

## COMPONENTS OF THE HEALx AND AVIx PRODUCTS

## The Properties of Monolaurin

It has long been recognised that lauric acid, a saturated fatty acid found in many natural products particularly coconut oil, palm oil

and breast milk, has strong antiviral properties. According to published research lauric acid is one of the best 'inactivating' fatty acids.

Lauric acid itself cannot be taken orally because it is severely irritating, however the monoglyceride of lauric acid, monolaurin, can be consumed without any problems.

Monolaurin is non-toxic, non-irritating and approved as a direct food additive by the FDA, yet adversely affects harmful bacteria (but not beneficial gut bacteria), yeast, fungi and protozoa in the body, and enveloped viruses.

Fatty acids and monoglycerides produce their killing/inactivating effects by several mechanisms:

- A postulated mechanism is interference of the plasma membrane lipid bilayer. The antiviral action attributed to monolaurin is that of liquefying the structure of the viral envelopes, causing disintegration of the microbial membrane.
- More recent studies indicate that one antimicrobial effect in bacteria is related to monolaurin's interference with signal transduction/toxin formation.
- Another antimicrobial effect in viruses is due to lauric acid's interference with virus assembly and viral maturation.
- A mode of action may be directly on the immune system itself.

Research over the last 30 years has produced an impressive volume of papers listing the antimicrobial effects of monolaurin on a wide range of potentially pathogenic viruses, bacteria, yeasts and fungi, and protozoa. It would appear that monolaurin has no adverse effect on desirable gut bacteria, and only on potentially pathogenic microorganisms. Of greater significance perhaps is that there appears to be very little development of resistance of the organism to the bactericidal effects of these natural antimicrobials.

Monolaurin is present in *Booster and Soother Plus* in the HEALx and AVIx ranges of products

## The Pharmacokinetic Properties of Aloe Vera



- Contains vitamins C and E, and vitamin A precursors, with strong antioxidant benefits.
- Bradykinase: reduces excessive inflammation when applied to skin.
- Mucopolysaccharides: an immunoregulating effect.
- Anthraquinones: aloin and emodin, which are phenolic compounds found in plant sap. These have antibacterial, antiviral and anti-inflammatory properties.
- Saponins: antiseptic-antibacterial, anti-viral and anti-fungal properties.
- Campesterol, sisterol, lupeol: plant steroids that may provide an anti-inflammatory effect.
- Salicylic acid, which is an anti-inflammatory.
- Contains amino acids.
- Contains lignin, which endows aloe vera with its penetrative effect and allows the carrying of other ingredients.
- Is a 'cooling herb': most feather conditions are referred to as 'warm' disorders.

Aloe Vera is present in *Soother Plus, Soother Spray and Rain* in the HEALx and AVIx ranges of products

## The Pain Relieving Properties of Quaternary Ammonium Compounds

Quaternary amines are produced artificially, often for use as injectable pain relief, but also occur naturally and are produced by protein breakdown in the body. Quaternary ammonium compounds are a naturally occurring quaternary amine.

Healthy cells maintain an electrical balance with a positive charge outside the cell and a negative charge inside the cell. When injury occurs the cellular membranes are disrupted and the electrical balance is destroyed eliciting local pain. Quaternary amines have a strong positive electrical charge which helps to re-establish the electrical balance in the cell membranes, thus dulling the pain perception. The quaternary ammonium compounds in HEALx and AVIx products are formulated to pass through the skin and offer pain relief directly at the site of the cellular damage.

Quaternary ammonium is present in *Soother Spray and Soother Plus* in the HEALx and AVIx ranges of products



## About the Palm Oil Used in HEALx and AVIx products

## Benefits

- Has a high antioxidant content (tocopherol and tocotrienol activity of vitamin E) and high carotenoid content (precursor to vitamin A).
- Contains balanced essential fatty acids, especially omega-3 and omega-6.
- May benefit the animal's skin, eyes, heart and immune system by strengthening the overall nutritional status
- May increase the pet's energy level, particularly in geriatric patients.
- May benefit all aspects of the animal's skin and coat/feathers, including improvements to dry skin and dull or brittle hair/feathers.
- Has been linked to an improvement in the condition of cataracts.

## Origins

Sunshine Factor is red palm oil made from the palm fruit, not the kernel. Many other palm oil products are diluted with the more abundant (and thus cheaper) kernel oil. Palm oil kernels do not have the same health benefits for pets as the palm fruit oil used in Sunshine Factor.

## Certified Organic

The red palm oil is certified organic by QAI, which means no pesticides, preservatives or other contaminants were used in its growth or processing. It is of human-quality consumption standards and is naturally derived using steam and mechanical processes - no chemical solvents are used.

## Sustainable Agriculture

The palm oil used is grown on long established farms in Brazil (in accordance with USDA Certified Organic Standards), and is not harvested in tropical forests in Malaysia, Indonesia or Africa (where the process of palm oil collection is causing environmental damage). The farms used are members of Northern Plains Sustainable Agricultural Society and the Roundtable on Sustainable Palm Oil (RSPO). They are also certified by TransFair as a Fair Trade programme, where workers are paid a fair wage.

Palm Oil is present in *Booster and Sunshine Factor* in the HEALx and AVIx ranges of products