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The antimicrobial barrier of the skin**Mohamed Maged El Battawy**

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The skin is the largest organ of the body. As the major interface with the environment, it acts as a barrier protecting the body against physical, chemical and biological external injury. Besides its role as a physical barrier, an emerging picture of the skin as an immune barrier is revealed by recent research. On exposure to external pathogens, keratinocytes can act as innate immunocompetent cells, secreting inflammatory cytokines and antimicrobial molecules. The commensal organisms on the surface of the skin form a complex stable microbial community, the microbiome, which keeps pathogenic microbes in check through several mechanisms, including activation of keratinocytes. Innate and adaptive immunocompetent cells such as antigen- presenting cells and tissue-resident memory cells are distributed

in the epidermis and dermis. These cells interact with keratinocytes and with the microbiome to initiate and maintain an immune response and also to promote barrier repair following injury. Disruption of the immune barrier function of the skin is associated with increased colonization by pathogenic microbes and subsequent inflammatory tissue response. An important example is a colonization by *Staphylococcus aureus* in lesions of atopic dermatitis. A thorough understanding of cutaneous antimicrobial function would provide new approaches to the treatment of inflammatory skin diseases. In this presentation, an overview of the key concepts of cutaneous antimicrobial defenses will be provided, while highlighting possibly related pathogenetic mechanisms of inflammatory skin disease.

Biography

Mohamed Maged El Battawy has completed medical/surgical bachelor and master degree of dermatology and venereology from Cairo University, Egypt. He has received doctorate degree of dermatology from School of Medicine, Cairo University. He is currently working as Professor of Dermatology in School of Medicine, Cairo University, Egypt and the Head of dermatology in Hadi Hospital, Kuwait.

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