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**Human T<sub>H</sub>9 Cells: A subset of skin-tropic T<sub>H</sub> cells with autocrine and paracrine proinflammatory capacity**

T helper type 9 (T<sub>H</sub>9) cells can mediate tumor immunity and participate in autoimmune and allergic inflammation in mice, but little is known about the T<sub>H</sub>9 cells that develop *in vivo* in humans. We isolated T cells from human blood and tissues and found that most memory T<sub>H</sub>9 cells were skin-tropic or skin-resident. Human T<sub>H</sub>9 cells co-expressed tumor necrosis factor–alpha and granzyme B and lacked coproduction of T<sub>H</sub>1/T<sub>H</sub>2/T<sub>H</sub>17 cytokines, and many were specific for Candida albicans. Interleukin-9 (IL-9) production was transient and preceded the up-regulation of other inflammatory cytokines. Blocking studies demonstrated that IL-9 was required for maximal production of interferon-
gamma, IL-9, IL-13, and IL-17 by skin-tropic T cells. IL-9–producing T cells were increased in the skin lesions of both atopic dermatitis and psoriasis, suggesting that these cells may contribute to human inflammatory skin disease. Our results indicate that IL-9 is produced transiently by a discrete T cell subset and that these cells are tropic for the skin. Although these IL-9 producing T<sub>H</sub> cells may function normally to protect against extracellular pathogens, aberrant activation of these cells may contribute to inflammatory diseases of the skin.