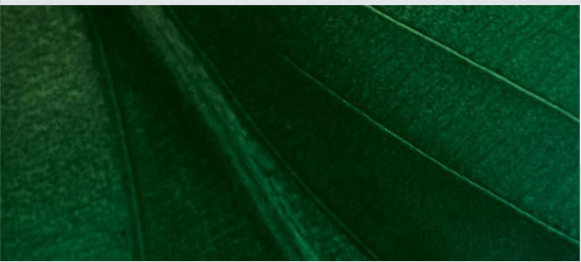




Lavender Essential Oil Therapeutic Properties

US Lavender Growers Association
January 27, 2023



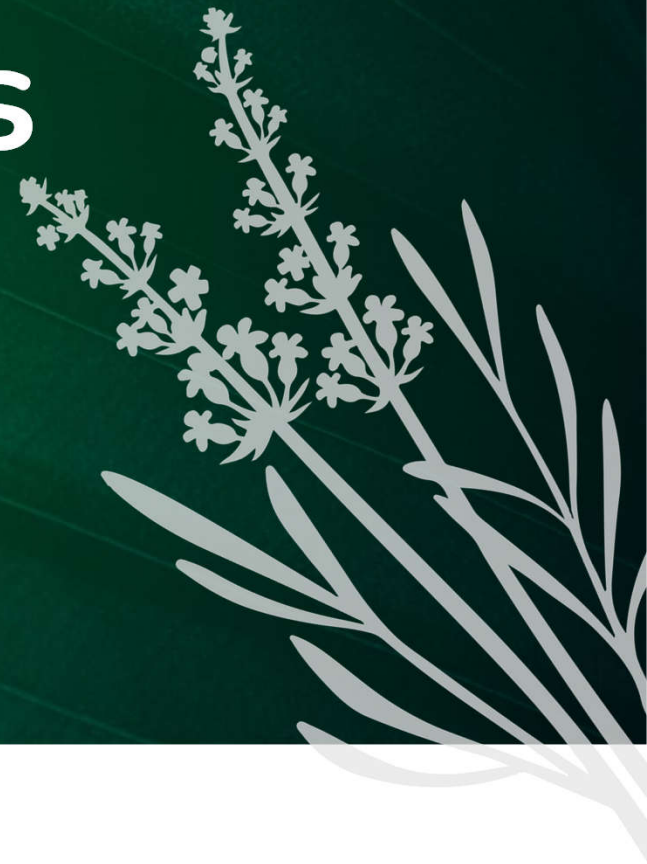
Introduction

Amanda Lattin

- Registered Aromatherapist and Clinical Herbalist
- Consulting Practice in Portland, Oregon, Terracina Aromatics and Herbals
- Dean of Aromatherapy at American College of Healthcare Sciences

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Aromatherapy

What is it and how does it work?



One Modality, Many Definitions

What is Aromatherapy?

“Aromatherapy is part of a larger field called phytotherapy (plant therapy). True aromatherapy is the skilled use of genuine essential oils for therapeutic purposes. Science, education and experience allow aromatherapy to truly become a holistic art.”

-Annette Davis, President, National Association of Holistic Aromatherapy

Inhalation

Versatile and generally safe.

Topical

Essential oils needed to be diluted for topical use.

Internal

Usually needs to be a standardized preparation



How are they different from herbal extracts?

What are Essential Oils?

Steam and Water Distilled, or Cold Pressed

Two products are produced via distillation. The essential oil and the distillate water (hydrosol or hydrolat)

Small Molecules, Volatile Organic Compounds

Essential oils are a very specific fraction of the plant's constituents. Very small, usually 30 carbons or less.

Non-Polar, Lipophilic

These key properties set essential oils apart from other types of herbal preparations



What Are Essential Oils?

Plant Communication Molecules

- Essential oil constituents play several important communication roles within the plant and with its external environment.
- Essential oils are also part of the plant's defense systems.
- These roles reflect how humans also use essential oils.

Communication

Plants, insects, animals

Protection

Injury, infection, water loss, predators

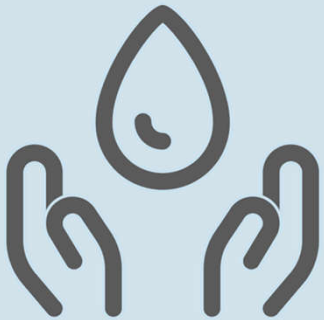
Pollination

Attraction and competition

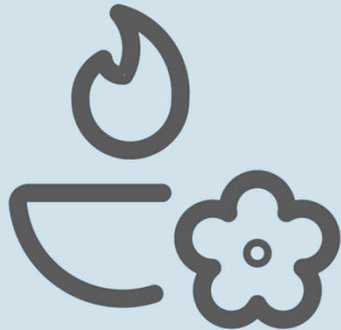


How Does Aromatherapy Work?

Therapeutic Versatility



Physiological Effects



Olfaction Effects



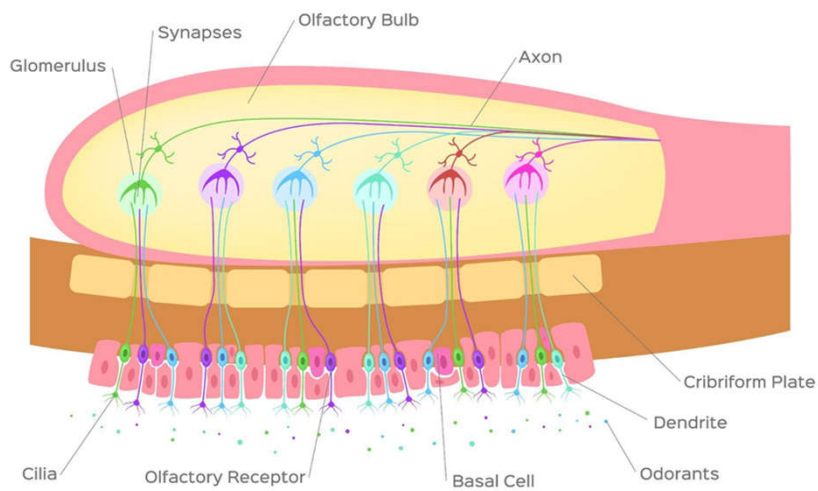
Indirect Immune
Stimulation



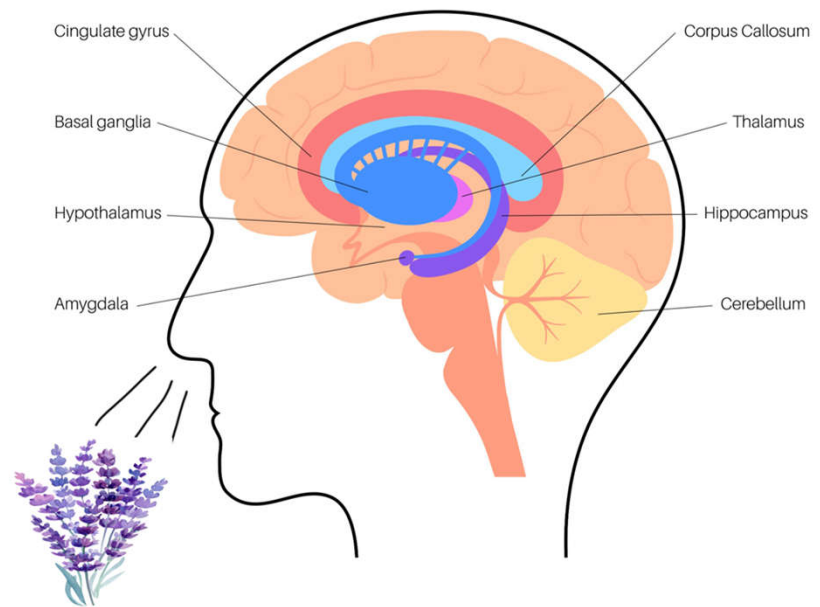
Psychological Effects

How Does Aromatherapy Work?

OLFACTORY SYSTEM



LIMBIC SYSTEM



Lavender Essential Oil

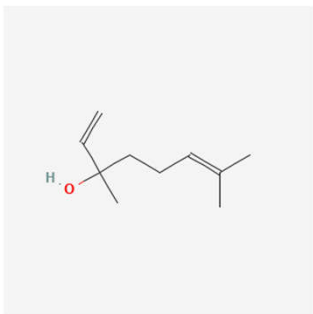
Key Chemical Constituents



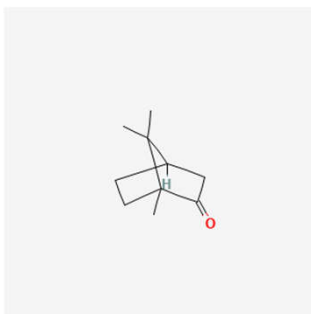
Synergy in Essential Oil Chemistry Affects Therapeutic Actions

Key Constituents in Lavender Essential Oil

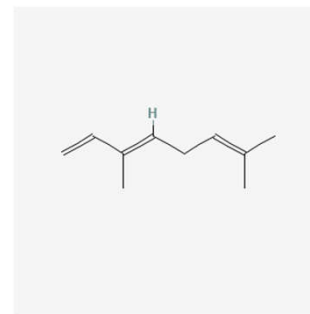
Linalool



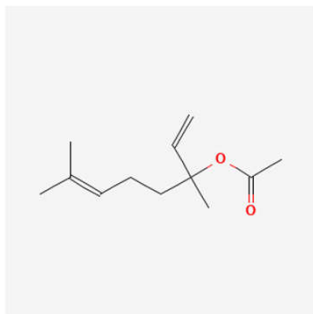
Camphor



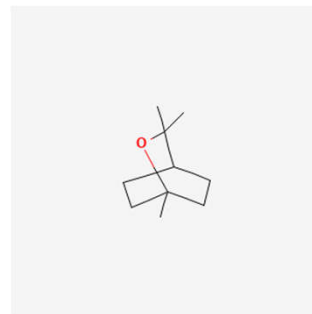
β - ocimene



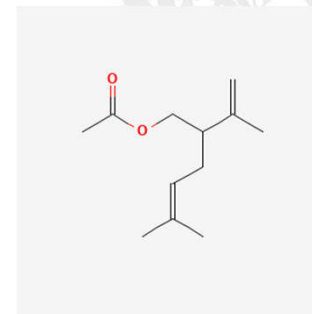
Linalyl acetate



1,8 cineole



Lavandulyl acetate



Synergy in Essential Oil Chemistry Affects Therapeutic Actions

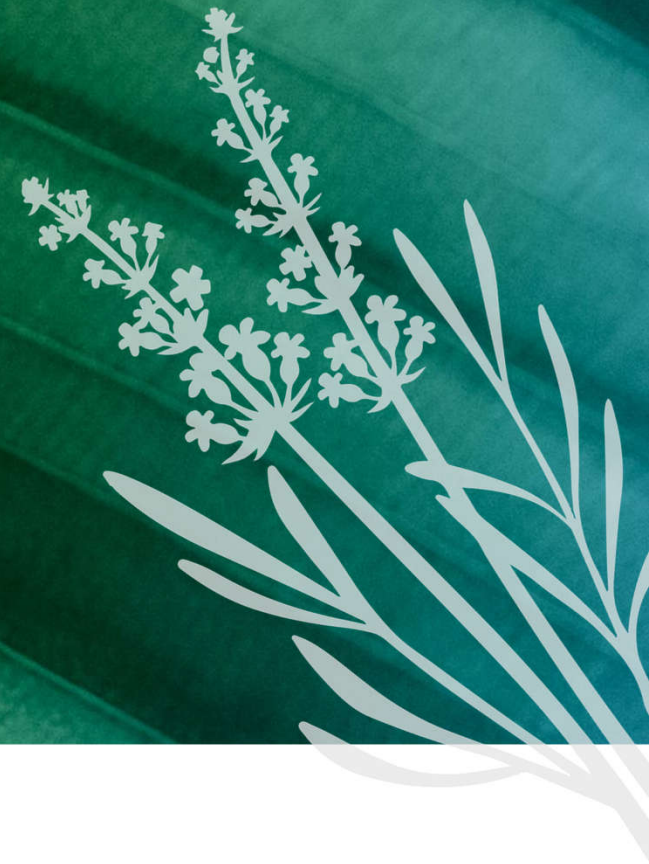
Lavender Essential Oil Key Chemistry

Linalool	Linalyl Acetate	Camphor	Eucalyptol
20%-45% (lavender) 24%-38% (lavandin)	25%-47% (lavender) 20%-38% (lavandin)	<1.5% (lavender) Up to 11% (lavandin)	< 3% (lavender) Up to 7% (lavandin)
Antioxidant Antidepressant Analgesic Anti-inflammatory Antimicrobial Neuroprotective	Anti-inflammatory Anxiolytic Hypotensive Anti-oxidant Antispasmodic Analgesic	Stimulant Analgesic Anesthetic	Anti-inflammatory Mucolytic Antimicrobial Anti-oxidant Cardioprotective Antihypertrophic Neuroprotective



Anxiolytic and Antidepressant Actions

Inhalation of Lavender Essential Oil



Synergy Creating Versatility

Multiple Actions, Holistic Effect

- Post- Partum
- Post-Op
- Assisted Living
- Acute Coronary Syndrome Patients
- Chronic Migraine
- Chemotherapy Patients
- Dental Procedures
- Educators
- Healthcare providers

Serotonergic System

Antidepressant

**N-methyl-D-aspartate
receptor (NMDA)**

Anti-agitation/anti-anxiety

**Voltage dependent
calcium channels
(VOCCs)**

Anti-anxiety



Antimicrobial Actions

Topical Applications of Lavender Essential Oil



Functional from Generalized to Very Specific

Filling a Need for New Approaches

- Skin microbiota
- Wound healing
- Acne
- Herpes lesions
- Indirect immune support
- Dermal infections, component of essential oil blends/synergies
- Composition of each lavender essential oil affects its antimicrobial action
- Low dilutions 4%-7%

Antibacterial

Alone and in combination with pharmaceuticals

Antifungal

Candida spp.

Antiviral

HSV, Influenza Type A



Pain Relieving Actions

Inhalation and Topical Applications



Lavender Essential Oil In Pain Management

Inhalation	Topical Application
Post Surgery: Colorectal Cancer, C-section, Open-Heart	Diabetic neuropathy - 10 minute foot massage with 3% dilution
Pediatric burns	HSV lesions- diluted topical gel
Hemodialysis	Dysmenorrhea - 10-15 minute abdominal self massage with diluted lavender EO
Hospitalized Premature Infants	Ongoing research to assess value of aromatherapy massage in cancer pain
Labor and Delivery	
Migraines	





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