



ACNE, ROSACEA, AND RELATED DISORDERS (INCLUDING HIDRADENITIS SUPPURATIVA)

## ANTIMICROBIAL PEPTIDES IN ROSACEA

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Skin faces outer environment and is continuously challenged by physical and microbial events. The skin does not tolerate the microbial or physical environment in some disease conditions. For example, abnormal sensitivity to the environment is the hallmark of rosacea, a common skin disease that is exacerbated by external triggers including ultraviolet light, heat and a variety of microbes. Several proinflammatory systems are activated in patients with this disorder, but recent findings have shown that rosacea patients consistently show excessive activation of innate immune effector molecules. These include excess and abnormal production of cathelicidin antimicrobial peptides (CAMP) and increased expression and activity of the serine protease kallikrein 5 (KLK5). These molecules could reproduce many of the clinical manifestations of rosacea in mouse models. Thus, imbalance of innate immune systems would trigger or exacerbate rosacea. The exploring of innate immune system in skin will illuminate the pathology of skin diseases that are affected by external environment.

