicity.

The flavonoid quercetin has significant anti-inflammatory activity. The compound inhibits both the release and production of histamine by preventing degranulation of mast cells. Quercetin stabilizes cell membranes, preventing the production of free radicals and other inflammatory compounds. In addition quercetin has a vitamin-C-sparing effect.

Vitamin C inhibits secretion of histamine and increases detoxification of histamine. Studies show the positive effect of vitamin C on histamine activity is dependent upon continuous dosing patterns, positive results are not seen with singular doses. Daily supplementation is recommended.

Although the FDA recently approved the sale and use of supplemental DAO in the US, this author does not support the use of exogenous enzyme supplementation as a license to freely eat problematic foods; supplemental DAO does have a valuable place in a therapeutic protocol. Situational supplementation of diamine oxidase is an

effective preventative, especially helpful when social activity compromises dietary control.

Screening for and removing food allergens, avoiding high histamine foods and avoiding potentially spoiled food is the first step toward reducing intestinal inflammation. Correcting bacterial imbalance with probiotics and avoidance of antibiotic and other medications destructive to GI bacterial balance will prevent further damage to enzyme-producing cells. Reducing stress load and response spares B-vitamins and supports enzyme production. Studies show a direct relationship with elevated stress response, biochemical imbalance and increased intestinal permeability.

Mineral deficiencies generally are not singular; removing causative factors of intestinal inflammation and healing the tissues is supportive for optimizing mineral absorption in the small intestine. Supplementation with a multiple vitamin formula containing a full spectrum of trace minerals will aid restoration of mineral balance.

Anaphylactic reactions are life-threatening emergencies. Anti-histamine medications are used to control anaphylactic response. Individuals with histamine sensitivity should always carry a kit with them to abort a reaction at first sign of symptoms. Long term use of anti-histamines can result in reduced response to the medication and need for increasingly larger doses. Dietary control, use of supplements and medicinal botanicals to reduce histamine response, and the careful use of antihistamine medications at first onset of symptoms preserves medication effectiveness and allows the body to begin healing.

#### FURTHER READING

*Digestion, Diet and Disease.* Janice M. Vickerstaff Joneja

*Food Hypersensitivity and Adverse Reactions* Marianne Frieri, Brett Kettlehut

*Textbook of Natural Medicine* Joseph E. Pizzorno Jr., Michael T. Murray

Fogel WA, Lewinski A, Jochem J. Histamine in food: is there anything to worry about? *Biochem Soc Trans.* 2007 Apr;35(Pt 2):349-52.

McGrath AP, Hilmer KM, Collyer CA, Shepard EM, Elmore BO, et al. Structure and inhibition of human diamine oxidase. *Biochemistry.* 2009 Oct 20;48(41):9810-22.

Maintz L, Novak N. Histamine and histamine intolerance. *Am J Clin Nutr.* 2007 May;85(5):1185-96. Review

I Stolze, K-P Peters, R A Herbst Histamine intolerance mimics anorexia nervosa *Hautarzt.* 2010 Sep ;61 (9):776-8 19907926

## Case Study: Chronic recurrent anaphylaxis

by Mary W. Barnes RH (AHG), NAIMH

Female, age 55, weight 155#, height 5'2", Hispanic ancestry – both indigenous and Spanish

Anaphylactic episodes, sudden onset summer 2006, client was at a social gathering, a picnic, her stomach began to rumble and become uncomfortable, excused self and went to bathroom, sudden diarrhea and emesis, itchy palms, soaked in sweat, blotchy skin, weakness, loss of consciousness, EMS and hospital.

The two years prior to onset were extremely stressful: menopause, divorce, re-entering work force after 30 years. She remembers thinking “If one more thing happens to me I will be really sick.”

Her adult daughter lives with her, is very engaged in her mother’s health issues, is supportive and attended the intake.

Second episode 16 months later in 2007 day before Thanksgiving, again emergency room visit. Current, episodes come in clusters every 2 – 4 months, increasing in severity, last occurrence May 2009 in response to Cold Ease medication.

### TESTING

- 2 sonograms
- 2 endoscopies, client does not know if villi damage was present
- 2 colonoscopies
- bone biopsy
- National Jewish – skin prick testing, food challenge positive for peas, soy, and nuts
- Cardiologist – tilt table test = fast BP drop, dx syncope

Reaction occurs ½ – ¾ hour post prandial. Signs and symptoms = red eyes, itchy hands, diarrhea and vomiting, hives, cold and clammy, BP drop, loss of consciousness. Note: tongue swelled with last episode.

Episodes are embarrassing, socially limiting and affect her work (she soils herself), client does not know what to eat, after episodes she will live on crackers for days, afraid to eat any other foods, she is

very concerned she may have a fatal disease, possibly cancer.

Foods she has reacted to after eating:

- bread
- soy
- Special K
- peanut butter on bread
- Chile relleno
- pizza
- flavored coffee from convenience store
- Horizon milk
- cheese
- soy sauce
- Cold Ease medication, OTC

She has seven siblings, all are related maternally and all have different fathers. One half sister has been diagnosed allergic to wheat, peas and soy.

### HEALTH HISTORY

- Bowel and urinary urgency for many years
- 1994 sprained ankle
- 2001 gallbladder removed
- 2004 menopause, last menses 2003
- 2005 divorce
- Current loss of 30-40lb. due to fear of eating
- Feels she is most likely lactose intolerant
- Diabetes, mother, 2 half sisters, 1 half brother
- Breast cancer, mother
- Heart disease, half sister

### MEDICATIONS:

- Verapamil 240 mg per day – calcium ion influx inhibitor, hypotensive
- Hydrochlorothiazide 25 mg per day – diuretic, hypotensive

Acute:

- Benadryl: histamine-blocker (diphenhydramine)
- Singulair, Montelukast sodium: asthma
- Xyzal, Levocetirizine dihydrochloride: rhinitis

- Epi pen (she has trouble using the pen during an episode and has often stabbed her hand by mistake), Benadryl is what she feels is the most effective at aborting or moderating an attack when taken at first sign of onset.

Additional daily prescriptions

- Allegra once/day – fexofenadine HCL, seasonal allergy
- Hydroxyzine Pamoate once/day - anti anxiety and anti tension, useful for histamine-mediated pruritus

### SUMMARY

Stature and relative body weight are indicative of insulin resistance. It is unclear if the high BP is related. She reports elevated BP is transient and more prevalent with rebound hypotension during periods when anaphylaxis is active. Hypertension was diagnosed post onset. No overt intestinal pathology or damage has been reported by any attending physician. Client does not know if she was checked for atrophy of intestinal villi. Intestinal inflammation and tissue damage can affect production of histamine modulating enzymes. Potential food allergy elimination and histamine triggering and containing foods should be avoided with care. Special attention should be paid to food quality and storage. Her kit for acute attacks should be with her at all times.

### FIRST STRATEGY

- Journal all food and reactions, include emotional state and time and date.
- Eliminate gluten, dairy, soy, peanuts and other pea (legume) family foods.
- Eliminate any food associated with elevated histamine.
- Focus on protein, vegetables, fruits, olive oil
- Consider supplementing with a B complex, B-6, Vitamin C and quercetin
- Consider using a diamine oxidase enzyme supplement
- Monitor BP, especially with continued weight loss, medication may need to be titrated down, discuss with attending MD
- First goal is to stabilize and reduce incidence of anaphylaxis

### SECONDARY STRATEGY:

Heal intestinal tract by removal of irritants, and supportive botanical remedies and nutritional supplementation.

### HERBAL FORMULATIONS FOR THE GUT

Tea formulations based on anti-inflammatory, anti-spasmodic, astringent, carminative, vulnerary actions are an effective clinical strategy to soothe and heal, to relax and tone the tissues of the intestinal tract. When applied in tandem with removal of food allergens and irritants, a positive increase in health and vitality can be experienced quickly.

An example of a typical base formula:

1 ounce *Calendula officinalis* – anti-inflammatory, vulnerary

1 ounce *Matricaria recutita* – anti-inflammatory, anti-spasmodic, carminative

½ ounce *Plantago spp* – anti-inflammatory, astringent, vulnerary

½ ounce *Mentha piperita* – antispasmodic, carminative

The formula can be adjusted to individual clients by the addition of:

*for dryness:* 1/8 - ¼ ounce *Althea officinalis* – demulcent, moistening, cooling

*for constitutional cold:* 1/8 ounce *Zingiber officinalis* – anti-inflammatory, carminative, warming

*for bloating and gas:* 1/8 - ¼ ounce *Foeniculum vulgare* – anti-inflammatory, anti-spasmodic, carminative, slightly warming

The formula is easily prepared as an infusion, the roots of *Althea officinalis* are soft and the seeds of *Foeniculum vulgare* readily give up their properties, both will infuse easily

A typical dosing pattern would be 2 – 4 cups in a day divided of a standard warm infusion, ½ – 1 ounce herb infused in 1 quart water

### SUPPLEMENTATION

A broad spectrum multivitamin is the base to build a supplement protocol upon. No nutrient or mineral is absorbed or utilized optimally by itself, the addition of a multiple vitamin/mineral supplement provides broad spectrum nutritional co-factors .

- Quercetin. A flavonoid found in many orange colored vegetables and in onions, quercetin is a potent anti-inflammatory and antioxidant. It

prevents the degranulation of mast cells inhibiting histamine release and has a Vitamin C sparing action. It also has cellular membrane stabilizing actions, effectively reducing inflammatory processes. Dose: 200 – 400 mg 3 times daily before meals.

- Vitamin C. Antihistamine action; prevents secretion of histamine, studies show regular use of Vitamin C lowers levels of histamine; irregular dosing is ineffective and effect subsides with discontinuation of supplementation. Dose: 10 – 30 mg for every kg (2.2#) of body weight per day in divided doses.
- Vitamin B6, pyridoxine. Note: if a multiple vitamin is not taken, a B complex is appropriate to balance the supplementation of additional pyridoxine – diamine oxidase is a pyridoxine dependent amine. B6 is essential to more than one hundred enzyme reactions in the body; active form – pyridoxal 5' phosphate – PLP. Compounds that inhibit pyridoxine also inhibit diamine oxidase: birth control pills, alcohol, FD&C yellow #5, food colorings, excessive dietary sugar; magnesium and B2, riboflavin, are essential for the conversion of pyridoxine to PLP. Dose: therapeutic range, 30 – 500 mg QD. Doses of 250 – 500 mg taken long term may result in ssx of toxicity: neuropathy or sensory neuropathy; consider 100 mg QD balanced with B complex.
- Copper: Shares common absorption carrier with zinc and calcium; screen for history of supplementation or high dietary content of calcium and zinc; antacids, vegetarian diets high in legumes and poor digestion contribute to copper deficiencies; consider a balanced trace mineral supplement rather than supplementation with copper alone, a comprehensive multi vitamin/mineral product is recommended.
- Consider flower essence therapy for emotional clearing; rescue remedy is indicated for the

emotional shock of anaphylaxis and the fear associated with pending episodes.

#### SPECIFIC HERBAL MATERIA MEDICA

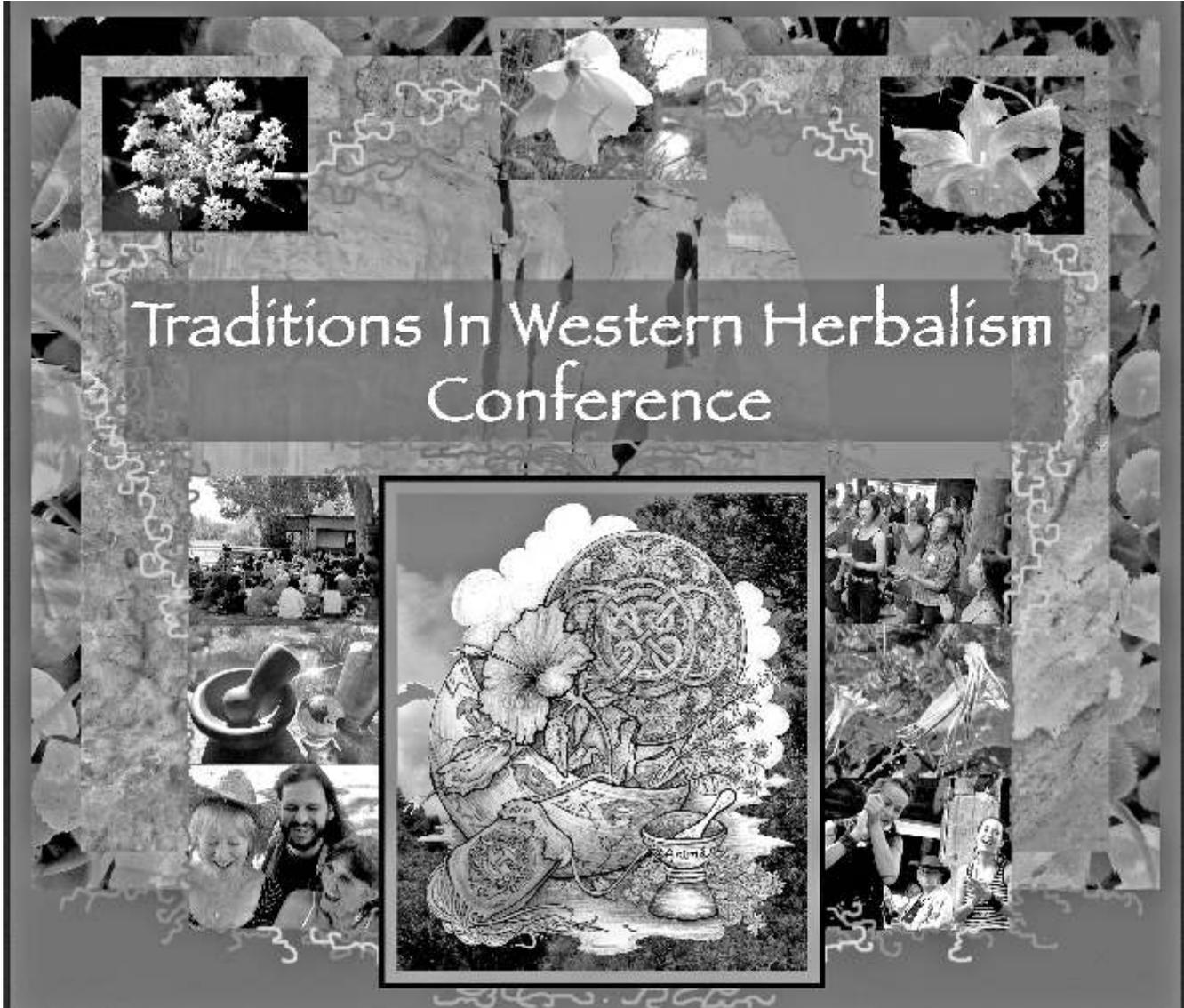
Consider an herbal protocol to reduce histamine release. Either one of the following herbs are specific to the case and could easily be added to the GI tea formula listed above.

- *Urtica dioica* –nettle leaf has anti-inflammatory properties shown to inhibit mast cell degranulation and the release of inflammatory factors including histamine; the herb is astringent and toning; the herb is considered nutritive and will raise vitality
- *Amygdalus persica*. Peach leaf has a long history of use for gastric irritation, nausea and bloating; the herb has anti-allergic and apparent anti-histamine actions (See Peach, allergy and anaphylaxis on page nine).

Initial protocol focused on dietary adjustment and was kept simple to not confuse the ssx picture, the clinician feels herbs should be added singularly and carefully so as to be able to track any adverse reaction and to honor the client's fear of ingesting unfamiliar substances in relationship to triggering a reaction.

Client has not experienced an attack since intake. She is journaling, eating a simple protein, vegetable, fruit diet. She is eating fish which may prove to be problematic. She continues to lose weight and is pleased with that. The client is long distance, follow up conversations have been via e-mail, education has been via e-mail. Client was lost to follow up at 6 months. At that point she had not experienced an attack since the initial intake, was serious about following a simple low histamine diet, was avoiding her known food allergens and gluten containing grains, and still occasionally eating fish.

Mary Barnes is on the regular and clinical faculties of the North American Institute of Medical Herbalism. She is a peer reviewed professional herbalist, clinical nutritionist and owner of Silver Spirit Herbs and Nutrition LLC. She maintains a private practice in Leadville, CO.



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## Peach, allergy, and anaphylaxis

By Kiva Rose

*Prunus persica* is a well-known member of the Rosaceae family. Although more recognized for the flavorful qualities of its fruit than as a medicine, it does have a long history of use as a medicine, including in Unani Tibb, Ayurveda, Physiomedicalism and Appalachian/Southern folk herbalism. This plant is also utilized in Traditional Chinese Medicine for many of the same indications, but instead of using the leaf, bark and flowers as discussed in this article, TCM works with the seed/kernel.

While I often use a beverage strength tea of dried peach leaves as a reliable relaxant nervine, it is the tincture of the fresh leaves and twig bark (and sometimes flowers) that I use for most acute purposes, especially those involving venomous bites or stings. It is my experience that in order for peach to be most beneficial as a medicine it should have a notable fragrance when the fresh leaves are crushed or the bark is abraded. Less fragrant specimens may still demonstrate some nervine properties but don't seem to be as effective in the treatment of allergic-like reactions. I have never purchased *Prunus persica* and the bulk of my experience is directly drawn from working with the leaf, bark and flower I wildcraft from local feral peach trees that grow here in rural southwestern New Mexico.

I initially learned of peach's potential usefulness in allergic-type reactions from Michigan herbalist Jim McDonald. I hesitate to give a label such as anti-histamine to this plant since I have no way of knowing the exact mechanism by which it works but I have seen through repeated experience that it can be invaluable in the treatment of venomous insects stings/bites, even when the person is clearly having some degree of allergic reaction. Like most treatments in this situation, peach works most effectively when given immediately or as soon as possible after the initial bite or sting. Where someone has been stung by a bee, I apply a few drops of tincture directly to the sting site after brushing (not pulling) the stinger away if it still remains, and if I have a small piece of gauze or similar on hand I may soak the cloth with tincture and keep it applied to the site. I have also soaked fresh alder leaf poultices with Peach tincture and applied that directly and find it works even better. I also give ½-1 ml of peach bark/leaf tincture internally as an adult dose. I repeat this dose every 15-20 minutes until the swelling, redness and pain begins to recede. Usually this happens within 1-3 doses.

Two of my clients who are moderately allergic to bee stings have been able to successfully use peach

rather than their epi pens when stung by bees. They still carry their epi pens as well as the peach tincture but in the five years one client has been using peach and the two years of the other, neither have had to resort to the epi pen even once.

Additionally, I have found that *Prunus persica* is remarkable useful in the treatment of the bites of conenose kissing bugs (of the genus *Triatoma*), insects which inject their saliva into the victim before ingesting their blood. These injected chemicals can (and often do) cause moderate to severe itching and pain in the victim for 24-48 hours that is not only local but can affect up to 80% of the body and welts at bite sites may be present for several days. This swelling and itching is thought to be an allergic reaction at least in part and anaphylactic shock is possible, especially if symptoms include swelling in the tongue and throat. Severity of reaction to bites appear to increase with repeated exposure. I previously used a topical infused oil or tincture of fresh *Larrea tridentata* leaf to treat these bites in clients and students and observed that the intensity and spreading of the itching/pain was reduced by 10-20% most of the time. However, about five years ago, I experimented with *Prunus persica* tincture on a *Triatoma* bite based on my success with peach in other venomous insects and discovered that the peach tincture applied topically on the welt and taken internally (½-1 ml in an adult) reduced itching, pain and swelling within ten minutes and eliminated it entirely (with the exception of a barely visible red mark at the bite site) with half an hour. I have repeated these results in 14 cases over the last five years, in both adults and children. I always apply a few drops of tincture topically to each bite site (*Triatoma* will often inflict a series of bites if not noticed and stopped) in addition to giving the tincture internally.

I also find peach exceptionally helpful in cases of morning sickness or even hyperemesis with obvious heat signs and where ginger may aggravate instead of assist. I have seen several cases where women who were previously too nauseous to have an appetite, or vomiting so profusely as to be unable to keep any food down, regain some appetite with a single dose of peach tincture. I originally read these indications as written by William Cook and have found *Prunus persica* to be a reliable and valuable remedy in this context.

Kiva Rose has a clinical practice in Reserve, NM and is the co-editor of *Plant Healer: A Journal of Traditional Western Herbalism* and co-director of the Traditions in Western Herbalism Conference.

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# MEDICAL HERBALISM IN GLOBAL HEALTH



## Clinical Training in Nicaragua

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### Clinical experience

Participants in this course will work in a primary care setting under the supervision of licensed naturopathic physicians and will observe all phases of the clinical visit – interview, physical exam, differential diagnosis, and preparation and administration of integrative treatments, which include herbal medicine, nutritional supplements, homeopathy, acupuncture, massage and bodywork, flower essence therapy, counseling, and pharmaceutical medicine. Participants will practice to the full scope of their training.

### Pre-Clinical Intensive Option

Intensive in medical Spanish in Esteli, Nicaragua. You will receive 20 hours of language instruction from experienced, professional teachers in a teacher-student ratio of one-on-one or one-on-two. Visits to herbal foundations and farms in Esteli and to a cloud forest nature preserve in Miraflores. Visits with local herbalists and an herbalist-midwife.

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## **Herpes (from page one)**

with anti-herpes activity, however, and its fame as an anti-viral herb is more an artifact of its commercial development and advertisement than its uniqueness or its superiority over other plants. Even in the 1960's, research into *Melissa's* effects were accompanied by research into other Lamiaceae family plants with similar constituents which were found to have similar or superior anti-herpes activity in vitro (Kucera and Hermann; Hermann and Kucera). The constituents of *Melissa* most commonly attributed with anti-viral properties – rosmarinic acid, caffeic acid, ferulic acid, flavonoids, and others – are widely distributed among the Lamiaceae, and plants of the genera *Hyssopus*, *Mentha*, *Prunella*, *Rosmarinus*, *Salvia* and *Thymus* have been found to be equal to and in some cases superior to *Melissa* in in-vitro anti-herpes tests (Nolkemper et al; Reichling et al).

For the plants below, the same pattern was found in the research: plants effective against one or more of the herpes viruses tested – HSV-I, HSV-2, or ACV – were found by the same or other researchers to also be effective against the other strains, suggesting a mechanism that interferes with the viral coat. The oils or other constituents in the plants prevented infection when applied to the cell cultures before application of the virus, but had no effect after the entrance of the herpes virus into the cells. This indicates a direct virucidal effect. Some of the research also indicated that the complete essential oils of the plants were more effective against the virus than the isolated components of the oil (Astani et al 2010; Schnitzler et al Jan 2010.) For the volatile oils, various authors note that they are fat soluble, and will readily enter into the tissues around an infection in humans.

### **MELISSA**

At dilutions of the essential oil that were not harmful to the cells themselves, binding to cells by the virus was reduced by more than 97% for both HSV-I and HSV-2. Effective inhibition was present at dilutions of 0.0004% and 0.00008%. The oil exhibited a direct virucidal effect on the virus that prevented its entrance into the cells (Schnitzler 2008 September, Nolkemper et al, Allahverdiyev et al.; Dimitrova). Human clinical trials of *Melissa* creams on herpes lesions showed that they shortened the healing period, prevented the spread of the infection, and rapidly resolved typical symptoms of herpes like itching, tingling, burning, stabbing, swelling, tautness, and redness (Koytchev et al).

### **HYSSOPUS**

A dose-dependent virucidal activity against HSV-2 was demonstrated. The essential oil appeared to inactivate the free virus by interfering with its envelope. Viral spread was significantly reduced by more than 90% when the virus was pre-incubated with the essential oil (Koch et al). The oil exhibited high levels of virucidal activity against ACV strains of HSV-1 (Schnitzler et al 2007).

### **MATRICARIA**

In a test of six essential oils, all including *Matricaria* showed a dose-dependent virucidal activity against HSV-2. The authors noted that *Matricaria* oil had highly selective effects against herpes virus and recommended it as a promising candidate for development as a topical therapeutic application against genital herpes (Koch et al).

### **MENTHA**

*Mentha* oil has been known to possess in-vitro anti-viral effects since 1967 (Hermann and Kucera). A study in 2008 showed that the oil exhibited high and concentration-dependent antiviral activity against free HSV-1, including both ACV and acyclovir-sensitive strains, and reduced infectivity “drastically” (Reichling et al 2008 dec). Both types of HSV, as well as ACV were “considerably neutralized” after treatment with the extracts prior to infection (Nolkemper et al). In another trial the antiviral activity of the oil at a dilution that did not harm the cells was about 99% (Schumacher et al).

### **PRUNELLA**

*Prunella vulgaris* extracts have shown strong activity against herpes virus, and may act through multiple mechanisms. The essential oil of *Prunella* showed high and concentration-dependent antiviral activity against HSV-1, HSV-2, and ACV. Researchers noted a “drastic” lowering of infectivity (Reichling et al 2008 dec; Nolkemper et al). *Prunella* also contains a polysaccharide component which possesses direct virucidal effects against both HSV-1 and HSV-2 and may also enhance overall immunity (Chiu et al, Zhang et al, Xu et al). The systemic immune-enhancing effects of the plant may explain why in China it is allowed to turn brown in the fields before harvesting; harvesting late in the season may maximize the polysaccharide fraction of the tops.

### **ROSMARINUS**

The essential oil of *Rosmarinus* has shown high and concentration-dependent levels of antiviral activity

against HSV-1 and ACV in experiments by different researchers (Reichling et al 2008 dec; Nolkemper et al).

**SALVIA**

*Salvia* oil reduced the spread of herpes infection after pretreatment of the host cells (Schnitzler 2008 January). It has been shown active against HSV-1, HSV-2, and ACV (Nolkemper et al). Twenty percent ethanolic extracts showed a much higher activity than the aqueous ones.

**THYMUS**

*Thymus* has been extensively researched for activity against herpes virus by various research teams. It showed strong inhibition of infection in cell culture in a dose-dependent manner, higher doses more effective than lower ones (Astani et al 2010). It showed effects against HSV-1 and ACV (Reichling et al 2008 dec; Schnitzler et al 2007). In a screening of 41 Nepalese plants for anti-herpes activity, a species of *Thymus* was one of three plants species showing potent activity (Rajbhandari et al). A dose-dependent virucidal activity against HSV-2 was demonstrated. The essential oil appeared to inactivate the free virus by interfering with its envelope. Viral spread was significantly reduced by more than 90% when the virus was pre-incubated with the essential oil (Koch et al). Another trial showed “considerable” activity against both types of herpes virus including ACV infection. (Nolkemper et al).

Other plants showing anti-herpes effects include *Eucalyptus* (Astani et al 2010), *Hypericum* (Vijayan et al ) *Illicium* (Astani 2011) *Melaleuca* (Astani et al

2010), *Pimpinella* (Koch et al.), *Propolis* (Schnitzler et al Jan 2010), *Santalum album* (Koch et al.; Schnitzler et al 2007); *Usnea* (Vijayan et al), and *Zingiber* (Koch et al.; Schnitzler et al 2007).

**CONSTITUENTS**

Proven antiviral plant constituents are widely distributed in the Lamiaceae family and some other plants. See page 13 for a list of plants constituents and the plants they may appear in.

**PREPARATIONS**

Optimal preparations are not clearly specified in the research. Essential oils, ethanolic extracts, and water extracts have all shown high activity, and pharmacy may have to be determined on a plant-by-plant basis. Traditional forms of diluted essential oils, infused oils, salves, creams, and compresses may make effective clinical applications.

**SAFETY**

In standard aromatherapy, oils are typically diluted to two percent or below or the strength of the concentrated oil. In-vitro, most of the herbs discussed here showed nearly complete inhibition of the virus at much greater dilution than two percent, so there is not reason to use concentrated oils. Undiluted oils may present both either topical or systemic problems, such as irritation, sensitization, hepatotoxicity, neurotoxicity, phototoxicity, oil-drug interactions, or potential harm to a fetus. See the chart below for some safety considerations of oils discussed in this article.

**Safety considerations for topical use of diluted essential oils\***

Eucalyptus	non-toxic, non-irritant, non-sensitizing
Hyssopus	non-irritant, non-sensitizing, avoid in pregnancy
Illicium	non-irritant, use in moderation
Matricaria	non-toxic, non-irritant, causes dermatitis in some individuals
Melaleuca	non-toxic, non-irritant, causes dermatitis in some individuals
Melissa	non-toxic, causes dermatitis in some individuals, often adulterated with Citrus or Cymbopogon.
Mentha	non-toxic, non-irritant, causes dermatitis in some individuals
Pimpinella	causes dermatitis in some individuals
Rosmarinus	non-irritant, non-sensitizing, avoid in pregnancy
Santalum	non-toxic, non-irritant, non-sensitizing
Thymus	may irritate some individuals, avoid in pregnancy
Zingiber	non-toxic, non-irritant, photosensitizing, avoid in pregnancy

(Lawless; Leung; Tisserand)

\*assumes dilutions of at least 50:1. Undiluted oils should not be applied topically.

## Anti-herpes constituents in some medicinal plants

Component	Eucalyptus	Hyssop	Matricaria	Melaleuca	Melissa	Mentha	Prunella	Salvia	Rosmarinus	Thymus	Zingiber
<b>1,8-cineole</b> (Astani et al 2010)	•	•				•		•	•	•	•
<b>alpha-pinene</b> (Astani et al 2010)	•							•	•	•	
<b>alpha-terpinene</b> (Astani et al 2010)		•		•				•	•	•	•
<b>alpha-terpineol</b> (Astani et al 2010)		•		•				•	•	•	•
<b>beta-caryophyllene</b> (Astani et al 2011)			•		•			•	•	•	•
<b>caffeic acid</b> (Dimitrova et al.)	•		•			•		•	•	•	•
<b>citral</b> (Astani et al 2010; Schnitzler 2008 sep)					•			•	•	•	•
<b>citronellal</b> (Schnitzler 2008 sep)	•									•	•
<b>ferulic acid</b> (Dimitrova et al.)						•		•	•	•	•
<b>gamma-terpinene</b> (Astani et al 2010)	•			•				•	•	•	•
<b>p-cymene</b> (Astani et al 2010)									•	•	•
<b>polysaccharides</b> (Zhang et al; Chiu et al; Xu et al)											•
<b>rosmarinic acid</b> (Reichling et al 2008 dec)					•			•	•	•	•
<b>terpinen-4-ol</b> (Astani et al 2010)		•						•	•	•	•
<b>thymol</b> (Astani et al 2010)										•	•

The above chart shows the widespread distribution of anti-herpes plant constituents among some Lamiaceae and other common medicinal plants. The data is not quantified, and does not show total amount of the anti-viral constituents. The absence of a component in a particular plant may indicate the absence of research into that plant rather than a lack of the constituent. The number of components do not

necessarily indicate the degree of virucidal activity of the plant. Note that *Matricaria*, although apparently containing fewer constituents than the other plants, was selected from among a group of six herbs by researchers as the plant with the most promise for development into a topical application (Koch et al).

## Commentary: Melissa and the birth of an herban legend

by Paul Bergner

(see accompanying **Topical medicinal plants for herpes virus infection** and the references below)

Reports of the anti-herpes effects of *Melissa officinalis* reports reached the North American herbal community in the 1980s and early 1990s, based on research in lab dishes showing an effect against the herpes virus. Follow up trials in humans showed effectiveness of topical applications of *Melissa* concentrated extracts to prevent or shorten herpes outbreaks. Thus the herb leapt into the pages of our herbals as an “antiviral,” the attribution made without reference to method of application or specificity to a viral species, family, or type. And although at least five other mint family plants were shown to be equally or more effective in the lab research as long ago as the 1960s – *Hyssopus*, *Mentha*, *Prunella*, *Rosmarinus*, *Thymus*, *Salvia* – these did not enter into our thinking as topical or internal antivirals. Once *Melissa* had won its “antiviral” attribute, it began appearing in texts with that action, and herbalists began giving it uncritically for all manner of viral infections: influenza, West Nile virus, Epstein-Barr virus, and others.

A focused examination of exactly how *Melissa* and these other plants emerged from the realm of science shows how to use them. The plants each showed inhibition against the implantation or spread of herpes virus in lab dish experiments.

### HERPES REFERENCES

Allahverdiyev A, Duran N, Ozguven M, Koltas S. Antiviral activity of the volatile oils of *Melissa officinalis* L. against Herpes simplex virus type-2. *Phytomedicine*. 2004 Nov;11(7-8):657-61.

Astani A, Reichling J, Schnitzler P. Screening for Antiviral Activities of Isolated Compounds from Essential Oils. *Evidence-Based Complementary and Alternative Medicine* Volume 2011

Astani A, Reichling J, Schnitzler P. Comparative study on the antiviral activity of selected monoterpenes derived from essential oils. *Phytother Res*. 2010 May;24(5):673-9.

Astani A, Reichling J, Schnitzler P. Antiviral Activity of Monoterpene Components of Essential Oils Against Herpes Simplex Virus. *Antiviral Research*, Volume 82, Issue 2, May 2009, Page A46

Some of them subsequently were effective in human trials, with topical application. With a handful of exceptions, they have not been shown to be effective against viruses other than herpes – it is indeed uncommon for plants with activity against one family or type of viruses to be effective against others. For example, McCutcheon et al. screened one hundred medicinal plants in British Columbia for activity against seven different viruses. The viruses were selected as representative of different virus types and families. Twelve of the plants showed at least some activity against one of the seven viruses, and five showed activity against cell cultures of herpes virus, but *no plant had activity against more than one of the seven viruses tested*. Even the famed “antiviral” herb *Lomatium dissectum* was only active against rotavirus, and had no effect on the other six viruses. Neither *Melissa* nor the other mint family plants have been shown to be effective against systemic viral infections when taken by the oral route. Although some of these plants are used as diaphoretics in febrile illness, we have no indication that they have any effect against the virus that may be eliciting the fever.

Looking at what the science actually offers here gives us many new tools for the topical treatment of herpes, including acyclovir-resistant infections. The accompanying article describes this research in more detail, and includes some promising non-Lamiaceae plants that might be included in formulas with any of the above plants for topical use.

Chiu LC, Zhu W, Ooi VE. A polysaccharide fraction from medicinal herb *Prunella vulgaris* downregulates the expression of herpes simplex virus antigen in Vero cells. *J Ethnopharmacol*. 2004 Jul;93(1):63-8.

Christophers J, Clayton J, Craske J. Survey of resistance of herpes simplex virus to acyclovir in northwest England. *Antimicrobial Agents and Chemotherapy*, vol. 42, no. 4, pp. 868–872, 1998.

Cohen RA, Kucera LS, Hermann EC. Antiviral activity of *Melissa officinalis* (Lemon Balm) Extract. *Proc Soc Exp Biol Med*. 1964 Nov;117:431-4.

Dimitrova Z, Dimov B, Manolova N, Pancheva S, Ilieva D, Shishkov S. Antiherpes effect of *Melissa officinalis* L. extracts. *Acta Microbiol Bulg*. 1993;29:65-72

Furman PA, Coen DM, St Clair MH, Schaffer PA. Acyclovir-resistant mutants of herpes simplex virus type 1

*Continued on next page*

express altered DNA polymerase or reduced acyclovir phosphorylating activities. *J Virol*. 1981 Dec;40(3):936-41.

Herrmann EC Jr, Kucera LS. Antiviral substances in plants of the mint family (Labiatae). 3. Peppermint (*Mentha piperita*) and other mint plants. *Proc Soc Exp Biol Med*. 1967 Mar;124(3):874-8.

Koch C, Reichling J, Schnee J, Schnitzler P. Inhibitory effect of essential oils against herpes simplex virus type 2. *Phytomedicine*. 2008 Jan;15(1-2):71-8. Epub 2007 Oct 31

Koytchev R, Alken RG, Dundarov S. Balm mint extract (Lo-701) for topical treatment of recurring herpes labialis. *Phytomedicine*. 1999 Oct;6(4):225-30.

Kucera, L.S., Herrman, E.C. Antiviral substances in plants of the mint family (Labiatae), Tannins of *M. officinalis*. *Proc. Soc. Exp. Biol. Med*. 124 (3), 865-869; 1967

Lawless, J. *Encyclopedia of Essential Oils*. London: Thorsons, 2002

Leung, A.Y. *Encyclopedia of Common Natural Ingredients*. Hoboken, N.J: Wiley 2009

McCutcheon AR, Roberts TE, Gibbons E, Ellis SM, Babiuk LA, Hancock RE, Towers GH. Antiviral screening of British Columbian medicinal plants. *J Ethnopharmacol*. 1995 Dec 1;49(2):101-10.

Nolkemper S, Reichling J, Stintzing FC, Carle R, Schnitzler P. Antiviral effect of aqueous extracts from species of the Lamiaceae family against herpes simplex virus type 1 and type 2 in vitro. *Planta Med*. 2006 Dec;72(15):1378-82. Epub 2006 Nov 7.

Rajbhandari M, Mentel R, Jha PK, Chaudhary RP, Bhattarai S, et al. Antiviral activity of some plants used in Nepalese traditional medicine. *Evid Based Complement Alternat Med*. 2009 Dec;6(4):517-22. Epub 2007 Oct 25.

Reichling J, Nolkemper S, Stintzing FC, Schnitzler P. Impact of ethanolic Lamiaceae extracts on herpesvirus infectivity in cell culture. *Forsch Komplementmed*. 2008 Dec;15(6):313-20. Epub 2008 Nov 3.

Sanchez-Medina A, Etheridge CJ, Hawkes GE, Hylands PJ, Pendry BA, Hughes MJ, Corcoran O. Comparison of rosmarinic acid content in commercial tinctures produced from fresh and dried lemon balm (*Melissa officinalis*). *J Pharm Pharm Sci*. 2007;10(4):455-63.

Schnitzler P, Neuner A, Nolkemper S, Zundel C, Nowack H, Sensch KH, Reichling J. Antiviral activity and mode of action of propolis extracts and selected compounds. *Phytother Res*. 2010 Jan;24 Suppl 1:S20-8.

(a) Schnitzler P, Schuhmacher A, Astani A, Reichling J. *Melissa officinalis* oil affects infectivity of enveloped herpesviruses. *Phytomedicine*. 2008 Sep;15(9):734-40.

(b) Schnitzler P, Nolkemper S, Stintzing FC, Reichling J. Comparative in vitro study on the anti-herpetic effect of phytochemically character-

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## Clinical correspondence

### Chamomile and acute abdominal distress

Tania Neubauer, ND

I spent the first year of my practice as a naturopathic physician in a public hospital in Nicaragua via Natural Doctors International's volunteer physician program, treating thousands of patients with the entire gamut of health concerns seen in primary care. While there I had amazing results with chamomile tincture for people with acute abdominal distress, including people who really looked like "acute abdomens." I was on an island with minimum one hour in a rickety little boat to get people to an actual ER with surgical capabilities, so only people who were definitely in serious condition would be transported. Also, most islanders adamantly refuse to leave the island for treatment for any reason – they have a bonesetter treat them when a bone is broken, and if a problem can't be fixed in their hospital, they will often go home and see if it gets better on its own. Therefore, the type of people who here in the States I would send to the ER to rule out appendicitis, etc., would in Nicaragua be people who I would sometimes preliminarily try a little bit of treatment to see how they responded.

I had a number of people come in doubled over in pain, and I fed them large doses of simple chamomile

tincture (at times, it was all I had) and they responded quite well, many with rapid total resolution of their distress. Prior to this experience I generally thought of chamomile as a pleasant tea with some gentle medicinal qualities, but after my year in Nicaragua I have come to really appreciate this incredible plant when prepared in a strong form. One thing that is particularly wonderful about it is that you can be a little fuzzy on the cause of the acute distress - gastro-intestinal? Reproductive? Sometimes no way to know without invasive GYN/rectal exams, expensive imaging and even exploratory surgery - and the chamomile still has a good chance of working.

Since working in a place with no access to imaging or labs, I have come to recognize this lovely quality about herbal medicine in general. Even if you don't have a good way to make a firm diagnosis, it's often safe to experiment (within reason) and see how the person responds – in other words you can use the treatments diagnostically. Many physicians do this with pharmaceuticals, but with much greater potential for adverse side effects, drug resistance, and other unwanted outcomes.

I typically dosed a tablespoon of chamomile tincture in these cases. I was using a dry plant tincture made by two Nicaraguan medicinal plant foundations with chamomile grown in the local mountains.

**Tania Neubauer is a naturopathic physician and clinical herbalist in Boulder, CO and is on the regular and clinical faculty at the North American Institute of Medical Herbalism.**

### Herpes references (from page fifteen)

ized aqueous and ethanolic extracts of *Salvia officinalis* grown at two different locations. *Phytomedicine*. 2008 Jan;15(1-2):62-70.

Schnitzler P, Koch C, Reichling J. Susceptibility of drug-resistant clinical herpes simplex virus type 1 strains to essential oils of ginger, thyme, hyssop, and sandalwood. *Antimicrob Agents Chemother*. 2007 May;51(5):1859-62. Epub 2007 Mar 12.

Schuhmacher A, Reichling J, Schnitzler P. Virucidal effect of peppermint oil on the enveloped viruses herpes simplex virus type 1 and type 2 in vitro. *Phytomedicine*. 2003;10(6-7):504-10.

R. Stránská, R. Schuurman, E. Nienhuis et al., Survey of acyclovir-resistant herpes simplex virus in the Netherlands: prevalence and characterization. *Journal of Clinical Virology*, vol. 32, no. 1, pp. 7–18, 2005.

Tisserand, R. and Balacs, T. *Essential Oil Safety: A Guide for Health Care Professionals*. Philadelphia: Churchill Livingstone, 1995

Vijayan P, Raghu C, Ashok G, Dhanaraj SA, Suresh B. Antiviral activity of medicinal plants of Nilgiris. *Indian J Med Res*. 2004 Jul;120(1):24-9.

Zhang Y, But PP, Ooi VE, Xu HX, Delaney GD, Lee SH, Lee SF. Chemical properties, mode of action, and in vivo anti-herpes activities of a lignin-carbohydrate complex from *Prunella vulgaris*. *Antiviral Res*. 2007 Sep;75(3):242-9. Epub 2007 Apr 17.

Xu HX, Lee SH, Lee SF, White RL, Blay J. Isolation and characterization of an anti-HSV polysaccharide from *Prunella vulgaris*. *Antiviral Res*. 1999 Nov;44(1):43-54.

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