Atopic Dermatitis

Why is SKIN BARRIER REPAIR necessary in ALL cases?

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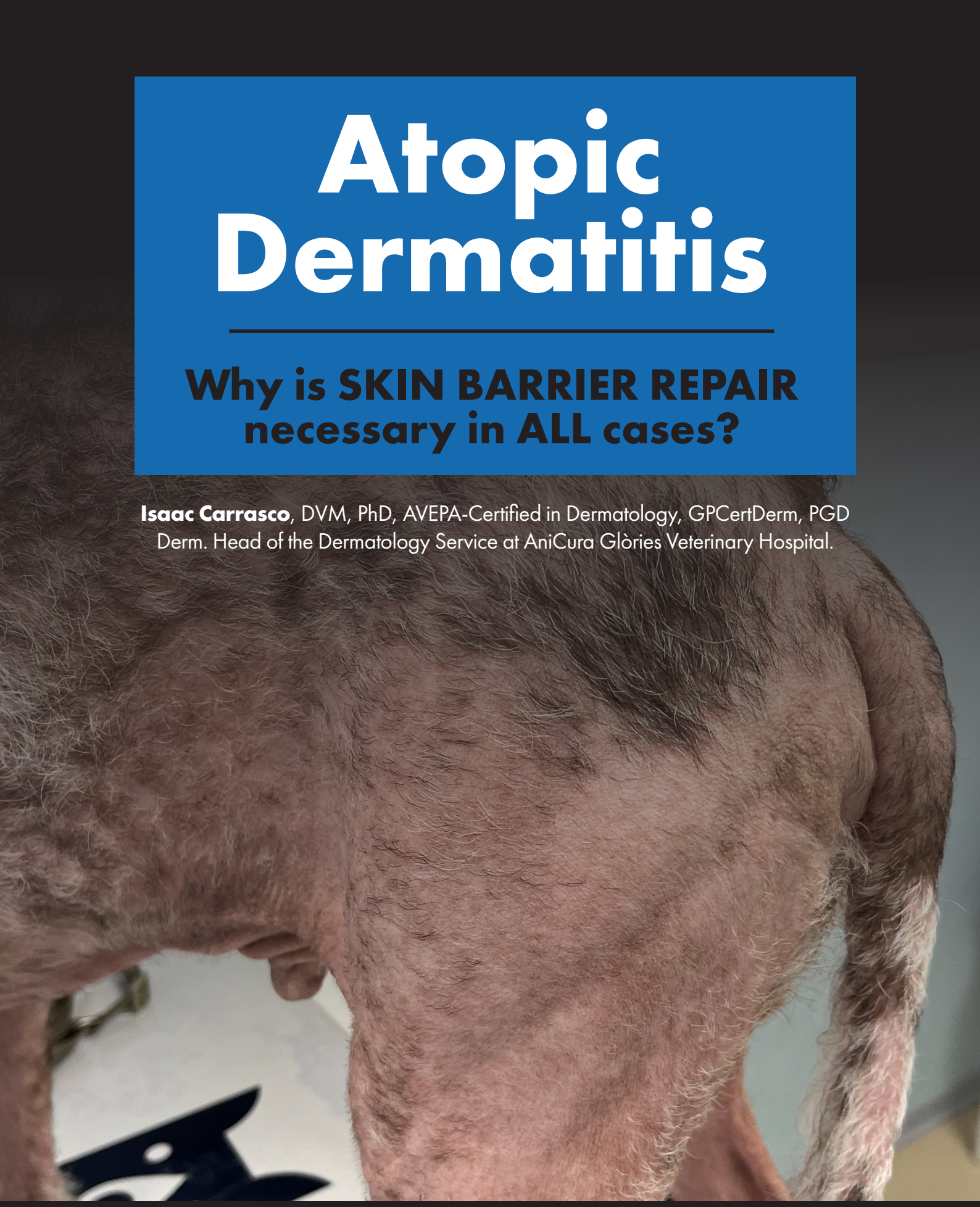

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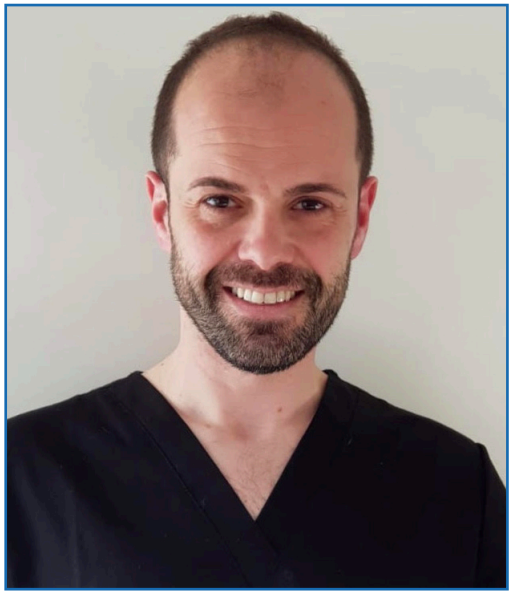

Graduated in Veterinary Medicine from the Universitat Autònoma de Barcelona (2002). Completed a subsequent internship in the Small Animal Unit. He earned a PhD in Veterinary Pharmacology from the same university, in the Department of Pharmacology, Toxicology, and Therapeutics, with his thesis focused on cutaneous hypersensitivity reactions in cats.

He is accredited (and re-accredited) in Dermatology by AVEPA-GEDA and certified in Dermatology by the ISVPS. He holds a Postgraduate Degree in Dermatology from IFEVET. He has been an author and reviewer for numerous publications in national and international journals and congresses.

Currently, he is the Head of the Dermatology Service at referral hospitals such as AniCura Glòries Veterinary Hospital (Barcelona). In addition, he is the director of the Postgraduate Program in Dermatology at IFEVET.

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EDITION

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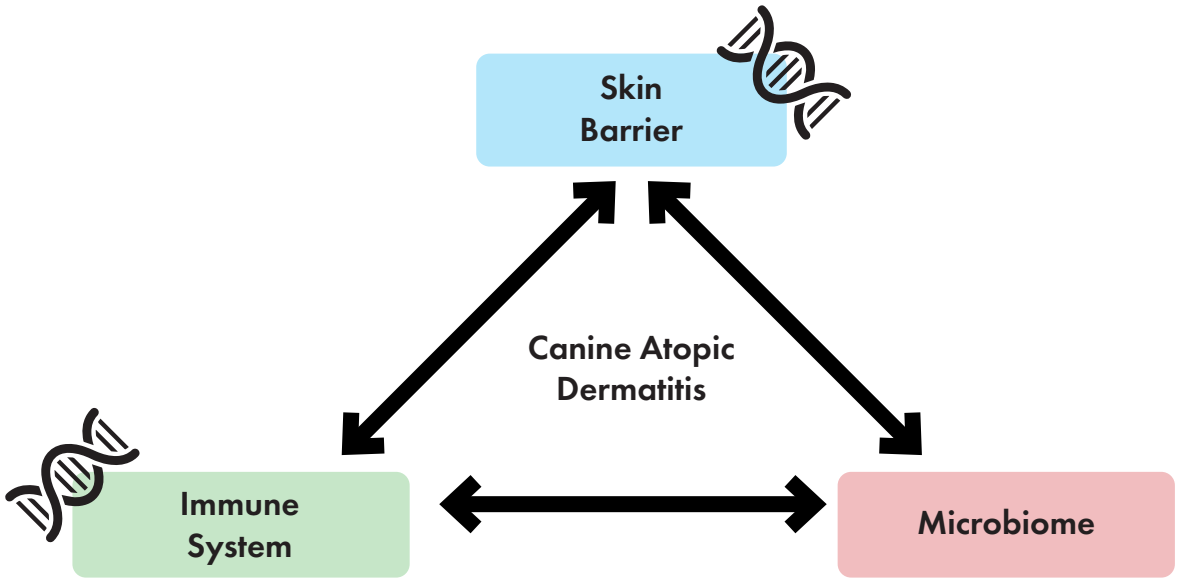
SUMMARY

1. Brief Pathophysiological Review

Pathophysiology of Canine Atopic Dermatitis



Skin Barrier

Genetically influenced:

- Alterations in genes responsible for proper epidermal differentiation.
- Alterations in the formation of intercellular lipids (including ceramides), changing their ratios and functions.

Immune System

Genetically influenced:

- Alterations in genes related to innate and adaptive immunity, leading to an inappropriate response to common allergens. Allergenic tolerance decreases.

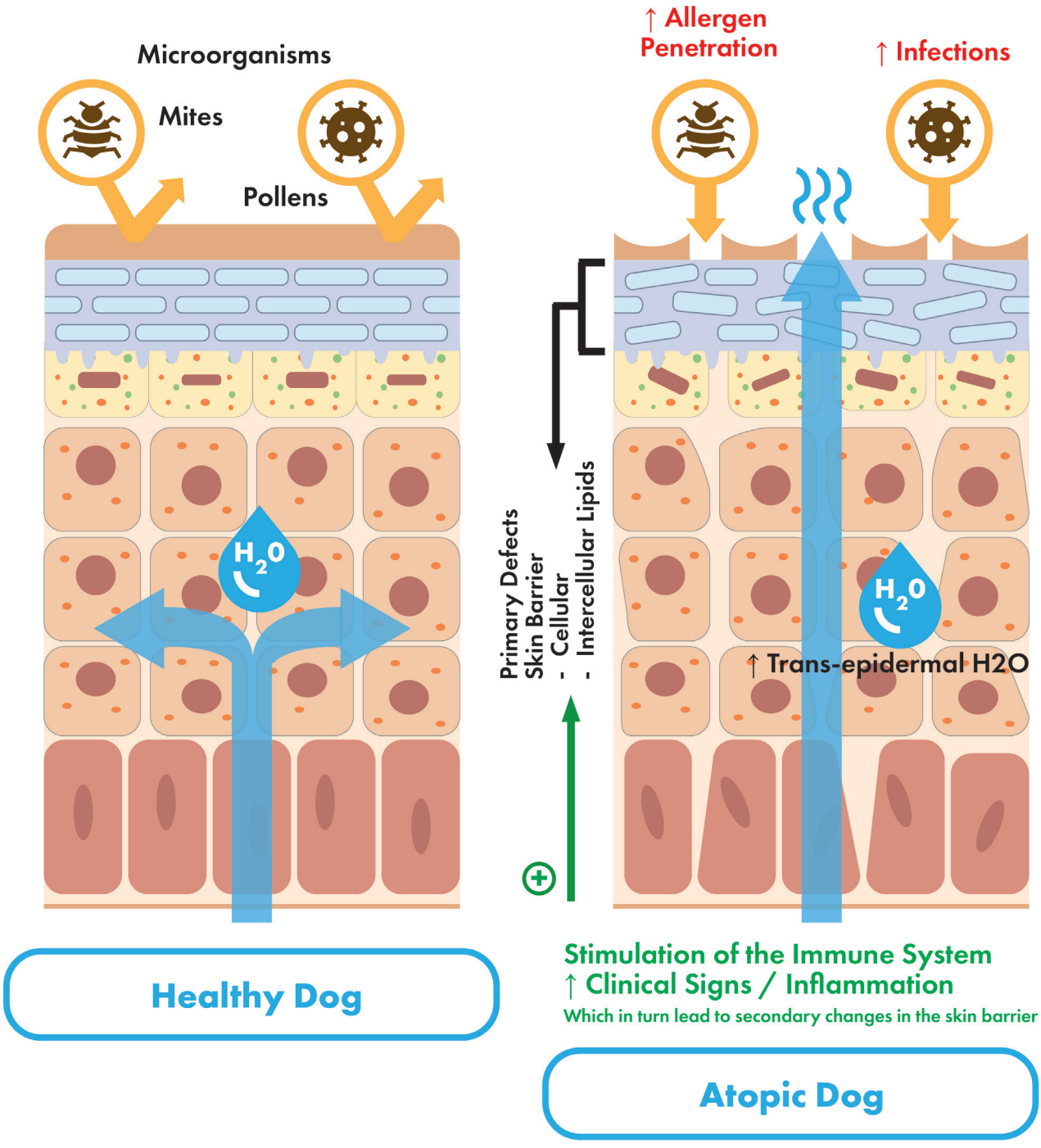
Microbiome Alterations

Microbial dysbiosis affecting epithelial differentiation and immune response.

Dermal Repair in Chronic Management

Primary changes in the skin barrier are genetically influenced, so **using dermal repair treatments throughout the atopic patient's life is essential** to maintain skin barrier stability.

- Reduces perpetuation of clinical signs.
- Increases time between relapses.
- Stabilizes microbiota.
- Reduces infection recurrence.
- Reduces transepidermal water loss.

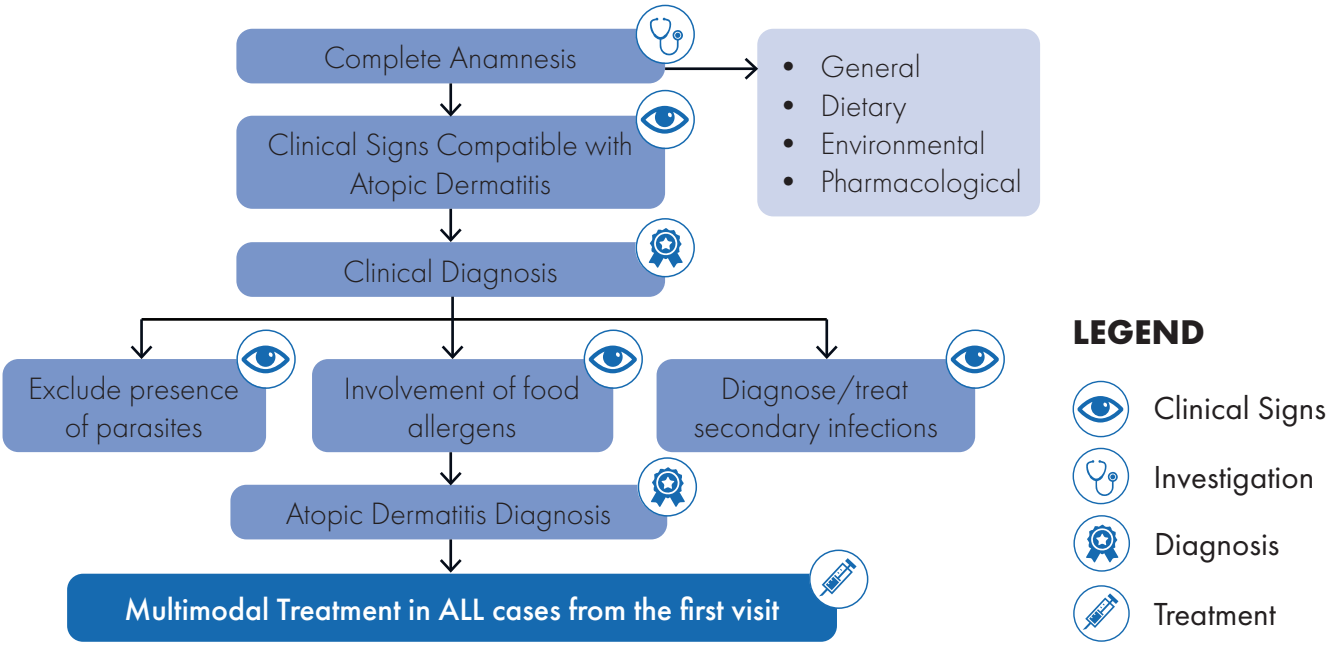


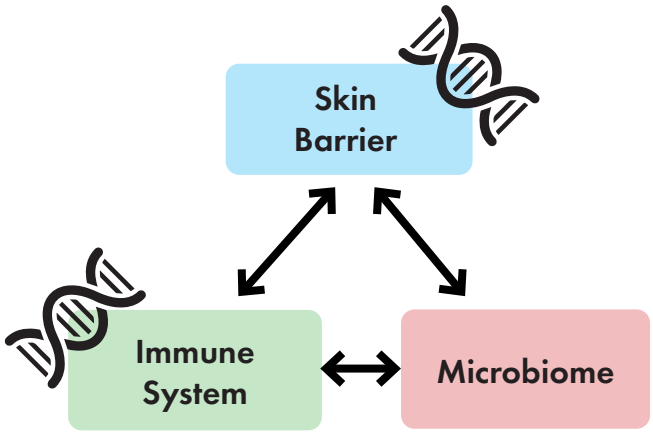
The epidermis of a healthy dog is an impenetrable barrier. The stratum corneum, made up of apoptotic keratinocytes and intercellular lipids (among which ceramides play a key role), provides impermeability and physical resistance to the skin. This prevents excessive transepidermal water loss and reduces the penetration of allergens.

The epidermis in atopic dogs is considerably more permeable. The stratum corneum is altered because changes occur in the physical structure of the keratinocytes during their maturation, as well as in the amount, proportion, and distribution of ceramides. This allows for:

- Greater allergen penetration, leading to contact with an hyperreactive immune system.
- The proliferation of microorganisms that further complicate the inflammatory condition.
- An increase in transepidermal water loss, leading to xerosis, which in turn increases pruritus.

2. Approach to the Atopic Patient





SKIN BARRIER REPAIR
- ↓ Allergen Permeability
- ↓ Transepidermal Water Loss
- ↓ Inflammation
- ↓ Secondary Infections

STABILIZE MICROBIOTA
- ↓ Inflammation
- ↓ Secondary Infections

Improves Skin Barrier Stability

ANTI-PRURITIC / ANTI-INFLAMMATORY
- ↓ Clinical Signs
- ↓ Inflammation
- ↓ Secondary Infections
- ↓ Secondary Skin Barrier Damage

Conclusion: **Multimodal treatment from day one, improving the skin barrier, controlling inflammation and itching, and stabilizing the microbiota.**

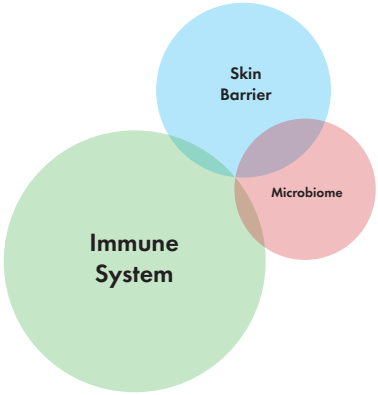
3. Clinical Cases

Dog with severe pruritus and few secondary lesions

Ideal Management:

- Control pruritus (medications).
- Improve skin barrier.
  - » Decrease allergen permeability.
  - » Prevent disease progression.
  - » Prevent secondary infections.

Possible pathophysiological scenario:

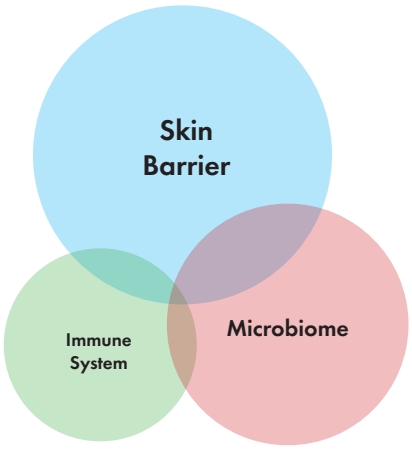


Dog with pruritus and marked xerosis

Ideal Management:

- Improve skin barrier.
- Decrease transepidermal water loss.
  - » Reduce xerosis and inflammation.
  - » Prevent disease progression.
  - » Prevent secondary infections.

Possible pathophysiological scenario:

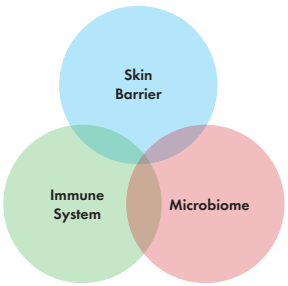


Dog with severe pruritus and severe secondary lesions

Ideal Management:

- Control infections.
- Control inflammation/pruritus.
- Improve skin barrier.
  - » Recover secondary damage.
  - » Prevent progression.
  - » Reduce the amount of anti-inflammatory medications.

Possible pathophysiological scenario:



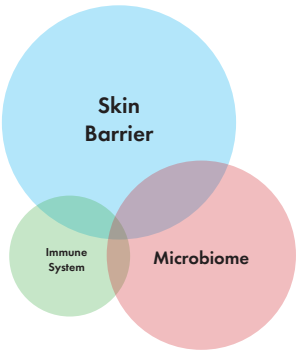
4. Long-term management of an allergic dog after clinical condition control

Allergic dog after controlling a very severe inflammatory and infectious condition

Ideal long-term management:

- Continuously maintain the skin barrier healthy and protected.
  - » Recover secondary damage.
  - » Prevent disease progression.
  - » Reduce the possibility of new infections.
  - » Decrease the amount of anti-inflammatory medications.

Possible pathophysiological scenario:



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- It contains **Biosfeen®**, a unique extract of animal-derived sphingolipids that includes ceramides and a high content of sphingomyelin.
- **Skin repair** is a key pillar in managing skin conditions where the skin barrier is compromised, such as atopic dermatitis.

Small dog and cat

Large/medium dog

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