

〈シンポジウム 21世紀へ向けた角層研究の幕開け〉
(角層研究の最前線)

角層に存在する抗菌ペプチドの局在と働き

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Localization and Function of Antimicrobial Peptides in Cornified Layer

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Abstract

Defensins are a part of the innate immune system of plants, invertebrates, and vertebrates including human. They are divided into α -defensins, β -defensins, and insect defensins. The connectivity and the spacing of characteristic cystein motif are different among these three defensin groups. In human, α -defensins, human neutrophilic defensin (HNP) 1~4 are stored in azurophilic granules of neutrophils, and human defensin (HD)-5 and HD-6 are stored in small-intestine Paneth cells and the female reproductive tissues. Human β -defensins (hBD)-1, and hBD-2 are mainly isolated from epithelial cells and in Paneth cells of the intestine. The hBD-1 was expressed in the respiratory tract, kidney, urogenital epithelium, intestinal epithelium and normal skin. The hBD-2 has been isolated from psoriatic scales and expressed in skin, respiratory and gingival epithelia. Here, we localized the expression of hBD-2 in psoriatic skin.

Key words: innate immunity, antimicrobial peptide, human β -defensin, psoriasis, horny layer, host defense.