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Innovative Nutraceutical Effectively Manages Canine Atopy

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Abstract

Like people, dogs may be allergic to numerous substances that their bodies touch or are found in the air or in food. These allergens enter the body by inhalation, direct contact or absorption, i.e., through the skin or respiratory or gastrointestinal tracts. Recognized as foreign entities, the canine response is the release of inflammatory cells and the regulation of histamine levels as defence mechanisms. Innumerable prescription and over-the-counter treatments have been advanced in attempts to relieve the clinical signs associated with canine seasonal allergies.

The primary aim of this multisite, prospective open label trial was to support anecdotal post-marketing surveillance reports that the non-prescription canine chew under study provided significant benefits for the treatment of canine allergic dermatitis. A secondary aim was to elicit responses from groomers and pet parents who used the product for their dogs.

Animals presented at random with lesions consistent with a diagnosis of allergic dermatitis were enrolled during the normal course of business at the veterinary hospital and groomers' shops.

Pet parents, groomers and veterinarians reported that a twice-a-day treatment regimen resulted in the reduction or alleviation of one or more cardinal signs of canine allergic dermatitis in 83.3% of the enrolled dogs. These findings warrant the use of Dermabliss Seasonal Allergy Chews alone or in conjunction with other treatments for dogs with allergic dermatitis.

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Keywords

Canine Atopic Dermatitis; Pyoderma; Allergic Dermatitis; Nutraceutical; All-Natural; Seasonal Allergy; Colostrum, Pododermatitis

Introduction

Like people, dogs may be allergic to numerous substances that their bodies touch or are found in the air or in food. These allergens enter the body by inhalation, direct contact or absorption, i.e., through the skin or respiratory or gastrointestinal tracts. Recognized as foreign entities, the canine response is the release of inflammatory cells and the regulation of histamine levels as defence mechanisms, thus initiating the healing process.

An animal's health and well-being depend on this protective immune response. Unfortunately, for some of them and for many different reasons, a chronic allergic condition may develop when the body continues to produce inflammatory materials and cells long after the initial threat has passed or when healthy tissues are targeted and aggravated.

There are hundreds of potential causative agents and multiple, extremely complex and dynamic interactions that may contribute to, induce or sustain an allergic reaction in a pet. Some of these may be internal factors, such as immune status or genetics [1]. External factors include regional or seasonal environmental exposure.

In addition, the concentration of allergen is a determinant of allergic reaction as is the presence of parasites, e.g., fleas.

Internal Factors

Immune Response

It is not uncommon for pets with allergy-based immune responses to experience itching and redness of their ears and abdomen; licking or chewing their front paws, legs or feet; and rubbing their faces and eyes. Scratching causes more itching and a cycle of itch-scratch-itch develops. This results in chronic skin irritation, open wounds, secondary bacterial and fungal skin infections, hair loss and dry, flaky skin [2].

A dog's immune system will determine whether the pet will react adversely to an allergen and how vigorously the reaction will be when a specific tissue or area of the body is targeted. It is important to note that each animal's immune response is unique and each one can respond to a challenge in a different manner. Over time, a specific allergen or mixture of allergens can cause dissimilar reactions in specific areas of the same animal.

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Breed Predisposition

Although any purebred or mixed-breed dog may develop allergies, certain breeds are known to develop them more frequently, including [3]

- Bulldogs
- Pit Bulls
- Labrador and Golden Retrievers
- German Shepherds
- Terriers (ex. Jack Russell Terriers, Boston Terriers, etc.)
- Shar-Peis
- Dalmatians
- Boxers
- Lhasa Apsos

Onset of Allergies

Canine allergies typically manifest between six months and three years of age and may occur seasonally or throughout the year. Allergic dermatitis can be caused by inhalation or contact with an allergen and often progresses into a lifelong health issue.

In order to prevent itching from developing into a severe skin infection or initiating an anal gland infection or abscess, caregivers must remain vigilant, provide long-term supervision and may need to schedule frequent veterinary visits. As a result of the physical toll taken on a pet, its human family is frequently burdened with emotional and financial stressors.

The problem is further complicated because infrequently will a single type of treatment provide sustained relief from allergic symptoms. With a wide variety of available treatment options, dog owners face the challenge of identifying an effective treatment regimen.

Due to the variability of underlying causes of an allergic reaction, veterinarians must employ a multifaceted approach in the management of canine dermatological conditions. Positive results often require a combination of interventions: routine bathing using a medicated shampoo; dietary changes; allergen avoidance and/or specific immunotherapy; antibiotics; or anti-inflammatory therapy, e.g., steroids [4,5]. In addition to traditional pharmaceutical approaches, natural and/or complementary products have been popularized for treating seasonal allergies [6-9].

The primary objectives in managing cases of dogs with allergies are to: reduce irritation; alleviate discomfort, eliminate infection; and improve quality of life for both the pet and the family [6].

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- **Steroids:** A course of treatment with steroids can effectively reduce the intense itching which occurs during flare-ups but can have both short-term and long-term side effects.
- **Antibiotics:** To reduce and control bacterial infections, a regimen of antibiotics may be necessary.
- **Allergy Testing:** Immunotherapy treatments to desensitize a dog to an allergen present a mixed bag of therapeutic options. It is expensive and not a quick fix. It may take six months for any noticeable improvement and a year-long series of hypoallergenic injections is frequently recommended to determine the efficacy of the therapy. Allergy testing and allergen-specific injections may improve the condition but are not a cure. Medication may still be required to address seasonal flare-ups.
- **Prescription Medicines:** A dog's itching can be treated effectively with several recently introduced pharmaceuticals, such as ApoquelTM, CytopointTM and AtopicaTM. However, certain factors should be considered, including the costs of recommended blood work and laboratory monitoring and the need for frequent veterinary visits to administer and oversee the course of treatment [10,11]. COVID-19, which has forced most veterinary practices to reduce office hours and staff, can make this a challenge.

Veterinarians stress that it is critical that the caregivers of allergic dogs recognize and accept that: allergic reactions cannot be cured; effective management requires lifelong vigilance; treatments minimize the effects of an allergic reaction; patience and realistic expectations are essential.

Since it is impossible to modify a pet's genetic predisposition to allergies or to avoid the environmental factors that may contribute to an allergic reaction, the most effective treatment options are those that target and moderate the underlying causes of and impact on the immune system.

There are several sensible ways to mitigate some of the effects of external factors, including:

- The elimination or minimization of exposure to, or contact with, allergens that are known to cause allergic reactions
- Routine grooming, to remove allergens from the skin and fur
- Control of external parasites on the pet and in the home environment

At-Home Management of Allergic Dermatitis

Since the pandemic outbreak, veterinary care has become more expensive and logistically more challenging. When an allergic reaction occurs, the sooner treatment is initiated the more likely it is that a dog can be made more comfortable and trips to the veterinary clinic can be reduced.

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Nowadays, pet parents have access to a wide range of products developed for dogs with allergies. The gold standard criteria for these are as follows:

- Effectively supports the immune system
- Long term potency and safety
- Ease of administration
- Tolerance of treatment ingredients
- Rapid, successful resolution of allergen-related problems

To address some of the challenges facing pet parents with dogs suffering from allergies, Vetnique Labs has created a proprietary blend of all-natural ingredients for an at-home treatment of hypersensitivities.

To substantiate positive post-launch anecdotal reports affirming its effectiveness in the treatment of dogs with seasonal allergies, Dermabliss™ Seasonal Allergy Chews were evaluated in a clinical trial.

Clinical Trial Design

A multi-site observational, open label study was designed and conducted to reflect the types of treatments offered by veterinarians and groomers for seasonal allergic dermatitis in real world cases. The trial addressed patients' need for relief and the pet parents' experience of having an atopic dog and their expectations regarding treatment.

Dogs that randomly presented to veterinary clinics and grooming establishments with pet parents' complaints of varying types and degrees of skin allergies were offered Dermabliss Seasonal Allergy Chews if they met the enrollment criteria (Table 1). Breeds known to be predisposed to atopy were enrolled where possible, but no animal was excluded based on breed characteristics.

For Veterinary Clinic Patients: Dermabliss Seasonal Allergy Chews were dispensed following initial routine laboratory testing and photography, with rechecks scheduled for days 14 and 28 of the month-long treatment periods.

For Grooming Shop Clients: Pets that presented with allergic skin irritation were photographed and Dermabliss Seasonal Allergy Chews were dispensed. Follow-up visits were scheduled on Days 14 and 28.

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Inclusion Criteria	Exclusion Criteria
• History of seasonal allergy • Free of disease, external parasites • Over 20 lbs. • 3-12 years old • Previous veterinary visit for itching • No dietary changes during study • Not on skin medication or supplements • Body Condition Score 3-7 [Appendix A] • Short coat	• Abnormal laboratory results • Steroids in previous month • Surgery within the last three months • Open lesions • History of cancer, inflammatory disease • Sign of Flea Allergy Dermatitis • Pregnant or lactating • BCS 1-2 or 8-9 [Appendix A] • Long coat

Table 1: Inclusion and exclusion criteria.

Results

A total of 28 dogs were screened, eighteen were enrolled and twelve completed the trial. No adverse events were reported. For the twelve dogs completing the study, all but two showed improvements in one or more of the key clinical signs associated with allergic dermatitis. Pet parents' subjective observations tracked with those of the investigating veterinarians (Table 2-6).

Clinical Scores 0 = None 1 = Mild 2 = Moderate 3 = Moderate Severe 4 = Severe	DBA #1	M Pointer	1 yo, 61 lbs	BCS 6			
	Veterinarian	Day 0	Day 14	Day 28			
	Papules	2	1	0			
	Pustules	0	0	0			
	Collarettes	0	0	0			
	Crusts	0	0	0			
	Alopecia	2	1	0			
	Inflammation	1	0	0			
	Total	5	2	0			
	Owner Observation	Day 0	Day 14	Day 28			
Owner Scores 0 = Normal 1 = Mild 2 = Moderate 3 = Moderate Severe 4 = Severe	How much scratching				3	1	1
	How much shedding				2	1	1
	Appearance of fur				1	1	1
	Health of skin				1	0	0
	Total				7	3	3

Clinical Scores 0 = None 1 = Mild 2 = Moderate 3 = Moderate Severe 4 = Severe	DBA #2	M Pit Bull	6 yo, 63 lbs	BCS 6			
	Veterinarian	Day 0	Day 14	Day 28			
	Papules	0	0	0			
	Pustules	0	0	0			
	Collarettes	0	0	0			
	Crusts	0	0	0			
	Alopecia	0	0	0			
	Inflammation	4	2	0			
	Total	4	2	0			
	Owner	Day 0	Day 14	Day 28			
Owner Scores 0 = Normal 1 = Mild 2 = Moderate 3 = Moderate Severe 4 = Severe	Scratching				1	1	0
	Shedding				3	1	1
	Fur				3	0	0
	Skin				3	1	0
	Total				10	3	1

Clinical Scores 0 = None 1 = Mild 2 = Moderate 3 = Moderate Severe 4 = Severe	DBA #3	F Pit Bull	6 yo, 58 lbs	BCS 6			
	Veterinaria	Day 0	Day 14	Day 28			
	Papules	2	1	0			
	Pustules	0	0	0			
	Collarettes	0	0	0			
	Crusts	0	0	0			
	Alopecia	3	2	2			
	Inflammati	0	0	0			
	Total	5	3	2			
	Owner	Day 0	Day 14	Day 28			
Owner Scores 0 = Normal 1 = Mild 2 = Moderate 3 = Moderate Severe 4 = Severe	Scratching				2	1	1
	Shedding				1	0	1
	Fur				1	1	0
	Skin				1	0	0
	Total				5	2	2

Clinical Scores 0 = None 1 = Mild 2 = Moderate 3 = Moderate Severe 4 = Severe	DBA #4	F Bulldog	3 yo, 50 lbs	BCS 7			
	Veterinarian	Day 0	Day 14	Day 28			
	Papules	0	0	0			
	Pustules	0	0	0			
	Collarettes	0	0	0			
	Crusts	0	0	0			
	Alopecia	3	3	3			
	Inflammation	0	0	0			
	Total	3	3	3			
	Owner	Day 0	Day 14	Day 28			
Owner Scores 0 = Normal 1 = Mild 2 = Moderate 3 = Moderate Severe 4 = Severe	Scratching				3	3	3
	Shedding				3	3	3
	Fur				2	2	2
	Skin				2	2	2
	Total				10	10	10

Clinical Scores 0 = None 1 = Mild 2 = Moderate 3 = Moderate Severe 4 = Severe	DBA #5	F Boxer	7 yo, 50 lbs	BCS 8			
	Veterinarian	Day 0	Day 14	Day 28			
	Papules	2	0	0			
	Pustules	0	0	0			
	Collarettes	0	0	0			
	Crusts	0	0	0			
	Alopecia	3	2	1			
	Inflammation	2	0	0			
	Total	7	2	1			
	Owner	Day 0	Day 14	Day 28			
Owner Scores 0 = Normal 1 = Mild 2 = Moderate 3 = Moderate Severe 4 = Severe	Scratching				2	1	1
	Shedding				2	1	1
	Fur				1	1	0
	Skin				2	0	0
	Total				7	3	2

Clinical Scores 0 = None 1 = Mild 2 = Moderate 3 = Moderate Severe 4 = Severe	DBA #6	F Weimanner	2 yo, 56 lbs	BCS 5			
	Veterinaria	Day 0	Day 14	Day 28			
	Papules	2	1	0			
	Pustules	1	1	1			
	Collarettes	2	1	0			
	Crusts	2	1	1			
	Alopecia	2	1	0			
	Inflammati	0	0	0			
	Total	9	5	2			
	Owner	Day 0	Day 14	Day 28			
Owner Scores 0 = Normal 1 = Mild 2 = Moderate 3 = Moderate Severe 4 = Severe	Scratching				1	1	1
	Shedding				3	2	2
	Fur				3.5	3	2
	Skin				4	2	1
	Total				11.5	8	6

Clinical Scores 0 = None 1 = Mild 2 = Moderate 3 = Moderate Severe 4 = Severe	DBA #7	French Bulldog	3 yo, 32 lbs	BCS 8			
	Veterinarian	Day 0	Day 14	Day 28			
	Papules	0	0	0			
	Pustules	0	0	0			
	Collarettes	0	0	0			
	Crusts	0	0	0			
	Alopecia	3	2	1			
	Inflammation	3.5	2	1			
	Total	6.5	4	2			
	Owner	Day 0	Day 14	Day 28			
Owner Scores 0 = Normal 1 = Mild 2 = Moderate 3 = Moderate Severe 4 = Severe	Scratching				3	1	1
	Shedding				1	1	1
	Fur				2	0	0
	Skin				2	0	0
	Total				8	2	2

Clinical Scores 0 = None 1 = Mild 2 = Moderate 3 = Moderate Severe 4 = Severe	DBA #8	M Sp. Span.	4 yo, 43lbs	BCS 5			
	Veterinarian	Day 0	Day 14	Day 28			
	Papules	0	0	0			
	Pustules	0	0	0			
	Collarettes	0	0	0			
	Crusts	0	0	0			
	Alopecia	1	1	1			
	Inflammation	4	3	1			
	Total	4	3	1			
	Owner	Day 0	Day 14	Day 28			
Owner Scores 0 = Normal 1 = Mild 2 = Moderate 3 = Moderate Severe 4 = Severe	Scratching				2	2	1
	Shedding				2	1	1
	Fur				2	1	0
	Skin				2	2	1
	Total				8	6	3

Clinical Scores 0 = None 1 = Mild 2 = Moderate 3 = Moderate Severe 4 = Severe	DBA #9	M Doberman	1 yo, 54 lbs	BCS 8			
	Veterinarian	Day 0	Day 14	Day 28			
	Papules	3	2	2			
	Pustules	3	2	2			
	Collarettes	2	1	1			
	Crusts	1	1	1			
	Alopecia	2	1	1			
	Inflammatio	x	x	x			
	Total	11	7	7			
	Owner	Day 0	Day 14	Day 28			
Owner Scores 0 = Normal 1 = Mild 2 = Moderate 3 = Moderate Severe 4 = Severe	Scratching				2.5	2	1
	Shedding				2.5	1	1
	Fur				3	1	1
	Skin				3	1	0
	Total				11	5	3

Clinical Scores 0 = None 1 = Mild 2 = Moderate 3 = Moderate Severe 4 = Severe	DBA #10	F Black Lab	8 yo, 54 lbs	BCS 6			
	Veterinarian	Day 0	Day 14	Day 28			
	Papules	0	0	0			
	Pustules	0	0	0			
	Collarettes	0	0	0			
	Crusts	0	0	0			
	Alopecia	3	3	1			
	Inflammation	0	0	0			
	Total	3	3	1			
	Owner	Day 0	Day 14	Day 28			
Owner Scores 0 = Normal 1 = Mild 2 = Moderate 3 = Moderate Severe 4 = Severe	Scratching				2	2	2
	Shedding				3	2	1
	Fur				2	2	2
	Skin				2	2	1
	Total				9	6	6

Clinical Scores 0 = None 1 = Mild 2 = Moderate 3 = Moderate Severe 4 = Severe	DBA #11	Bulldog	11 yo, 73 lbs	BCS 7			
	Veterinarian	Day 0	Day 14	Day 28			
	Papules	4	4	4			
	Pustules	4	4	4			
	Collarettes	0	0	0			
	Crusts	0	0	0			
	Alopecia	0	0	0			
	Inflammation	0	0	0			
	Total	8	8	8			
	Owner	Day 0	Day 14	Day 28			
Owner Scores 0 = Normal 1 = Mild 2 = Moderate 3 = Moderate Severe 4 = Severe	Scratching				3	2	1
	Shedding				1	1	1
	Fur				0	0	1
	Skin				4	2	2
	Total				8	5	5

Clinical Scores 0 = None 1 = Mild 2 = Moderate 3 = Moderate Severe 4 = Severe	DBA #12	F Chow Chow	11 yo, 45lbs	BCS 4			
	Veterinarian	Day 0	Day 14	Day 28			
	Papules	0	0	0			
	Pustules	0	0	0			
	Collarettes	0	0	0			
	Crusts	0	0	0			
	Alopecia	0	0	0			
	Inflammatio	3	2	1			
	Total	3	2	1			
	Owner	Day 0	Day 14	Day 28			
Owner Scores 0 = Normal 1 = Mild 2 = Moderate 3 = Moderate Severe 4 = Severe	Scratching				3	2	1
	Shedding				1	1	0
	Fur				1	0	0
	Skin				1	1	1
	Total				6	4	2

Table 2: Clinician and owner observation.



Table 3: Clinical observations.



Table 4: Owner observations.

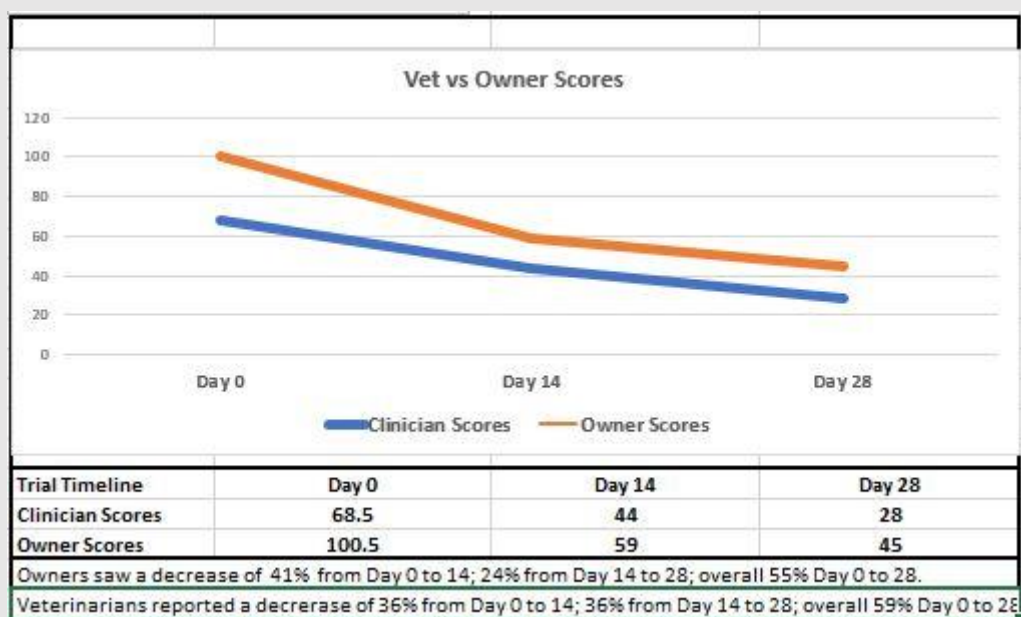


Table 5: Observations of owners and veterinarians.

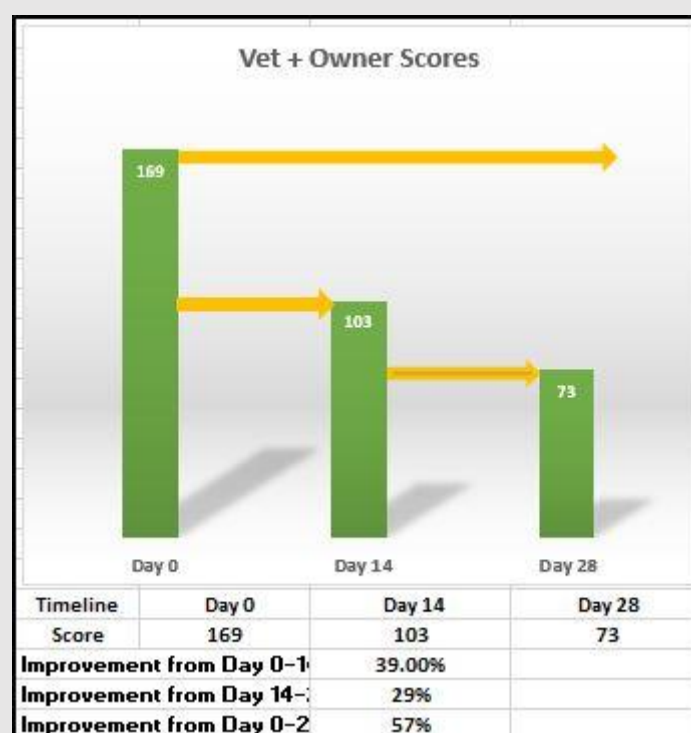


Table 6: Veterinarians and owners reported a decrease in presenting signs throughout the study.

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Synergistic Active Ingredients

Nutritional Fatty Acids

- Omega 3-6-9. This supplement provides a healthy balance of essential fatty acids that are fundamental for heart, skin, joint and immune system health. Polyunsaturated Fatty Acids (PUFA) are known to exhibit a variety of health benefits in dogs, including anti-inflammatory effects [12,13].
- Wild Alaskan Salmon Oil. Rich in omega-3s, this fish oil can promote healthy skin by:
 - Enhancing the protective barrier function of the skin
 - Reducing the symptoms of dry skin and itching caused by dermatitis
 - Accelerating wound healing [14].

Plant Extracts

- Quercetin: Quercetin is commonly referred to as “nature’s Benadryl” and is believed to reduce the severity of atopic dermatitis [15]
- Licorice Root: It has been shown in experimental and clinical studies that Glycyrrhiza uralensis has anti-inflammatory, antioxidant and antimicrobial properties [16]
- Bromelain: It is efficacious in several conditions and diseases associated with inflammation [17,18-39]

Probiotics

These are substances which stimulate the growth of microorganisms in the gastrointestinal tract. They are live bacteria and/or yeasts that naturally live in the body. This is the microbiome - “good bacteria” - that supports the immune system and maintains balance in the gut. Every microbiome is unique!

- Lactospore: Clinically validated for its ability to maintain the skin’s protective barrier, strengthen skin integrity and optimize surface microflora [40].

Vitamins

- Biotin: Vitamin B7 benefits dogs suffering from skin conditions by synthesizing fatty acids [19]

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- Vitamin C: Well known as an antioxidant, it plays a vital role in maintaining healthy skin [20,21]
- Vitamin A: It has been shown to be an effective complementary treatment for several dermatological conditions [22,23]
- Vitamin E: Protecting the immune system from oxidative stress, it supports healthy muscles, the heart, liver and skin. A significant potential benefit of Vitamin E is used as an adjunctive treatment for allergic dermatitis because of its antioxidant and anti-inflammatory properties [24]

Colostrum

Colostrum is critical in promoting the growth and health of newborns but is only produced for a short period of time following birth. Bovine colostrum has been proven to be beneficial to many species, including pets and humans. It is a comprehensive “superfood” that contains macro- and micronutrients, immune modulators, growth factors and immunoglobulins [25-30]. There is mounting evidence that it is useful in treating a variety of medical conditions, including the health and well-being of domestic pets [31-35].

Clinical Cases

Case 1: Generalized Atopic Dermatitis- Neck, Axillae

Day 0: Two-year-old male German Short Hair Pointer presented with papules, hair loss due to inflammation and scratching of the neck and axillae (Fig. 1-3).

Day 14: There was some hair regrowth neck but still scratching axillae causing a lesion at the left axilla.

Day 30: Owner: itching had improved and “rash” was gone.

Veterinarian: “total resolution” of the presenting signs (Table 7) (Fig. 4-9).

Vet Clinical Signs	Baseline	Recheck 1	Recheck 2	Clinical Scores
Papules	2	1	0	0 = Normal
Pustules	0	0	0	1 = Mild
Collarettes	0	0	0	2 = Moderate
Crusts	0	0	0	3 = Moderate+
Alopecia	2	1	0	4 = Severe

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Inflammation	1	0	0	
Total	5	2	0	
Owner Observations	Baseline	Recheck 1	Recheck 2	Owner Scores
How much scratching?	3	1	1	0 = None
How much shedding?	2	1	1	1 = Mild-normal
Appearance of fur	1	1	1	2 = Moderate
Health of skin	1	0	0	3 = Severe
Total	7	3	3	4 = Critical

Table 7: Case 1: Clinician and owner observation.



Figure 1: Case 1. Ventral neck. Day 0.

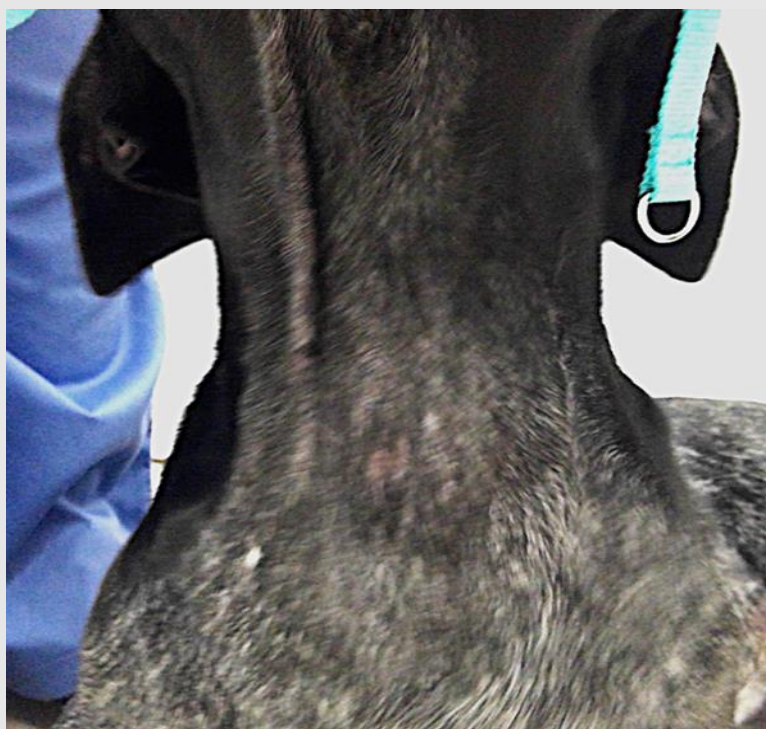


Figure 2: Case 1. Ventral neck. Day 14.



Figure 3: Case 1. Ventral neck. Day 30.

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Figure 4: Case 1. L axilla. Day 14.



Figure 5: Case 1. Detail L axilla. Day 14.

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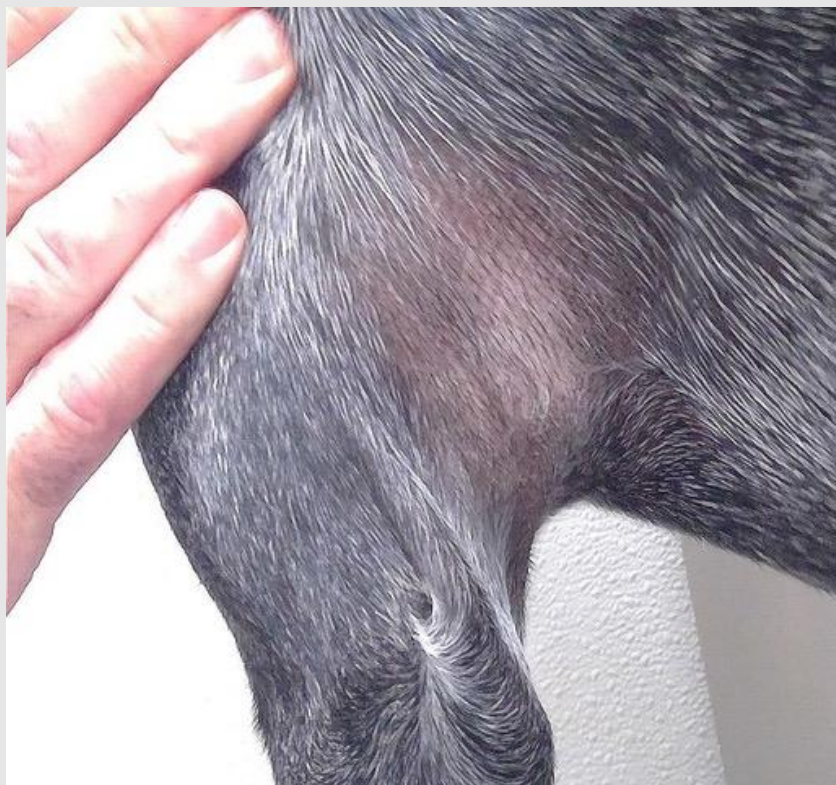


Figure 6: Case 1. L axilla. Day 30.

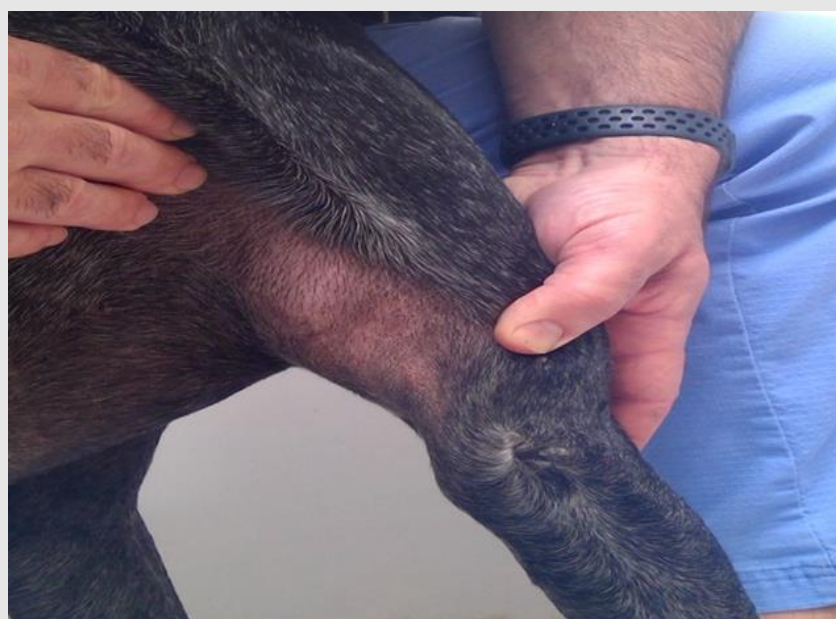


Figure 7: Case 1. R axilla. Day 0.

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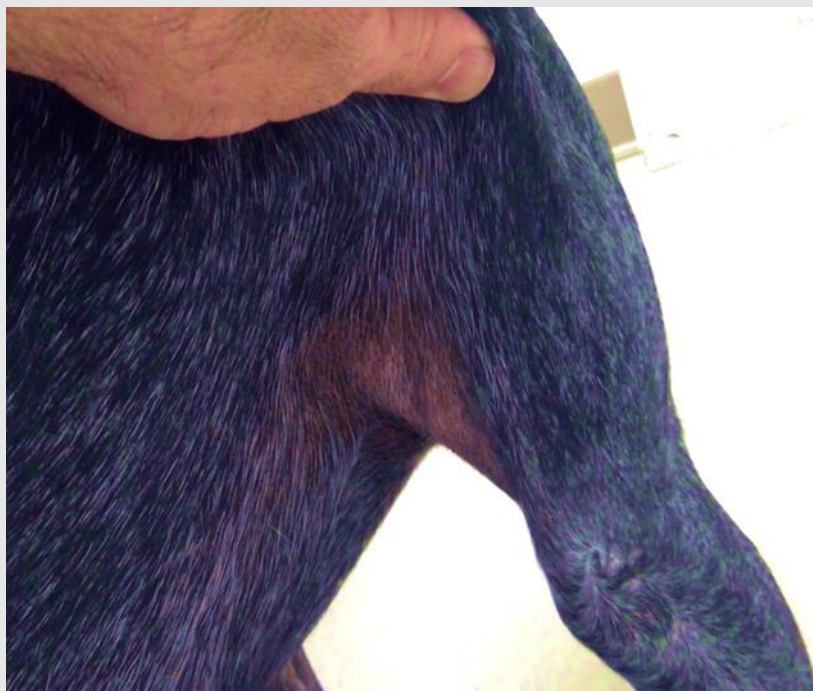


Figure 8: Case 1. R axilla. Day 14.



Figure 9: Case 1. R axilla. Day 30.

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Case 2: Atopic Dermatitis-Abdomen

Day 0: Four-year-old American Pit Bull, 63lbs, presented when owner first noticed excessive hair loss two weeks prior, no pruritis.

Day 14: Overall decrease of inflammation and licking.

Day 30: Vet: “90-95% less inflammation and shedding”; hair regrowing (Table 8) (Fig. 10-12).

Vet Clinical Signs	Baseline	Recheck 1	Recheck 2	Clinical Scores
Papules	0	0	0	0 = Normal
Pustules	0	0	0	1 = Mild
Collarettes	0	0	0	2 = Moderate
Crusts	0	0	0	3 = Moderate+
Alopecia	0	0	0	4 = Severe
Inflammation	4	2	0	
Total	4	2	0	
Owner Observations	Baseline	Recheck 1	Recheck 2	Owner Scores
How much scratching?	1	1	0	0 = None
How much shedding?	3	1	1	1 = Mild-normal
Appearance of fur	3	0	0	2 = Moderate
Health of skin	3	1	0	3 = Severe
Total	10	3	1	4 = Critical

Table 8: Case 2: Clinician and owner observation.



Figure 10: Case 2. Abdomen. Day 0.



Figure 11: Case 2. Abdomen. Day 14.

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Figure 12: Case 2. Abdomen. Day 30.

Case 3: Atopic Dermatitis- Abdomen

Day 0: Seven-year-old, 9 lb Pit Bull presented with a history of on/off scratching; worse in spring; currently itching for one month; erythema groin.

Day 14: Owner: improved within a week; now only occasional itching.

DVM: Hair has started to regrow; areas of erythema have resolved; overall inflammation significantly reduced.

Day 30: Complete resolution of presenting problems (Table 9) (Fig. 13,14).

Vet Clinical Signs	Baseline	Recheck 1	Recheck 2	Clinical Scores
Papules	2	0	0	0 = Normal
Pustules	0	0	0	1 = Mild
Collarettes	0	0	0	2 = Moderate
Crusts	0	0	0	3 = Moderate+

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Alopecia	3	2	0	4 = Severe
Inflammation	3	2	0	
Total	8	2	0	
Owner Observations	Baseline	Recheck 1	Recheck 2	Owner Scores
How much scratching?	2	1	0	0 = None
How much shedding?	2	1	0	1 = Mild-normal
Appearance of fur	1	1	1	2 = Moderate
Health of skin	2	0	0	3 = Severe
Total	7	3	1	4 = Critical

Table 9: Case 3: Clinician and owner observation.



Figure 13: Case 3. Inguinal. Day 0.



Figure 14: Case 3. Inguinal. Day 14.

Case 4: Face Fold Pyoderma, Pododermatitis

Day 0: Four-year-old French Bulldog, 22 lbs. Groomer's personal pet has had chronic moderate to severe moist face-fold dermatitis and pododermatitis since adoption one year ago. Has been on several rounds of prescription medication, but always comes back. Paws often bleed due to obsessive licking/biting.

Day 14: Noticeable reduction in inflammation after a few days but paws continued to be very red.

Day 35: Significant reduction in inflammation; occasional licking, face rubbing. Face folds "look as good as they have ever been" (Table 10) (Fig. 15-22).

Vet Clinical Signs	Baseline	Recheck 1	Recheck 2	Clinical Scores
Papules	0	0	0	0 = Normal
Pustules	0	0	0	1 = Mild
Collarettes	0	0	0	2 = Moderate
Crusts	0	0	0	3 = Moderate+
Alopecia	3	2	1	4 = Severe
Inflammation	3	2	1	
Total	6	4	2	

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Owner Observations	Baseline	Recheck 1	Recheck 2	Owner Scores
How much scratching?	3	1	1	0 = None
How much shedding?	1	1	1	1 = Mild-normal
Appearance of fur	2	0	0	2 = Moderate
Health of skin	2	0	0	3 = Severe
Total	8	2	2	4 = Critical

Table 10: Case 4: Clinician and owner observation.

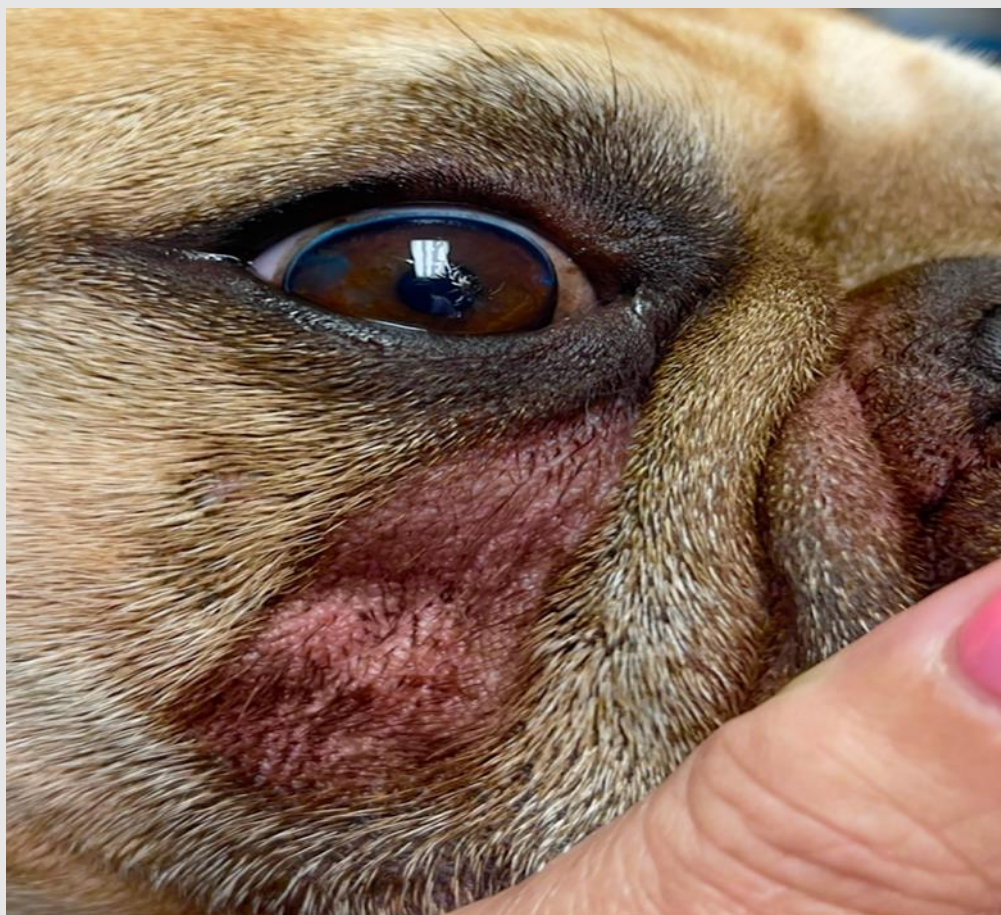


Figure 15: Case 4. R face. Day 0.

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Figure 16: Case 4. R face. Day 16.



Figure 17: Case 4. R face. Day 35.

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Figure 18: Case 4. L face. Day 0.



Figure 19: Case 4. L face. Day 16.

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Figure 20: Case 4. L face. Day 35.



Figure 21: Case 4. Interdigital pododermatitis. Day 0.



Figure 22: Case 4. Interdigital pododermatitis. Day 17.

Conclusion

Over the last century, innumerable conventional medical and over-the-counter treatments have been advanced in attempts to relieve the clinical signs of seasonal allergies. As scientists continue to uncover the intricacies of the body's immune system, more targeted pharmaceutical therapies have become available that are aimed at preventing, treating and elimination allergies [36-39].

The study under review was designed to support post-marketing surveillance reports that non-prescription Dermabliss Seasonal Allergy Chews provided significant benefits for the treatment of canine allergic dermatitis.

From the in-trial responses of both pet parents and veterinarians, a regimen of Dermabliss Seasonal Allergy Chews was shown to reduce or alleviate the expression of one or more of the cardinal signs of canine allergic dermatitis in 83.3% of the enrolled dogs.

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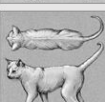
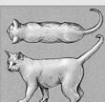
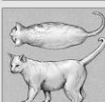
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Allergic dermatitis is incurable and there are numerous agents, conditions and individual responses that can initiate and sustain the condition [41]. The availability of this all-natural product that alone or in conjunction with other treatments may successfully alleviate distresses and discomfort, warrants considering its inclusion as an option in treating seasonal canine allergic dermatitis.

Appendix A

Body Condition Scoring (BCS) Systems

5 Point	9 Point	Description	
1/5	1/9	Dogs: Ribs, lumbar vertebrae, pelvic bones and all bony prominences evident from a distance. No discernible body fat. Obvious loss of muscle mass. 	
		Cats: Ribs visible on short-haired cats; no palpable fat; severe abdominal tuck; lumbar vertebrae and wings of ilia obvious and easily palpable. 	
1.5/5	2/9	Dogs: Ribs, lumbar vertebrae and pelvic bones easily visible. No palpable fat. Some evidence of other bony prominence. Minimal loss of muscle mass. Cats: Shared characteristics of BCS 1 and 3.	
2/5	3/9	Dogs: Ribs easily palpated and may be visible with no palpable fat. Tops of lumbar vertebrae visible. Pelvic bones becoming prominent. Obvious waist. 	
		Cats: Ribs easily palpable with minimal fat covering; lumbar vertebrae obvious; obvious waist behind ribs; minimal abdominal fat. 	
2.5/5	4/9	Dogs: Ribs easily palpable, with minimal fat covering. Waist easily noted, viewed from above. Abdominal tuck evident. Cats: Shared characteristics of BCS 3 and 5.	
3/5	5/9	Dogs: Ribs palpable without excess fat covering. Waist observed behind ribs when viewed from above. Abdomen tucked up when viewed. 	
		Cats: Well proportioned; waist observed behind ribs; ribs palpable with slight fat covering; abdominal fat pad minimal. 	
5 Point	9 Point	Description	
3.5/5	6/9	Dogs: Ribs palpable with slight excess fat covering. Waist is discernible viewed from above but is not prominent. Abdominal tuck apparent. Cats: Shared characteristics of BCS 5 and 7.	
4/5	7/9	Dogs: Ribs palpable with difficulty; heavy fat cover. Noticeable fat deposits over lumbar area and base of tail. Waist absent or barely visible. Abdominal tuck may be present. 	
		Cats: Ribs not easily palpable with moderate fat covering; waist poorly distensible; obvious rounding of abdomen; moderate abdominal fat pad. 	
4.5/5	8/9	Dogs: Ribs not palpable under very heavy fat cover, or palpable only with significant pressure. Heavy fat deposits over lumbar area and base of tail. Waist absent. No abdominal tuck. Obvious abdominal distension may be present. Cats: Shared characteristics of BCS 5 and 9.	
5/5	9/9	Dogs: Massive fat deposits over thorax, spine and base of tail. Waist and abdominal tuck absent. Fat deposits on neck and limbs. Obvious abdominal distention. 	
		Cats: Ribs not palpable under heavy fat cover; heavy fat deposits over lumbar area, face and limbs; distention of abdomen with no waist; extensive abdominal fat pad. 	



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Available at aahanet.org/Public/Documents/NutritionalAssessmentGuidelines.pdf

Ethical Statement

This study is done by Veterinary Health Research Centers, USA under the proper government guidelines.

Conflict of Interest

The author declares no conflicts of interest.

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