

Skin Microbiome in Atopic Dermatitis

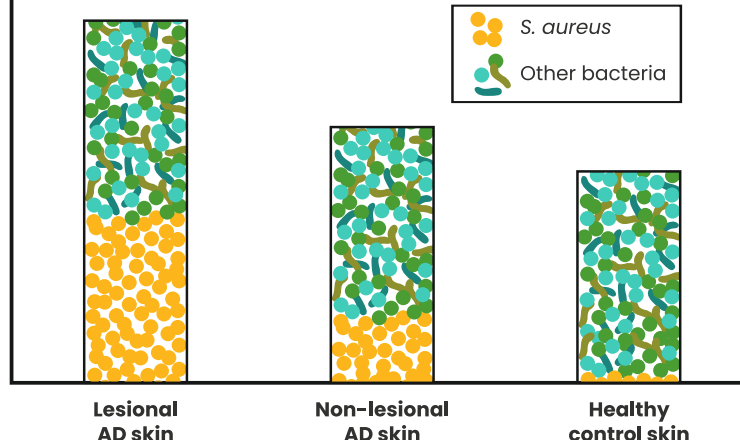
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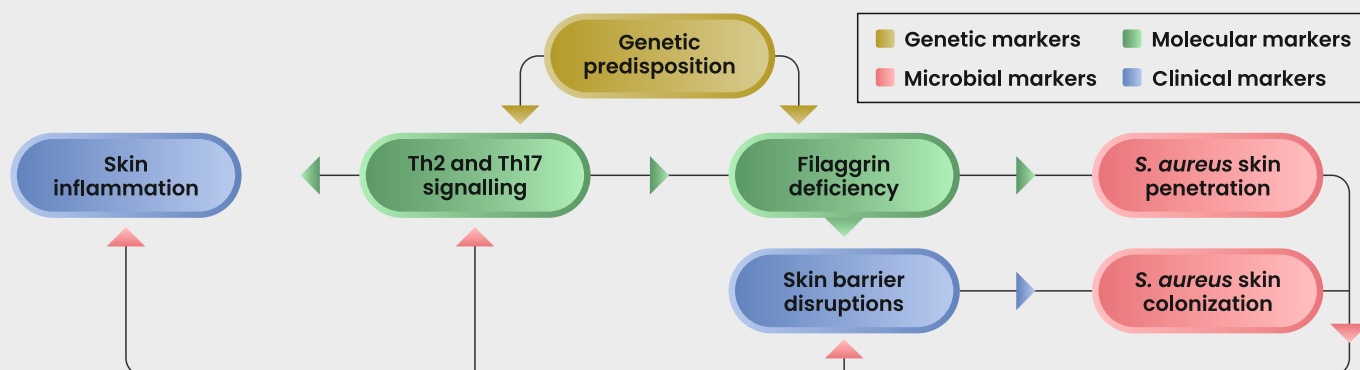
The skin is an important first-line defence against pathogenic microbial invasion. Tight connections between corneocytes in the stratum corneum form a physical barrier, and antimicrobial peptides and lipids secreted from keratinocytes and glands provide a chemical barrier. In addition, commensal skin microorganisms can impede growth of pathogens, either directly by secreting antimicrobial molecules, or indirectly by occupying space and competing for nutritional resources.

Absolute abundances of bacteria



Absolute abundances of bacteria in atopic dermatitis (AD) skin and healthy skin.

Bacterial densities are significantly greater on AD lesional skin compared with healthy control skin, which mainly is due to significantly increased abundances of *S. aureus* in AD lesional skin. *S. aureus* absolute abundances are also increased in AD non-lesional skin, but not as much as in lesional skin.



Proposed connections between human factors involved in AD pathogenesis and *S. aureus* colonization and virulence.

***Streptococcus* was the most common bacterial genus at the perioral skin, with mean relative abundances exceeding 40% in both healthy control skin and lesional skin from patients with mild to moderate AD.**

Studies indicate that it is not the eczema itself that drives the changes in diversity, but other AD-related factors in or on the skin that not only are associated with lesional skin areas (e.g. *S. aureus* colonization, lipid composition or pH).

Study indicates that right emollient application leads to decreased proportions of *Staphylococcus* spp. on AD lesional skin.

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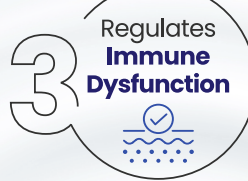
Epidermosil[®]
Bio-PGA



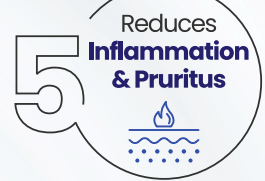
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