



RESULTS

SPEAK LOUDER THAN WORDS



NOTES FROM

2006 AVI_x Chat

presented by Dr. Thomas Bankstahl

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Updates on Clinical Applications for AVI_x Products

Thomas Bankstahl, DVM

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Why Use AVIx Products?

- Good clinical results: short- and long-term
- Good palatability
- Cost effectiveness
- Name recognition
- Great customer support
- Great client education materials
- Use as a medical dispense



Excellent client compliance and return visits with AVIx products

AVIX Sunshine Factor



- 100% pure organic red palm oil
- From the flesh of the fruit of the palm tree *Elaeis guineensis*
- Three convenient sizes: 1 oz (30 ml), 4 oz (120 ml) and 1 gallon (3.74 L)
- Not hydrogenated or processed
- No trans fats
- The redder the color, the better
- Resistant to oxidation or rancidity at room temperature
- No reported adverse side effects if used as directed
- Contains vitamin E, palmitic acid and a balance of omega 3 and omega 6 fatty acids
- Contains precursors to vitamin A



Organic red palm fruit from Brazil, not Malaysia

General Properties of Red Palm Oil

- Decreases incidence of atherosclerosis
- Lowers blood cholesterol levels
- Decreases occurrence of blood clots by increased vasodilatation, lowering strokes and heart attacks
- Improves immune function
- Inhibits the growth of breast cancer cells in humans
- “Chemopreventive drug” reported as high as 45% enhancement of breast cancer drugs, such as tamoxifen



Vitamin A Precursors

- Red palm oil (AVIX Sunshine Factor) is considered to be one of the richest natural sources of carotenoids
- Includes beta carotene and alpha carotene
- Alpha carotene is considered to be superior over beta carotene in the inhibition of some forms of cancer
- Lycopene is also shown to inhibit some forms of cancer
- Phytoene and zeocarotene

▶ Carotenoids

- Known benefits in people include antioxidant and anticancer effects
- Antioxidants are the scavengers for free radicals
- The buildup of free radicals has been associated with heart disease, cellular aging, cancer, arthritis, and Alzheimer's disease
- Important for the eye, immune system, cellular function and differentiation

Vitamin E

- The many forms of vitamin E include: four tocopherols (alpha, beta, gamma, delta) and four tocotrienols (alpha, beta, gamma, delta)
- Most diets contain only alpha tocopherol
- Red palm oil (AVI_x Sunshine Factor) is the only oil that has abundant tocotrienols
- Tocotrienols are super antioxidants



▶ General Properties of Tocopherols and Tocotrienols

- Inhibit HMG-CoA, which is the enzyme that controls the rate of cholesterol synthesis
- Decrease LDL and triglycerides
- Raise HDL
- Increase immune function
- Anticancerogenic
- Lower the risk of cataract formation
- Modulate the formation of prostaglandins from arachidonic acid, controlling a component of the inflammatory cascade

HMG-CoA Reductase

- Is present in avian species
- May not be the only enzyme involved in cholesterol synthesis
- Has diurnal variation
- This enzyme seems to peak at the time of food ingestion
- May consider giving AVIX Sunshine Factor at or near feeding times in birds with elevated cholesterol levels

Clinical Applications for the Use of AVIx Sunshine Factor in Birds

- Dry flaky skin
- Cardiovascular disease
- Musculoskeletal weakness
- Nutritional deficiencies
- Immune system weakness
- Neoplasia
- Feather discoloration, breakage, picking
- Ocular: early cataract formation, conjunctivitis
- Reproductive disorders: infertility, poor hatching, weak chicks
- Neonate bacterial and fungal diseases



This is a current case study where we are documenting cataract reversal (notice AVIx Sunshine Factor on beak). Stay tuned for “after” updates.

Clinical Results Experienced with AVIx Sunshine Factor

- Lowered circulating cholesterol
- Plumage vibrancy and water repellence
- Decreased vascular incidences due to increased vasodilatation
- Improved heart function/rate (with the addition of AVIx Bird Builder)
- Better hatchability/reduced cardiovascular defects in chicks
- Earlier development of chicks
- Better control of pruritus than flax seed oil when used with antihistamines
- Decreased need for NSAIDs
- Cataract reversal with potential return to vision
- Atherosclerosis prevention (often unrewarding to treat once the pathology has occurred)
- Control of long-term recurrent atopy/sinusitis/otitis
- Reduced incidence and therapy of bacterial and fungal infections

Before AVIx Sunshine Factor



- 1) Erythema of the nares
- 2) Flaky dry skin and pruritus
- 3) Tattered, dull and improperly colored feathers
- 4) Lack of sheen and water repellency

After only 4 weeks of AVIX Sunshine Factor



Results speak louder than words.



Species Commonly Showing Response to AVIx Sunshine Factor

- African greys—atherosclerosis as young as 2 years of age; prevention may be the key
- Amazons
- Eclectus parrots
- Pionus
- Macaws
- Cockatiels



This eclectus parrot has been on AVIx Sunshine Factor for 2 months; although it is still rejuvenating, notice the fluorescent color and sheen.

AVIx Booster

- Organic red palm oil with the addition of monolaurin
- All the positive health benefits of red palm oil combined with the unique qualities of monolaurin

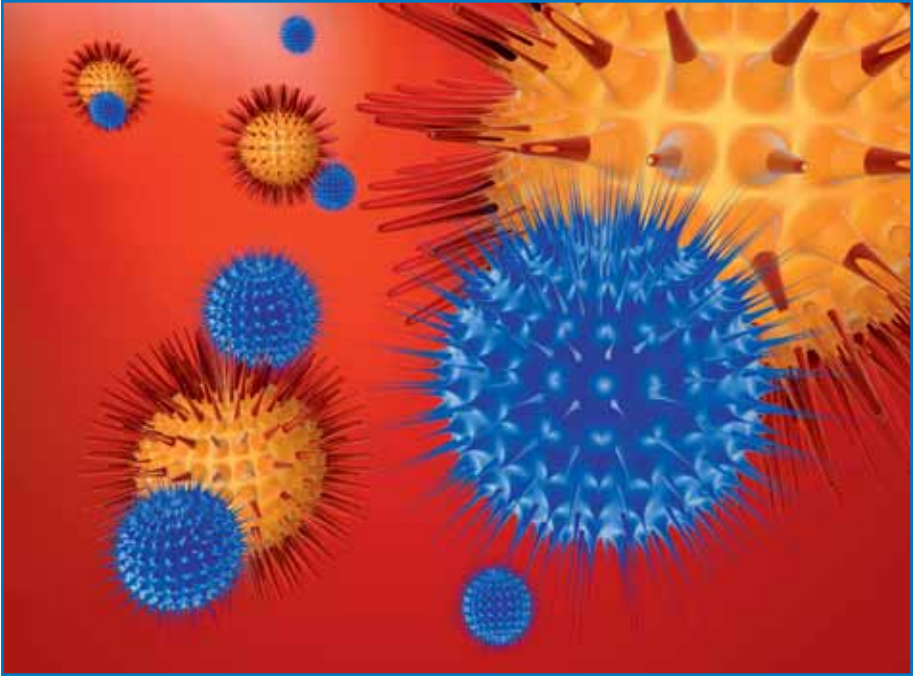


Monolaurin

- Lauric acid was first discovered in human breast milk as the substance that contributed antiviral properties
- Monolaurin is the glycerol ester of lauric acid, giving it more biological activity than lauric acid
- Saturated fatty acid
- Found in coconut products
- Nontoxic and listed on the FDA GRAS (Generally Recognized As Safe) list as a food additive

How Does AVIx Booster Work?

- Binds to the lipid-protein envelope of enveloped viruses, preventing them from attaching and entering host cells to result in infection and replication
- May also fluidize or destroy the envelope directly
- The binding of monolaurin to the envelope “tags” it so that the host immune system can identify it and mount an appropriate host response



Properties of AVIx Booster

- Antiviral: effective against 14 human RNA and DNA enveloped viruses including herpesvirus, cytomegalovirus, coronavirus, influenza and respiratory syncytial virus
- Antimicrobial: *Listeria*, *Staphylococcus aureus*, *Streptococcus agalactiae*, *Chlamydomphila*, *Heliobacter pylori*
- Spares normal gastrointestinal flora
- Antifungal: ringworm
- Effective against yeast: *Candida albicans*
- Antiprotozoal: *Giardia lamblia*

Clinical Applications of AVIx Booster

- For immune compromised individuals
- For birds with multiple low grade or recurring infections
- In conjunction with *Giardia* protocols to expand relapse intervals
- For patients that do not have gut flora to support antibiotic use
- Used in addition to antibiotic/antifungal therapy to speed recovery
- Used in hospitalized patients via handfeedings
- Added to handfeeding protocols in neonates
- Decreases the need or repetitiveness of antibiotic/antifungal therapy, thereby reducing resistance and disrupting gut flora
- Used for viral carriers to improve quality of life and reduce shedding
- Passerine flock support: *Listeria*/cytomegalovirus
- Given to breeding pairs prior to and during chick-rearing

BEFORE



AFTER



A 70-year-old green-winged macaw before and after AVIx Booster, in conjunction with other therapy. After initial stabilization, this macaw has been maintained using only AVIx products:

- AVIx Booster concentrate supported the immune system and has kept chronic long-term infections under control with daily usage
- AVIx Sunshine Factor has provided antiinflammatory relief for arthritis (negating the need for NSAIDs), provided cardiac support and potent antioxidants, which have improved the quality of life and improved feather quality
- AVIx Soother ointment used daily with appropriate physical therapy resulted in resolution of bumblefoot and allowed this bird to not only return to standing but return to gripping, perching and manipulation of food and foot toys

AVIx Bird Rain

- A natural bird bath
- Aloe vera and water base
- Sodium lauryl sulfate: very low percentage of total volume; for mild cleansing
- 8-ounce spray bottle and 16-ounce refill





Pharmacokinetic Properties of Aloe

- Contains vitamins C and E = antioxidants
- Contains precursors to vitamin A
- Bradykinase: reduces excessive inflammation when applied to skin
- Mucopolysaccharides: immunoregulating effect
- Anthraquinones: aloin and emodin—phenolic compounds found in plant sap = antiinflammatory, antibacterial, antiviral
- Saponins: “soap-like” antiseptic-antibacterial, antiviral, antifungal
- Campesterol, sisosterol, lupeol: plant steroids that may provide antiinflammatory effect
- Salicylic acid: antiinflammatory
- Amino acids
- Lignin: endows aloe vera with its penetrative effect; carries other ingredients
- Cooling herb: most feather conditions are referred to as “warm” disorders

Clinical Applications of AVIX Bird Rain

- Encourages normal preening
- Sometimes the only source of bathing in noncompliant clients
- Used for superficial skin lesions/abrasions
- Used for clients where a topical is needed and the owner is unable to apply directly
- Dry feet or skin
- Can be compounded with other drugs (e.g., antibiotics, F10, heparin)
- Used when deeper penetration is not needed
- Works well to “clean” feet and feathers (e.g., newspaper stains)



AVIx Soother

Spray and Ointment

- All the benefits of aloe vera (see pp 20-21)
- Contains a microencapsulated ingredient that uses transdermal technology to provide an antiinflammatory response to reduce pain and pruritis
- Transdermal technology may also provide a vehicle for other drugs, e.g., heparin, Celebrex™, antibiotics (based on culture and sensitivity), antihistamines, chlorhexidine, and F10
- The spray addresses broad areas of the body, whereas the ointment is applied directly to more focally affected areas



Clinical Applications of AVIX Soother Spray

- Web fold dermatitis
- Ulcerated, scabbed or erythematous skin
- Adjunct therapy to feather picking or mutilating
- Polyfolliculitis
- Only modality often available for some clients



Clinical Applications of AVIx Soother Ointment

- Wing web mutilation
- Impacted uropygial glands
- Irritated/ulcerated uropygial gland
- Distal wing tip edema secondary to night fright or trauma
- Cockatiel lockjaw
- Bumblefoot
- Arthritic joint*
- Post splinting/orthopedic procedures
- Sore hocks
- Joint infections/synovitis
- Broken or removed blood feathers
- Irritated tail base
- Bruising
- Postoperative care
- Irritated/peeled skin on legs
- Tissue edema
- At sites of subcutaneous fluid administration or injection
- In conjunction with physical therapy of joints in wings and legs

**Contraindicated in birds diagnosed with gout*

AVIx Bird Builder

- Contains 52 minerals
- Two convenient sizes: 1 ounce and 4 ounce
- Ease of administration
- High palatability

Clinical Results with AVIx Bird Builder

- Improved pectoral musculature
- Greatly improved mentation: return to vocalization/playing
- Improved quality of life in neoplasia cases
- Improved feather quality
- Appropriate molt
- Weight modulation: appropriate loss or gain
- No adverse renal effects seen
- Improvement in cardiac cases (in conjunction with AVIx Sunshine Factor)
- Can be used in flock settings, e.g., passerines



Mechanisms of Action of AVIx Bird Builder

- Replaces nutritional “holes”
- Supplies electrolytes for medullary gradients
- Calcium supplementation
- Boosts iron level (e.g., anemia from chronic disease)
- Supplies antibacterial/antiviral properties of silver
- Provides iodine for production of thyroid hormone for birds that may have low thyroid as a primary disease or euthyroid secondary to other chronic disease
- Selenium may help with improved muscle atrophy, and helps to increase the effectiveness of vitamin E

Coming Soon: HEALx for Small Mammals

Mammal formulations of AVIx products are being clinically tested on various small mammals and thin-skinned reptiles.