



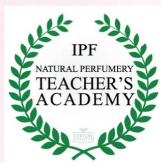
FUNCTIONAL OLFACTORY PROFILING OF AUSTRALIAN AND GLOBAL NATIVES OILS



**Imparting neuro-stimuli that impact emotional
well-being and neuro-calmness with organic
compounds and natural perfumery**

By Param Singh, Founder Ampar

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FUNCTIONAL PROFILING OF AUSTRALIAN AND GLOBAL NATIVE OILS



Dr Param Singh, Australia

AREA OF EXPERTISE

- ✓ Aromachology & Holistic Wellness
 - ✓ Phyto therapeutics
 - ✓ Transdermal and nano-delivery systems (niosomes, liposomes, microencapsulation)
 - ✓ Functional foods and Oral applications
 - ✓ Plant-based dyes and therapeutic textiles
 - ✓ International collaborations in analytical testing, prototypes, manufacturing
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CURRENT PROJECTS

1

Key formulation systems for mood, sleep and cognitive regulation

2

Delivery system development, olfactory, oral, topical using biomolecules

3

Botanical textile R&D exploring therapeutic effects of dyed fabrics

4

International trials on scientifically validated transdermal delivery materials

AUSTRALIAN OILS GROUPED BY DOMINANT TERPENE CLASS AND CORRESPONDING NEUROFUNCTIONAL ACTIVITY:

Functional Axis	Terpene Class	Key Compounds	Example Oils	Mechanistic Rationale
Sedation / Calm	Monoterpene Alcohols	Linalool, Terpineol	Rosalina, Nerolina	GABA-A modulation, anxiolytic response
Pain & Inflammation	Sesquiterpenes / Ketones	Eremophilone, Viridiflorol	Buddha Wood, Kunjea	COX/LOX inhibition, TRPV1 modulation
Cognitive Clarity	Oxides, Monoterpenes	1,8-Cineole, α -Pinene	Fragonia, Lemon Ironbark	Acetylcholine upregulation, vasodilation
Emotional Uplift	Esters, Ionone	Methyl cinnamate, β -Ionone	Strawberry Gum, Boronia	Dopaminergic/serotone-rgic enhancement

COMPARATIVE PROFILING OF SELECTED AUSTRALIAN NATIVE ESSENTIAL OILS AND GLOBALLY RECOGNIZED OILS WITH **NEUROFUNCTIONAL EFFECTS.**

Oil Name	Region	Primary Terpenes	Dominant Effect	Mechanism of Action	Research Status
Rosalina (Melaleuca ericifolia)	Australia	Linalool, 1,8-Cineole	Calm, Anti-anxiety	GABAergic modulation	Emerging
Fragonia (Agonis fragrans)	Australia	alpha-Pinene, 1,8-Cineole	Mental Clarity	Cholinergic & adrenergic	Emerging
Buddha Wood (Eremophila mitchellii)	Australia	Eremophilone, Valeranone	Analgesic, Sedative	TRPV1 modulation	Emerging

INTRODUCING NHIRU: CASE STUDY (CALM FORMULATION)

Based on available literature the Role of Linalool and Limonene

- A stimulating action on neurotransmitters (dopamine) to balance the nervous system
 - Calm anxiety and restlessness
 - Limonene is known to have significant effects on neurotransmitters (dopamine and serotonin), making it another crucial component for bringing forth a sense of happiness by affecting positively the person humour
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THE ROLE OF DOPAMINE & SEROTONIN

- **The Functions of Dopamine**

Dopamine, a small molecule produced by some neurons, acts as a chemical messenger to transmit information to different brain circuits. The degeneration of dopamine neurons is associated with the development of motor disorders seen in Parkinson's disease.

- **The Functions of Serotonin**

Serotonin, another important neurotransmitter, contributes to various physiological functions, although some of its roles are still poorly understood.

ESSENTIAL OILS FOCUS BIOCHEMISTRY AND THEIR PROPERTIES FOR THE PROJECT, NHIRU CALM.

- *Linalool: Coriander, Basil, Petitgrain Mandarin*
- *Limonene: Bergamot, Lemon Yellow, Sweet Orange*
- *Linalyl acetate: Bergamot, Petitgrain*
- *Alpha-pinene & Beta-pinene : Lemon Yellow*

GOALS TO LAUNCH AN AROMACHOLOGY FRAGRANCE NHIRU®: NERVE PULSE CALM WHICH SHOULD HAVE RATIONAL IMPACT ON NEUROTRANSMITTERS

Essential Oils Aromatic Molecules & Pain Management

- ✓ ALPHA BISABOOL: Chamomile Roman/German 15, Chamazulene
 - ✓ FARNESENE :Chamomile 46
 - ✓ MENTHOL: Peppermint 42
 - ✓ METHYL SALICYLATE: Winter Green
 - ✓ LINALOOL: Lavender spike 40 and Camphor
 - ✓ CINNAMALDEHYDE: Cinnamon Bark 69
 - ✓ CARYOPHYLLENE: E citriodora (Citronella/pinene/cineole)
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Meet Me at C12-C13



Thank You