



## Dermatological Studies on Coconut: Topical, Oral, an anti-inflammatory food

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**A**t the Fifth Asian Dermatological Congress in Beijing in 1998, Dr. Kabara talked about his work from the 1970s on medium chain fatty acids, and the uniquely potent anti-bacterial, -fungal, -viral, and -protozoal properties of lauric monoglyceride (monoalaurin) which later investigators in the 1990s confirmed. As a Western-taught dermatologist it was fascinating



to find that monolaurin comes from coconut oil, an all too common tropical product but not among the active botanicals present in tropicals during those years.

These were laboratory and test animal studies. It was time to do an evidence-based type clinical trial on the first hypothesis that monolaurin is as effective and safe as Isopropyl alcohol in a hand gel. With dermatology residents at Makati Medical Center (MMC) and the Skin and Cancer Foundation, Inc; and with research Fellows at VSRC, in succession two randomised double blind clinical trials (RCTs) were done and the results of which accepted the hypothesis! By 2000, these two studies became the very first papers on a coconut ingredient published in a peer-reviewed journal on Microbiology and on Dermatology.

The first paper on VCO as an anti-inflammatory oil was a pilot study presented at the Forum on Photobiology of the Korean Dermatologic Society Meeting in 2004. Using UVB Erythema, UVA Pigmentation, Sunburn Cells as Parameters, the antioxidant effects of Extra Virgin Coconut Oil in UV-exposed skin was detailed.

Meanwhile, other RCTs were published on coconut oil itself having excellent anti-microbial (like its monolaurin) properties and at the same time a quantified emollient. Since 2000 VCO was used at VSRC for patients with dry and often microbially colonised psoriasis, acne,

atopic, contact dermatitis and rosacea lesions. It was noted that VCO - moisturised skin looks and feels better than equally moisturised skin from other moisturiser types. Since these conditions now belong to what are called Inflammatory Diseases, the possibilities of a third effect at work: on the inflammation itself of the lesions was further explored. In still another unpublished paper it was showed in a small RCT the

rise in blood levels of lauric acid and monolaurin after intake of CO which we suspected might also contribute to anti-inflammatory effects.

Studies now recognize psoriasis as a T-cell mediated chronic inflammatory disease. Similarly recognized as inflammatory are diabetes, obesity, hypertension, and some neurodegenerative diseases that occur frequently in moderate to severe psoriasis and are called its comorbidities. Reviews worldwide support this association and studies indicate that inherited susceptibility genes may lead to common inflammatory pathways when exposed to certain lifestyle triggers, especially the diet.

On dietary oils, coconut oil's chemical profile that may affect inflammation focusing on (1) Omega -6:-3 Ratio, (2) Saturation, (3) Chain lengths (4) Trans fats; (5) Anti-/Pro-oxidant contents, (6) Anti-microbial effects were first reviewed and then reviewed those of seed oils commonly used in cooking and found several with chemical profiles opposite those of coconut oil.

Before and After Markers of inflammation (Clinical Indices; Quality of Life Ratings; Serum and Skin Biopsy Immunohistochemistry in moderate psoriasis and its associated internal disease comorbidities) show that compared with a prototype of the more commonly used seed oils used in or patterned on Western diets, Coconut Oil is significantly more anti-inflammatory. ■