

Seminar Components

Essential oil creation in the plant

- Oil glands; enzymes and biosynthesis
- Why are there trace constituents?
- Functions of essential oils in the plant; implications for human use

Essential oil composition

- Environmental and temporal factors
- Analysis; chemotypes; functional groups
- Useful lifespan of an essential oil

Properties and research

- Types of evidence
- When extrapolation does or does not work
- Mechanisms of action

Constituents and their interactions

- Additivity, synergy and antagonism
- Complexity and potency
- Pharmacology, holism and energetics

Essential oil kinetics

- Measuring dose and dilution
- Establishing safe doses
- The therapeutic window: safe but still effective

Oral dosing

- Pros and cons
- Case study: Citral and safe dosing

Inhalation

- Duration of exposure: risk vs benefit
- Nose-to-brain pathways
- Stress and anxiety: neurochemicals and clinical evidence
- Case study: Success in treating brain cancer

Transdermal absorption

- Dermal structure and permeability
- The stratum corneum
- Intercellular lipid matrix
- Determining essential oil absorption
- The effect of excipients
- Factors such as body region, race, gender and age

Distribution and metabolism

- Hepatic metabolism
- Dermal metabolism
- Enzymes and pathways
- Pharmacogenetics
- Carcinogens and hepatotoxins

Essential oil / drug interactions

- Grapefruit, citral, blue chamomile, wintergreen, peppermint

Excretion

- Elimination half-lives; routes of excretion

Cancer

- Carcinogens in essential oils
- Applying research on saffrole
- Toxic synergy and antagonism
- Case study: Saffrole-containing oils & real-world risk
- Essential oils for skin cancer prevention

Holistic Approaches

Antioxidant

- Oxidative stress and disease; radical scavenging
- Case study: radiation damage

Anti-inflammatory

- NF-Kappa B and COX pathways
- Anti-inflammatory oils
- Case study: post-herpetic neuralgia

Immune stimulant

- Types of T cells
- Case study: tuberculosis
- Rebuilding immune competence

Robert Tisserand

Robert is an international speaker, educator and consultant. In 2010-2014 he inspired live audiences in the UK, USA, Canada, Australia, Brazil, the Czech Republic, China, Hong Kong, Taiwan, Korea and Japan. He tracks all the published essential oil research and collaborates with doctors, herbalists and pharmacologists, integrating scientific data with holistic principles. He is familiar with the foundations of Oriental medicine, and Western herbal and naturopathic traditions, with their emphasis on cleansing, protecting, strengthening immune function and aiding natural healing processes. Robert has 40 years of experience in essential oil blending and aromatherapy product development. He is a co-author of the 780-page book, *Essential Oil Safety*.

Robert has been instrumental in bringing widespread professional and public recognition to aromatherapy. During his 15 years as a massage therapist, he wrote one of the first books on aromatherapy, in 1977. *The Art of Aromatherapy* is now published in twelve languages. In 1974 he established *The Aromatic Oil Company* (a predecessor of *Tisserand Aromatherapy*) and in 1988 he founded *The Tisserand Institute*, setting new standards for vocational aromatherapy education. Also, in 1988, he launched *The International Journal of Aromatherapy*, which he published and edited for 12 years. In the 1990s, Robert orchestrated three international AROMA conferences at British Universities, each attracting some 300 attendees.

Robert is on the International Advisory Board of Complementary Therapies in Clinical Practice, and is a member of the Natural Perfumers Guild. In recognition of his pioneering work, he has been awarded Honorary Lifetime Membership of the International Federation of Professional Aromatherapists (IFPA), the International of Aromatherapists (IFA) and the Alliance of International Aromatherapists (AIA). He was privileged to receive a Lifetime Achievement Award from the AIA in 2007, and is a member of the AIA Research Committee.