thema that accompany inflammatory and immune skin reactions. The increased vascular permeability also allows the movement of inflammatory and immune cells into the dermis.

Loveren and co-workers have reported that certain antigen-primed T cells produce factors that activate mast cells during the early phases of the elicitation of a CH response (56). As the response progresses, the increase in vascular permeability at sites of antigen deposition allows the influx of antigen-specific $T_{CH}$ cells. The $T_{CH}$ cells secrete a variety of chemotactic, cell-activating, and migration inhibitory factors that sequester inflammatory cells at the antigen-reactive skin site. The reaction proceeds to effect clearance of the antigen from the skin. The response subsides with the appearance of the $T_S$—cell-mediated regulatory response.

Mast cells mediate antigen-nonspecific inflammatory reactions and immediate-type hypersensitivity responses in a similar manner. The appearance of inflammatory cells within the skin is directly associated with the increased vascular permeability produced after mast cell degranulation. In these two reactions, mast cells are activated by either the direct or indirect effects of the skin irritant (inflammatory), or direct activation by allergen binding to IgE on the surface of the mast cells (immediate-type hypersensitivity) (54). Although the appearance of the skin reaction produced by either inflammatory or immune cells is similar, the mechanisms that are involved are distinct and, thus, different approaches should be taken to circumvent the elicitation of a specific skin reaction produced by a given compound introduced through the skin (i.e., does the compound act as an irritant, contact sensitizer, or allergen?).

### C. Epidermotropic Blood-Borne Cells

Lymphocytes, monocytes, and polymorphonuclear cells are the mediators of the various skin reactions. The influx and concentration of these cells in a skin site are responsible for the urticaria observed at inflammatory and immune reactive sites. We have already discussed how these cells gain entry into the skin. However, it should be appreciated that certain populations of T cells display epidermotropic properties (57). When activated, these cells tend to selectively recirculate to skin sites. Mycosis fungoides cells represent a neoplasia of T cells that have retained this property (58). Thus, it appears that in addition to possessing antigen-specific activity through the expression of the T-cell antigen receptor (Ti/CD3 complex), epidermotropic T cells also express receptors for skin endothelium-expressed cell adhesion molecules which allows them to selectively bind to, and extravasate across, the dermal vasculature. These types of adhesion molecules have been identified