Essential Oils & Black Salve

DERRICK ADAMS, DO, FAOCDD
RED BLUFF, CA
I have no relevant conflicts of interest
Overview

- DSHEA – legislative issues
- Essential Oils (EO’s)
- Escharotic Agents
5 CANCER FIGHTING Essential Oils
“What we have found was frankincense essential oil can trigger the cancer cell to die — basically commit suicide. It also gives your body what it needs to kill cancer as well, so it’s a dual mechanism.”

- Dr. Eric Zielinski
How Did We Get Here?
*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.
Dietary Supplement Health and Education Act (DSHEA)

- Amendment to Federal Food, Drug, and Cosmetic Act of 1938
- Dietary Supplements do not need FDA approval
- FDA does not receive info on safety and efficacy
- Eliminates regulatory standards for quality and purity
- Burden of proof is on consumer and FDA
- No premarket approval or premarket testing
1994 DSHEA

October 1994
Dietary Supplement Health and Education Act (DSHEA)

FDA
Food Drug
Dietary Supplement Safety Act of 2010

- Empower FDA to remove dangerous supplements
- Remove adulterated products
- Set forth civil penalties
- Required reporting of “non serious” adverse events
*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.
Growth Of Industry Dietary Supplement Sales

Dietary Supplement Sales were estimated to top 30 Billion in 2011

Introduced in 1994, DSHEA dramatically increased the availability and use of supplements. It also increased consumer responsibility. Source: fda.gov
“I believe that the amount the Congress heard about this whole issue was greater than what they received about the Vietnam war. It was tremendous.” (Jane Henney 1998-2002 FDA)

“It makes [regulating] tobacco look easy.”
What are Essential Oils?

- FDA or FTC has no definition
- “Essene” vs. “Essential”
- Hydrophobic & Volatile
- Oils we already use—menthol, methyl salicylates, camphor
- Aromatherapy/Massage
Essential Oils in My Life

- Mouthwash
- Food Flavoring
- Vapor Rub
- Analgesic muscle creams
- “Medicated” Lip balm
- Tea Tree Shampoo
- Lavender moisturizer
Father of Aromatherapy
Rene-Maurice Gattefosse
PubMed Listings for EO’s and Specific Conditions

- Psoriasis 30
- Seborrhea 12
- Tinea 35
- Antimicrobial 5,622
- Alopecia 16
- Rosacea 3
Do essential oils have antimicrobial properties?
Melaleuca alternifolia (Tea Tree)
Reported Benefits

- Acne
- Antifungal
- Seborrhea
- Antibiotic
- Antiviral
- Thrush
- Attenuate nickel reactions
- Lice
Melaleuca alternifolia (Tea Tree) Equivalent to Phenol?


PubMed - Tea Tree Oil Studies


PubMed - Tea Tree Oil Studies


Tea tree oil reduces histamine-induced skin inflammation.

Koh KJ¹, Pearce AL, Marshman G, Finlay-Jones JJ, Hart PH.

Abstract

BACKGROUND: Tea tree oil is the essential oil steam-distilled from Melaleuca alternifolia, an Australian native plant. In recent years it has become increasingly popular as an antimicrobial for the treatment of conditions such as tinea pedis and acne.

OBJECTIVES: To investigate the anti-inflammatory properties of tea tree oil on histamine-induced weal and flare.

METHODS: Twenty-seven volunteers were injected intradermally in each forearm (study and control assigned on an alternating basis) with histamine diphosphate (5 microg in 50 microL). Flare and weal diameters and double skin thickness were measured every 10 min for 1 h to calculate flare area and weal volume. At 20 min, 25 microL of 100% tea tree oil was applied topically to the study forearm of 21 volunteers. For six volunteers, 25 microL paraffin oil was applied instead of tea tree oil.

RESULTS: Application of liquid paraffin had no significant effect on histamine-induced weal and flare. There was also no difference in mean flare area between control arms and those on which tea tree oil was applied. However, mean weal volume significantly decreased after tea tree oil application (10 min after tea tree oil application, P = 0.0004, Mann-Whitney U-test).

CONCLUSIONS: This is the first study to show experimentally that tea tree oil can reduce histamine-induced skin inflammation.
PubMed – Tea Tree Oil Studies


PubMed – Tea Tree Oil Studies


PubMed – Tea Tree Oil Studies


Lavender Oil
Reported Benefits

- Acne
- Calm anxiety
- Alopecia
- Improve complexion
- Hair growth
- Hair removal
- Relieve pain
- Anti-Aging
Lavender


Lavender


Side Effects: Gynecomastia


“Lavender oil poses potential environmental health concerns and should be investigated further,” The Endocrine Society
Herbs for Growing Breasts
Using Essential Oils to Promote Breast Growth

Since they contain estrogen, are estrogenic, and cause male breasts to grow (so why not?)

UsingEOsSafely.com/BREASTGROWTH
Lemon Oil?
Natural Compounds as Spider Repellents: Fact or Myth?

Fischer A\textsuperscript{1,2,3}, Ayasse M\textsuperscript{2}, Andrade MCB\textsuperscript{3}.

Abstract
Although some spiders are globally invasive, found at high densities, and may be considered pests (particularly those that are toxic to humans), there are few pest management methods based on experimental data. 'Common wisdom' and advertisements on internet websites assert that a number of natural substances repel spiders. We tested whether the three substances cited most frequently (lemon oil, peppermint oil, and chestnut-fruits) effectively repelled female spiders or whether these were myths. We presented each of the putative repellents versus a control in a two-choice assay and tested responses of females of three invasive spider species in two different families: Theridiidae, Latrodectus geometricus C. L. Koch (Araneae: Theridiidae) and Steatoda grossa C. L. Koch (Araneae: Theridiidae) and the araneid, Araneus diadematus Clerck. Chestnuts (Araneae: Araneidae) and mint oil strongly repelled L. geometricus and A. diadematus. S. grossa was less sensitive to these chemicals but had a slight tendency to avoid chestnuts. However, lemon oil, the substance most likely to be cited as a repellent (over 1,000,000 hits on Google), had no effect on any of these spiders. We conclude that volatiles released by mint oil and chestnuts may be effective in deterring spider settlement in two different families of spiders, but lemon oil as a repellent is a myth.
Eucalyptus oil
Reported Benefits

- Itchy scalp
- Insect repellent
- Topical pain
- Antiseptic
- Sun screen
- Acne
- Moisturizer
- Enhance drug delivery

<table>
<thead>
<tr>
<th>Name of herbal oil taken</th>
<th>SPF value calculated spectrophotometrically</th>
</tr>
</thead>
<tbody>
<tr>
<td>Olive oil</td>
<td>7.549</td>
</tr>
<tr>
<td>Coconut oil</td>
<td>7.119</td>
</tr>
<tr>
<td>Castor oil</td>
<td>5.687</td>
</tr>
<tr>
<td>Almond oil</td>
<td>4.659</td>
</tr>
<tr>
<td>Mustard oil</td>
<td>2.105</td>
</tr>
<tr>
<td>Chaulmoogra oil</td>
<td>2.019</td>
</tr>
<tr>
<td>Sesame oil</td>
<td>1.771</td>
</tr>
<tr>
<td>Peppermint oil</td>
<td>6.668</td>
</tr>
<tr>
<td>Tulsi oil</td>
<td>6.571</td>
</tr>
<tr>
<td>Lemon grass oil</td>
<td>6.282</td>
</tr>
<tr>
<td>Lavender oil</td>
<td>5.624</td>
</tr>
<tr>
<td>Orange oil</td>
<td>3.975</td>
</tr>
<tr>
<td>Lemon oil</td>
<td>2.810</td>
</tr>
<tr>
<td>Eucalyptus oil</td>
<td>2.625</td>
</tr>
<tr>
<td>Tea tree oil</td>
<td>1.702</td>
</tr>
<tr>
<td>Rose oil</td>
<td>0.248</td>
</tr>
</tbody>
</table>
10 Oils With Natural SPF

- **Carrot Seed Oil**: SPF 38-40
- **Raspberry Seed Oil**: SPF 28-50
- **Wheatgerm Oil**: SPF 20
- **Avocado Oil**: SPF 4-15
- **Coconut Oil**: SPF 2-8
- **Olive Oil**: SPF 2-8
- **Macadamia Nut Oil**: SPF 6
- **Almond Oil**: SPF 5
- **Shea Butter**: SPF 3-6
- **Jojoba Oil**: SPF 4
Enhanced chlorhexidine skin penetration with 1,8-cineole.


Abstract

BACKGROUND: Chlorhexidine (CHG) penetrates poorly into skin. The purpose of this study was to compare the depth of CHG skin permeation from solutions containing either 2% (w/v) CHG and 70% (v/v) isopropyl alcohol (IPA) or 2% (w/v) CHG, 70% (v/v) IPA and 2% (v/v) 1,8-cineole.

METHODS: An ex-vivo study using Franz diffusion cells was carried out. Full thickness human skin was mounted onto the cells and a CHG solution, with or without 2% (v/v) 1,8-cineole was applied to the skin surface. After twenty-four hours the skin was sectioned horizontally in 100 μm slices to a depth of 2000 μm and the concentration of CHG in each section quantified using high performance liquid chromatography (HPLC). The data were analysed with repeated measures analysis of variance.

RESULTS: The concentration of CHG in the skin on average was significantly higher (33.3% [95%, CI 1.5% - 74.9%]) when a CHG solution which contained 1,8-cineole was applied to the skin compared to a CHG solution which did not contain this terpene (P = 0.042).

CONCLUSIONS: Enhanced delivery of CHG can be achieved in the presence of 1,8-cineole, which is the major component of eucalyptus oil. This may reduce the numbers of microorganisms located in the deeper layers of the skin which potentially could decrease the risk of surgical site infection.

KEYWORDS: Antiseptic penetration; Skin antisepsis; Terpene

PMID: 28514947  PMCID: PMC5436417  DOI: 10.1186/s12879-017-2451-4

Free PMC Article

Greive KA¹, Barnes TM¹.
Investigation of the Anti-Melanogenic and Antioxidant Characteristics of Eucalyptus camaldulensis Flower Essential Oil and Determination of Its Chemical Composition.

Huang HG1, Ho YC2, Lim JM3, Chang TY4, Ho CL5, Chang TM6.

Abstract
The effects of essential oil from Eucalyptus camaldulensis flowers oil on melanogenesis and the oil's antioxidant characteristics were investigated. Assays of mushroom and cellular tyrosinase activities and melanin content of mouse melanoma cells were performed spectrophotometrically, and the expression of melanogenesis-related proteins was determined by Western blotting. The possible signaling pathways involved in essential oil-mediated depigmentation were also investigated using specific protein kinase inhibitors. The results revealed that E. camaldulensis flower essential oil effectively suppresses intracellular tyrosinase activity and decreases melanin amount in B16F10 mouse melanoma cells. The essential oil also exhibits antioxidant properties and effectively decreases intracellular reactive oxygen species (ROS) levels. The volatile chemical composition of the essential oil was analyzed with gas chromatography-mass spectrometry (GC/MS). The chemical constituents in the essential oil are predominately oxygenated monoterpenes (34.9%), followed by oxygenated sesquiterpenes (31.8%), monoterpenic hydrocarbons (29.0%) and sesquiterpene hydrocarbons (4.3%). Our results indicated that E. camaldulensis flower essential oil inhibits melanogenesis through its antioxidant properties and by down-regulating both mitogen-activated protein kinases (MAPK) and protein kinase A (PKA) signaling pathways. The present study indicates that the essential oil has the potential to be developed into a skin care product.
The image depicts a signaling pathway involving the melanocortin 1 receptor (MC1R) and its regulation by various factors. Key components include:

- **α-MSH** (melanocyte-stimulating hormone) binds to MC1R.
- **IBMX** (isobutylmethylxanthine) inhibits cAMP PDE (phosphodiesterase).
- **E. camaldulensis flower essential oil** activates MITF (microphthalmia-associated transcription factor).
- **PD98059** inhibits MAPK (mitogen-activated protein kinase) activity.
- **cAMP** (cyclic adenosine monophosphate) activates CREB (cAMP-response element-binding protein).
- **mitf** (mouse intestine nuclear factor) gene expression is regulated by CREB.
- **E. camaldulensis flower essential oil** also activates tyrosinase (TRP-1, TRP-2), leading to melanogenesis.

Antibacterial essential oils in malodorous cancer patients: clinical observations in 30 patients.


Author information

Abstract

Malodorous necrotic ulcers in cancer patients are of major concern as it leads to social isolation and poor quality of life. Current medical and topical therapies have proven inadequate in their ability to reduce foul smell to acceptable levels. We report the positive experience we have had in using antibacterial essential oils in patients with incurable head and neck cancer and associated malodorous necrotic ulcers. All patients received a standard course of therapy with oral or systemic antibiotics. In addition, we rinsed the ulcers with an antibacterial essential oil mix (mainly based on Eucalyptus oil) twice a day. All patients experienced complete resolution of the foul smell by only the third or fourth day of therapy. As a secondary effect we saw that besides smell reduction the oils had anti-inflammatory effects on neoplastic ulcers. In some patients ulcers started to heal and achieved complete re-epithelialization. The patients experienced great personal relief upon resolution of their malodorous conditions. Quality of life improved significantly with the resulting reintroduction of social contact with friends and relatives.

PMID: 16785038 DOI: 10.1016/j.phymed.2005.09.012
[Indexed for MEDLINE]
Enhancing effect of essential oils on the penetration of 5-fluorouracil through rat skin.

Abdullah D¹, Ping QN, Liu GJ.

Abstract

Three essential oils as penetration enhancers for 5-fluorouracil (5-FU) were studied using excised rat skin. The oils used were eucalyptus, peppermint and turpentine. Azone was used for comparison. The enhancing effect of the oils was found to be less than that of azone, but all the oils used enhanced the permeation of 5-FU. Eucalyptus oil was found to be the most active, causing about 60 fold increase, while peppermint and turpentine caused 46 and 28 fold increase, respectively. Eucalyptus oil was further studied by grading it into 5 fractions according to difference in boiling points. It was found that their activities increased as their boiling point increased. With all enhancers increased partition coefficients were observed but the diffusion coefficient values obtained were comparatively higher. The mode of action of these accelerants may be described by combined processes of partition and diffusion, the diffusion process being dominant.

PMID: 9208269

[Indexed for MEDLINE]
Peppermint Oil
Reported Benefits

- Contains menthol & menthone
- Natural pesticide
- Irritable Bowel Syndrome
- Topical usage for nerve pain and muscle aches
- No FDA approvals
- European Medicines Agency approves topical usage
Camphor

- OTC Itch Creams
- OTC Topical Analgesics
- Seizures

Oil of Wintergreen
Reported Benefits

- Pain relief
- Improve digestion
- Antiseptic
- Counter-irritant to pain
- OTC muscle liniments
Oil of Wintergreen

- Methyl salicylate
- Ester of salicylic acid and methanol
- Metabolizes into salicylate
- 1 teaspoon = 20 300mg aspirin tablets
Frankincense and Cancer?

"What we have found was Frankincense essential oil can trigger the cancer cell to die — basically commit suicide. It also gives your body what it needs to kill cancer as well, so it’s a dual mechanism."

- Dr. Eric Zielinski
Frankincense oil derived from *Boswellia carteri* induces tumor cell specific cytotoxicity

Mark Barton Frank,1 Qing Yang,2 Jeanette Osban,1 Joseph T Azzarelli,1,2 Marcia R Saban,2 Ricardo Saban,3 Richard A Ashley,2 Jan C Weller,4 Kar-Ming Fung,5 and Hsueh-Kung Lin2,3,6

Author information | Article notes | Copyright and License information | Disclaimer

Abstract

Go to:

Background

Go to:

Originating from Africa, India, and the Middle East, frankincense oil has been important both socially and economically as an ingredient in incense and perfumes for thousands of years. Frankincense oil is prepared from aromatic hardened gum resins obtained by tapping *Boswellia* trees. One of the main components of frankincense oil is boswellic acid, a component known to have anti-neoplastic properties. The goal of this study was to evaluate frankincense oil for its anti-tumor activity and signaling pathways in bladder cancer cells.
Frankincense oil derived from *Boswellia carteri* induces tumor cell cytotoxicity

Mark Barton Frank, Qing Yang, Jeanette Osban, Joseph T Azzarelli, Marcia R Saban, Ricardo Richard A Ashley, Jan C Weller, Kar-Ming Fung, and Hsuah-Kung Lin

Abstract

**Background**

Originating from Africa, India, and the Middle East, frankincense oil has been important both economically as an ingredient in incense and perfumes for thousands of years. Frankincense oil is derived from aromatic hardened gum resins obtained by tapping *Boswellia* trees. One of the main components of frankincense oil is boswellic acid, a component known to have anti-neoplastic properties. The goal of this study was to evaluate frankincense oil for its anti-tumor activity and signaling pathways in human cancer cells.

Frankincense essential oil prepared from hydrosolvent of *Boswellia sacra* gum resins induces human pancreatic cancer cell death in cultures and in a xenograft murine model

Xiao Ni, Mahmoud M Shaha, Qing Yang, Amy Cao, Kar-Ming Fung, Russell G Postier, Tad Polee, Gary Young, Jingzhe Zhang, and Hsuah-Kung Lin

Regardless of the availability of therapeutic options, the overall 5-year survival for patients diagnosed with pancreatic cancer remains less than 5%. Gum resins from *Boswellia* species, also known as frankincense, have been used as a major ingredient in Ayurvedic and Chinese medicine to treat a variety of health-related conditions. Both frankincense chemical extracts and essential oil prepared from *Boswellia* species gum resins exhibit anti-neoplastic activity, and have been investigated as potential anti-cancer agents. The goals of this study are to identify optimal condition for preparing frankincense essential oil that possesses potent anti-tumor activity, and to evaluate the activity in both cultured human pancreatic cancer cells and a
Frankincense oil derived from Boswellia species is an important component of the Bursaria family, known for its anti-inflammatory and anti-inflammatory properties. The essential oil from Boswellia sacra has been shown to have potential anti-cancer agents. The objective of this study was to evaluate frankincense's effects on tumor cell-specific apoptotic and suppressing tumor aggressiveness in cultured human breast cancer cells.

Background

Gum resins obtained from trees of the Bursaria family (Boswellia sp.) are important ingredients in incense and perfumes. Extracts prepared from Boswellia sp. gum resins have been shown to possess anti-inflammatory and anti-neoplastic effects. Essential oil prepared by distillation of the gum resin traditionally used for aromatic therapy has also been shown to have tumor cell-specific anti-proliferative and pro-apoptotic activities. The objective of this study was to optimize conditions for preparing Boswellia sacra essential oil with the highest biological activity in inducing tumor cell-specific cytotoxicity and suppressing aggressive tumor phenotypes in human breast cancer cells.
Clinical evaluation of safety and efficacy of Boswellia-based cream for prevention of adjuvant radiotherapy skin damage in mammary carcinoma: a randomized placebo controlled trial.

Togni S¹, Maramaldi G, Bonetta A, Giacomelli L, Di Pierro F

Abstract

OBJECTIVE: Acute radiation erythema and other skin reactions are common adverse effects experienced by breast carcinoma patients undergoing radiotherapy treatment. Boswellic acids are pentacyclic triterpenes extracted from the resins of the tropical tree Boswellia serrata with strong anti-inflammatory properties. This study was designed to evaluate the safety and the efficacy of the application of a base cream containing boswellic acids in a proprietary formulation (Bosexil(R)) for the prevention and relief of radiation-induced adverse effects in breast cancer patients.

PATIENTS AND METHODS: The acute skin reactions were clinically evaluated by visual intensity and computer-assisted skin color analysis, and toxicity was assessed by the Radiation Therapy Oncology Group (RTOG) rating scale.

RESULTS: These findings indicate that the use of a boswellia-based cream is effective in reducing the use of topical corticosteroids and is able to reduce the grade of erythema and the skin superficial symptoms, being well tolerated by the patients.

CONCLUSIONS: Further studies comparing boswellia cream with other topical agents will be appropriate to confirm the effectiveness of this treatment for breast cancer patients under radiation therapy.

Comment in
A comment about the use of Boswellia-based cream for prevention of adjuvant radiotherapy skin damage in mammary carcinoma. [Eur Rev Med Pharmacol Sci. 2015]
Use of Boswellia-based cream for prevention of adjuvant radiotherapy skin damage in mammary carcinoma. [Dermatol Ther. 2016]

PMID: 25967706
Side effects of topical essential oils

- Wintergreen oil death
- Gynecomastia
- Allergic or Irritant dermatitis
- Photodermatitis
- Systemic hypersensitivity
- Delay of diagnosis and treatment
“If, for some reason, you have bottles of essential oils at home, consider discarding them (safely) if you have young children. Otherwise, they MUST be locked up, out of sight and reach of children and pets – all the time.”
Phototoxic & Photosensitive Reactions

- Bergamot
- Grapefruit
- Lemon
- Lime
- Bitter Orange
- Cumin
Random Interesting Studies
EO’s & Dermatology

Elephants are the only Animals that can't Jump
Randomized trial of aromatherapy. Successful treatment for alopecia areata.

Hay IC, Jamieson M, Ormerod AD.

Abstract

OBJECTIVE: To investigate the efficacy of aromatherapy in the treatment of patients with alopecia areata.

DESIGN: A randomized, double-blind, controlled trial of 7 months' duration, with follow-up at 3 and 7 months.

SETTING: Dermatology outpatient department.

PARTICIPANTS: Eighty-six patients diagnosed as having alopecia areata.

INTERVENTION: Eighty-six patients were randomized into 2 groups. The active group massaged essential oils (thyme, rosemary, lavender, and cedarwood) in a mixture of carrier oils (jojoba and grapeseed) into their scalp daily. The control group used only carrier oils for their massage, also daily.

MAIN OUTCOME MEASURES: Treatment success was evaluated on sequential photographs by 2 dermatologists (I.C.H. and A.D.O.) independently. Similarly, the degree of improvement was measured by 2 methods: a 6-point scale and computerized analysis of traced areas of alopecia.

RESULTS: Nineteen (44%) of 43 patients in the active group showed improvement compared with 6 (15%) of 41 patients in the control group (P = .008). An alopecia scale was applied by blinded observers on sequential photographs and was shown to be reproducible with good interobserver agreement (kappa = 0.84). The degree of improvement on photographic assessment was significant (P = .05). Demographic analysis showed that the 2 groups were well matched for prognostic factors.

CONCLUSIONS: The results show aromatherapy to be a safe and effective treatment for alopecia areata. Treatment with these essential oils was significantly more effective than treatment with the carrier oil alone (P = .008 for the primary outcome measure). We also successfully applied an evidence-based method to an alternative therapy.
Rosemary oil vs minoxidil 2% for the treatment of androgenetic alopecia: a randomized comparative trial.

Panahi Y, Taghizadeh M, Marzony ET, Sahebkar A.

Abstract
Rosmarinus officinalis L. is a medicinal plant with diverse activities including enhancement microcapillary perfusion. The present study aimed to investigate the clinical efficacy of rosemary oil in the treatment of androgenetic alopecia (AGA) and compare its effects with minoxidil 2%. Patients with AGA were randomly assigned to rosemary oil (n = 50) or minoxidil 2% (n = 50) for a period of 6 months. After a baseline visit, patients returned to the clinic for efficacy and safety evaluations every 3 months. A standardized professional microphotographic assessment of each volunteer was taken at the initial interview and after 3 and 6 months of the trial. No significant change was observed in the mean hair count at the 3-month endpoint, neither in the rosemary nor in the minoxidil group (P > .05). In contrast, both groups experienced a significant increase in hair count at the 6-month endpoint compared with the baseline and 3-month endpoint (P < .05). No significant difference was found between the study groups regarding hair count either at month 3 or month 6 (P > .05). The frequencies of dry hair, greasy hair, and dandruff were not found to be significantly different from baseline at either month 3 or month 6 trial in the groups (P > .05). The frequency of scalp itching at the 3- and 6-month trial points was significantly higher compared with baseline in both groups (P < .05). Scalp itching, however, was more frequent in the minoxidil group at both assessed endpoints (P < .05). The findings of the present trial provided evidence with respect to the efficacy of rosemary oil in the treatment of AGA.

PMID: 25342469
Figure 1. Comparison of hair count between the study groups at different intervals. Significant increases in mean hair count were observed at month 6 compared with month 3 and baseline in both groups ($P<.05$).
Efficacy of korean red ginseng in the treatment of alopecia areata.

Oh GN¹, Son SW

Author information

Abstract
Alopecia areata (AA) is an autoimmune disease that can affect any hair-bearing area. AA is known to be caused by immunological disorder but still, the pathogenesis is not fully understood. Many therapeutic modalities have been used to treat alopecia areata, with variable efficacy and safety profiles. Unfortunately, none of these agents is definitely curative or preventive alone. We studied hair growth efficacy and safety of Korean red ginseng (KRG) in AA comparing corticosteroid intra-lesional injection (ILI) alone patient group with ILI with KRG taking patient group using Folliscope 2.5 for 12 wk. Herein, we would like to report the efficacy of KRG in the treatment of AA and recommend KRG as a useful complimentary food for gaining efficacy of treatment for AA.
Efficacy of Korean Red Ginseng in the Treatment of Alopecia Areata

Ga Na Oh and Sang Wook Son*

Abstract

Alopecia areata (AA) is an autoimmune disease that can affect any hair-bearing area. AA is known to be caused by immunological disorder but still, the pathogenesis is not fully understood. Many therapeutic modalities have been used to treat alopecia areata, with variable efficacy and safety profiles. Unfortunately,
Positive Patch-Test Reactions to Essential Oils in Consecutive Patients From North America and Central Europe.


Abstract

BACKGROUND: Synthetic fragrances and natural essential oils (EOs) are used in perfumery and found in various cosmetics. Essential oils are also increasingly used to promote wellness. In previous studies, the sensitization potential of some EOs has been identified; however, the current prevalence of sensitivity is largely unknown.

OBJECTIVES: The aim of this study was to determine frequency of positive patch-test reactions to EOs tested in the baseline series, along with 3 fragrance markers (FMs) (fragrance mix I, fragrance mix II, and Myroxylon perpeira), in consecutive patients in the US/Canadian North American Contact Dermatitis Group (NACDG) (2009-2014) and the central European, tri-national Information Network of Departments of Dermatology (IVDK) (2010-2014).

METHODS: This study used a retrospective analysis of patch-test results and relevant demographic/clinical data collected electronically by the networks, obtained with Santalum album 10% petrolatum (pet) (IVDK only), Cananga odorata 2% (NACDG) and 10% (IVDK) pet; Jasminum species 2% (NACDG) and 5% (IVDK) pet, Mentha piperita 2% pet, Melaleuca alternifolia, oxidized (tea tree oil), 5% pet, and Lavandula angustifolia 2% pet (latter 3 NACDG only).

RESULTS: Overall, 62,354 patients were tested to 3 FMs and EOs (NACDG, 13,356; IVDK: 49,996), 11,565 (18.6%) reacted to at least 1 FM or EO, whereas 857 (1.4%) reacted to 1 or more EOs but none of the 3 FMs. For both the NACDG and IVDK populations, individuals who were positive to 1 or more of the 9 study allergens were significantly less likely to be male, have occupational skin disease, or have hand involvement and significantly more likely to have leg dermatitis and be 40 years and older (P's < 0.005). Prevalence rates for EOs were as follows: S. album, 1.4% IVDK; C. odorata, 1.1% NACDG and 2.4% IVDK; Jasminum species 0.7% NACDG and 1.4% IVDK; M. piperita, 0.9% NACDG; L. angustifolia, 0.3% NACDG; and M. alternifolia, 0.3% NACDG. Of the 140 NACDG patients who reacted to 1 or more of the 5 NACDG EOs but none of the FMs, M. alternifolia yielded most positive reactions (45%); half of these reactions were strong (++ or +++), 50.8% and of definite/probable clinical relevance (52.4%). Of the 717 IVDK patients who reacted to 1 or more of the 3 IVDK EOs but none of the 3 FMs, 38% were positive to C. odorata, 36% to S. album and 36% to Jasminum species.

CONCLUSIONS: Testing to EOs may be important for detecting sensitivity not detected by FMs alone. In North America, M. alternifolia is an important and clinically relevant sensitizer often not detected by FM. In Europe, as well as in North America, clinical relevance is often difficult to evaluate because (1) labeling of EOs when used as fragrance is not mandatory, and (2) these mixtures may indicate sensitization to 1 or more of their individual constituents from other sources, including synthetic fragrances.
Essential oils enhance the toxicity of permethrin against Aedes aegypti and Anopheles gambiae.

Gross AD\textsuperscript{1,2}, Norris EJ\textsuperscript{1}, Kimber MJ\textsuperscript{2}, Bartholomay LC\textsuperscript{2}, Coats JR\textsuperscript{1}.

Abstract

Insecticide resistance and growing public concern over the safety and environmental impacts of some conventional insecticides have resulted in the need to discover alternative control tools. Naturally occurring botanically-based compounds are of increased interest to aid in the management of mosquitoes. Susceptible strains of Aedes aegypti (Linnaeus) (Diptera: Culicidae) and Anopheles gambiae (Meigen) (Diptera: Culicidae) were treated with permethrin, a common type-I synthetic pyrethroid, using a discriminate dose that resulted in less than 50% mortality. Piperonyl butoxide (PBO) and 35 essential oils were co-delivered with permethrin at two doses (2 and 10 μg) to determine if they could enhance the 1-h knockdown and the 24-h mortality of permethrin. Several of the tested essential oils enhanced the efficacy of permethrin equally and more effectively than piperonyl butoxide PBO, which is the commercial standard to synergize chemical insecticide like pyrethroids. PBO had a strikingly negative effect on the 1-h knockdown of permethrin against Ae. aegypti, which was not observed in An. gambiae. Botanical essential oils have the capability of increasing the efficacy of permethrin allowing for a natural alternative to classic chemical synergists, like PBO.

KEYWORDS: Aedes aegypti; Anopheles gambiae; biopesticides; mosquito control; plant essential oils
In vitro activity of ten essential oils against Sarcoptes scabiei.

Evening primrose oil and marine oil in the treatment of psoriasis.

Oliwiecki S¹, Burton JL.

Author information

Abstract
The effect of dietary supplementation with a combination of n-3 (marine oil) and n-6 (evening primrose oil) essential fatty acids in the treatment of chronic stable plaque psoriasis was observed. Thirty-seven patients in a double-blind parallel trial were studied. There was no significant improvement in clinical severity of psoriasis or change in transepidermal water loss.

PMID: 8050140

[Indexed for MEDLINE]
Treatment of pityriasis versicolor with topical application of essential oil of Cymbopogon citratus (DC) Stapf - therapeutic pilot study.

Carmo FS\(^1\), Pereira Fde O, Cavalcante NM, Gayoso CW, Lima Fde O

+ Author information

**Abstract**

**BACKGROUND:** Pityriasis versicolor is a fungal infection caused by Malassezia spp. that has frequent relapses.

**OBJECTIVES:** The main objective of this research was to perform phase I and II clinical studies, using formulations containing essential oil of Cymbopogon citratus in patients with pityriasis versicolor.

**METHODS:** Phase I study included twenty volunteers to ascertain the safety of the formulations. In phase II, 47 volunteers randomly received essential oil formulations at 1.25 µL/mL concentration, for forty days. The shampoo should be applied three times a week and the cream twice a day. A control group in phase II, consisting of 29 volunteers, received the same formulations but with 2% ketoconazole as the active ingredient.

**RESULTS:** No significant adverse events were observed in volunteers during Phase I. In Phase II, 30 (63.83%) volunteers using essential oil and 18 (62.07%) using ketoconazole remained until the end of the study. We observed a predominance of lesions in disseminated form, with M. sympodialis detected as the predominant agent identified in cultures. After 40 days of treatment, the rate of mycological cure was 60% (p < 0.05) for the group treated with essential oil of C. citratus and over 80% (p < 0.05) for the group treated with ketoconazole formulations.

**CONCLUSIONS:** Notwithstanding the safety and antifungal effects observed in this study after application of formulations containing the essential oil of C. citratus, further studies with larger populations should be performed to confirm the actual potential of these formulations in the treatment of patients with Pityriasis versicolor.
So Do Topical EO’s Work?
How can we use EO’s in dermatology?

- Alleviate fear of injections?
- Post-herpetic neuralgia?
- Neuralgia Parathestica?
- Pruritic symptoms?
- Adjunct to Anti-parasitics?
- Adjunct in acne management?
- Uncomplicated tinea?
- Seborrhea?
- Alleviate side effects of other medications?
- Enhance penetration of topicals?
Commercial EO Companies
What do these companies do well?

- Advocate caution (especially in children)
- Recommend dilution
- Recommend test spots
- Recognize possible irritant and allergic contact dermatitis
- Provide lists of photosensitizing agents
- Redefine “evidence”
Acceptable Claims for EO’s

- “Supports the health of the ______ system”
- “Improve vitality”
- “Promote wellbeing”
- “Balance the ___ system”
Pure Essential Oils are Comparable to OTCs

Enhance Your Family’s Health With Pure Therapeutic Grade Essential Oils

After Sun Lotion, Aleve®, Alluna®, Blistex®, Calamine Lotion, Carmex®, Desitin®, Ear Drops, Head & Shoulders®, Midol®, Motrin®, Neosporin®, Solarcaine®, Selsun Blue®, Tylenol® PM

Allegra®, Anti-Bacterial Hand Sanitizer, Children’s Tylenol®, Chloraseptic®, Dextromethorphan®, Halls®, Imodium®AD, Monistat®, Prevacid®, Prilosec®OTC, Ricola®, Robitussin®, Tinactin®, Tylenol®, SAM-e®, Zyrtec®

Advil®, Allegra®, Aspirin, Biofreeze®, Colic Tablets®, Dayquil®, Dextromethorphan®, Drisana®, Gas X®, Imodium®AD, Listerine®, Nasonex®, Nyquil®, Orabase®, Oragel®, Miralax®, Prevacid®, Prilosec®OTC, Scope®, Sudafed®, TheraFlu®, Tums®, Zyrtec®
Everyday Oils vs. OTC Drugs

You have a choice. You can choose to give your family safe, effective, pure alternatives.

Peppermint
- Pepto-Bismol
- Imodium-AD
- Tums / Rolaid
- Mylanta
- Prilosec / Zantac
- TYLENOL / Motrin
- Beano / Gas-X
- Midol

Thieves
- Dayquil / Nyquil
- Chloraseptic
- Robitussin
- Abreva
- Orajel
- Lamisil / Lotrimin
- Vicks VapoRub
- Nicorette

Lemon
- Children's Tylenol
- Children's Motrin
- Imodium-AD
- Mucinex
- Alli
- Azo Cranberry

Lavender
- Neosporin / Bacitracin
- Aleve / Motrin
- Advil Simms
- TYLENOL PM
- Unisom
- Zyrtec / Claritin
- Benadryl
- Calamine Lotion

Frankincense
- Neosporin / Bacitracin
- Mederma
- Scar Away
- Scar Zone
- Blister Shield
- Azo Cranberry
- Neutrogena
- Oil of Olay

Purification
- Calamine Lotion
- OFF! (Repellent)
- Bactine
- Proactive / Clearasil
- Benadryl Topical
- Cortaid
- Cortizone
- Cortizone-10
- Vagasil

PanAway
- Bengay
- Mineral Ice
- Icy Hot / Biofreeze
- Aleve
- Thermocare
- Aspercreme
- Motrin / Advil
- Midol

Valor
- Advil
- Ibuprofen
- Motrin
- TYLENOL Arthritis
- Bengay
- Sleep Apnea Eze
- Breathe Right Strips

Peace & Calming
- Unisom
- TYLENOL PM
- Benadryl
- Stress & Anxiety
- Zanaprin

“YOUR INFORMATION CAN GO HERE”
FDA Crackdown!
The Business of Pseudoscience
“The Egyptians were some of the first people to use aromatic essential oils extensively in medical practice, beauty treatment, food preparation, and in religious ceremony.”
“Essential oil extracts were used throughout the dark ages in Europe for their anti-bacterial and fragrant properties.”
History of the Escharotic Agents

*Squamous Cancer Removed with Bloodroot!*

The doctors told this lady it was "nothing" ..... but see what happened!

- Bloodroot Salve Applied
- The Lesion Separates
- The Skin Heals

See More Pictures
Escharotic Agents

- Bloodroot
- Zinc Chloride
- Indian Mud
- Black Salve
- Curaderm-BEC5
- QHS Cream
- Yellow Salve
- Compound X
- Hoxsey’s paste
- Mohs paste
Above: An American woman after using black salve on her nose to remove a small cancer on her skin; required several operations to repair the hole.

Above: Temple of a 55-year-old Australian man after the application of black salve for four months. Image ©Medical Journal of Australia, via http://dailymail.co.uk/i/pix/2014/04/09/article-2600537-1CF534D900000578-73_634x421.jpg

Left: [Name redacted] of Florida, before and after the application of black salve to the skin under her nose; required six operations to reconstruct her nose.

Left: [Name redacted] of Idaho, after the application of black salve to her nose; required 17 constructive operations over 3 years to reconstruct her face.

Images courtesy of Quackwatch article, "Don't Use Corrosive Cancer Salves (Escarotics)" by Stephen Barrett, M.D. http://www.quackwatch.com/81QuackeryRelatedTopics/Cancer/escharot.html


History of Escharotic Agents

- 2,500 years ago – Indian uses of arsenic
- Eastern Native American tribes
- Ibn Sina of Persia
- Hildegard of Germany in the 12th century.
- 1815 England first “modern” usage of zinc chloride
- Dr. J. Weldon Fell
- Harry Hoxsey “Hoxsey’s Paste”
- Dr. Mohs – American College of Chemosurgery
- Dr. Oz vs. Greg Caton
- Mohs surgeons & Naturopaths
YOU DON'T HAVE TO DIE

THE AMAZING STORY OF THE HOXSEY CANCER TREATMENT

HARRY M. HOXSEY, N.D.
Public Beware!

WARNING AGAINST THE HOXSEY CANCER TREATMENT

Sufferers from cancer, their families, physicians, and all concerned with the care of cancer patients are hereby advised and warned that the Hoxsey treatment for internal cancer has been found worthless by two Federal courts.

The Hoxsey treatment costs $400, plus $60 in additional fees—expenditures which will yield nothing of value in the care of cancer. It consists essentially of simple drugs which are worthless for treating cancer.

The Food and Drug Administration conducted a thorough investigation of the Hoxsey treatment and the cases which were claimed to be cured. Not a single verified cure of internal cancer by this treatment has been found.

Those afflicted with cancer are warned not to be misled by the false promise that the Hoxsey cancer treatment will cure or alleviate their condition. Cancer can be cured only through surgery or radiation. Death from cancer is inevitable when cancer patients fail to obtain proper medical treatment because of the lure of a painless cure “without the use of surgery, x-ray, or radium” as claimed by Hoxsey.

Anyone planning to try this treatment should get the facts about it.

For further information write to:
U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Food and Drug Administration
Washington 25, D. C.
Mohs Paste

- “Chemical Charlatan!”
- Cauterize, Kill, Fix
- 40.0 gm Stibnite, 10.0 gm *Sanguinaria canadensis*, 34.5 ml of saturated zinc chloride solution

Bloodroot Conspiracy?

- American Society for Mohs Surgery
- American College of Mohs Surgery
- Dr. Perry Robins Skincancer.org
- Nytimes obituary
This book by Frederic Mohs features his results of a 12,000 person study using the herb bloodroot and zinc chloride to destroy cancer cells.

According to Wikipedia, **Mohs surgery**, also known as **chemosurgery**, developed in 1938 by a general surgeon, Dr. Frederic E. Mohs, is microscopically controlled surgery used to treat common types of skin cancer. Mohs surgery is one of the many methods of obtaining complete margin control during removal of a skin cancer. Mohs surgery allows for the removal of a skin cancer with very narrow surgical margin and a high cure rate.

The cure rate with Mohs surgery cited by most studies is between 97% and 99.8% for primary basal cell carcinoma, the most common type of skin cancer. Recurrent basal cell cancer has a lower cure rate with Mohs surgery, more in the range of 94%. It has been used in the removal of melanoma-in-situ (cure rate 77% to 98% depending on surgeon), and certain types of melanoma (cure rate 52%). Another study of melanoma-in-situ revealed Mohs cure rate of 95% for frozen section Mohs, and
Guess Who Loves Mohs Paste?
Preparation and Evaluation of a Modified Mohs Paste Mixed with Zinc Oxide 10% Topical Oil-Based Ointment

Minako Tsuruta, Takanori Miyoshi, Moeko Tsuruyama, Saori Matsumoto, Takuya Yamashina, Kenji Irie, Naomi Matsuo, Tomomi Itonaga, Yoichi Hiraki, Yosei Kawamata

Published Online: 1 May 2018 | https://doi.org/10.1089/jpm.2017.0585

Abstract

Background: The skin fixative used in Mohs chemosurgery contains zinc chloride and is referred to as Mohs paste (MP). However, MP shows a remarkable change in rheological characteristics after its preparation.

Objective: To prepare an MP with stable rheological characteristics, we prepared a modified MP (mMP) using zinc oxide 10% single ointment (Zn_ointment), which is an oil-based ointment.

Methods: We evaluated mMP by determining its rheological characteristics, depth of tissue fixation, and observation of the tissue sample for fixation.
Mohs' ointment use in controlling advanced head and neck cancer.

[Article in Japanese]
Minami K^1, Hasegawa N, Fukuoka O, Miyajima C, Tsunoda R, Fukaya T

Abstract
Mohs' chemosurgery, originally developed to treat skin cancer, uses zinc chloride in Mohs' ointment to fix tissues, and is applicable in different clinical settings. In advanced head and neck cancer, Mohs' chemosurgery relieves main skin-infiltration symptoms such as bleeding, infection, exudation, and severe pain. Mohs' chemosurgery conducted in two cases of advanced head and neck cancer yielded an acceptable result free of bleeding, pain, exudation, and infection. Steps in palliative care are repeated until the tumor surface is completely fixed. Using Mohs' ointment provides acceptable relief without technical complications. Although not a topical chemotherapeutic agent, it fixes the lesion well.

PMID: 19670797
[Index for MEDLINE]
[Local Control with At-Home Mohs Paste Treatment for Malignant Tumor Exposed at the Skin].

[Article in Japanese]
Terabayashi T, Yamagiwa T, Watanabe G, Ito S, Yamaoka Y.

Abstract
Malignant tumors exposed at the body surface are often complicated by bleeding, effusion, infection, and offensive odor, which can lead to impairment of patients' QOL. Mohs paste has previously been used in the treatment of cutaneous malignant tumors as a local application for such symptoms during palliative care; some reports indicate that this procedure is effective. However, most of the cases were treated in hospital. We have performed this procedure as a part of home care. From January 2011 to December 2014, we studied Mohs paste treatment at home in 5 patients. In all cases, hemostasis and reduction of effusion were observed. To ensure a safe procedure, the patient is required to maintain the rest position during the treatment. We conclude that Mohs paste treatment is possible at home and that this procedure is an effective means to support the patients hoping for home care.

PMID: 25809409
[Indexed for MEDLINE]
Zinc chloride unit dose packaging, applicator, and method of use in treating cancer and other skin diseases

Abstract

An improved method for the treatment of melanoma and skin diseases which utilizes a zinc chloride fixative mixture is provided. The active ingredients of the fixative mixture include zinc chloride (a deeply penetrating, tissue killing histologic preservative), and the anti-cancer plant alkaloids sanguinarine and chelerythrine. Zinc chloride allows the surgeon to perform a complete conventional surgical excision around and below a melanomatous tumor through painless, bloodless dead tissue, and because the microscopic structures are fixed in place by the zinc chloride, the excised tissue can be examined by a pathologist to confirm complete excision and clearance of the melanoma. Although zinc chloride fixative paste has been shown to be an effective treatment for human skin cancer and melanoma, this treatment has been overlooked by the medical community. The paste is difficult to maintain and complicated to apply to the affected skin. This invention allows the active ingredients of zinc chloride fixative paste to be effectively administered to the skin by providing single-use dose specific storage, application, dressing, and administration systems needed to facilitate the use of topical zinc chloride mixtures and/or zinc chloride pastes in the treatment of melanoma and other skin diseases. Enhanced zinc chloride mixture formulations are described.
Experimental rationale for treatment of high-risk human melanoma with zinc chloride fixative paste. Increased resistance to tumor challenge in murine melanoma model.

Kalish RS, Wood JA, Siegel DM, Kaye VN, Brooks NA.
Alpha Omega Labs®

Cansema®

BLACK TOPICAL SALVE
“CLINICAL USE” SIZE

Use as directed • 102 g.
Greg Caton

- “I’ve treated over 25,000 patients”
- “I know 5 where it didn’t work.”
- “Cured mesothelioma”
- “…on the FBI’s 10 Most Wanted list”

Taken from online interview with Dr. M. Oz.  
Americans on the Run
These four, wanted by U.S. authorities, may be at large in this country or could have fled abroad.

Gregory James Caton, U.S.
Convicted of selling fake, harmful cancer drugs and other meds to duped consumers

Metin Atlian, Turkey & U.S.
Defense contractor indicted for bribery of U.S. military officials to win lucrative jobs in Iraq

Marlyn Dean Hinders, U.S.
Indicted for helping to run an offshore Ponzi scheme that swindled $80 million from investors

Neeraj Gulati, India & U.S.
Accused of raping a maid in India; fled the country before local authorities could arrest him
*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.