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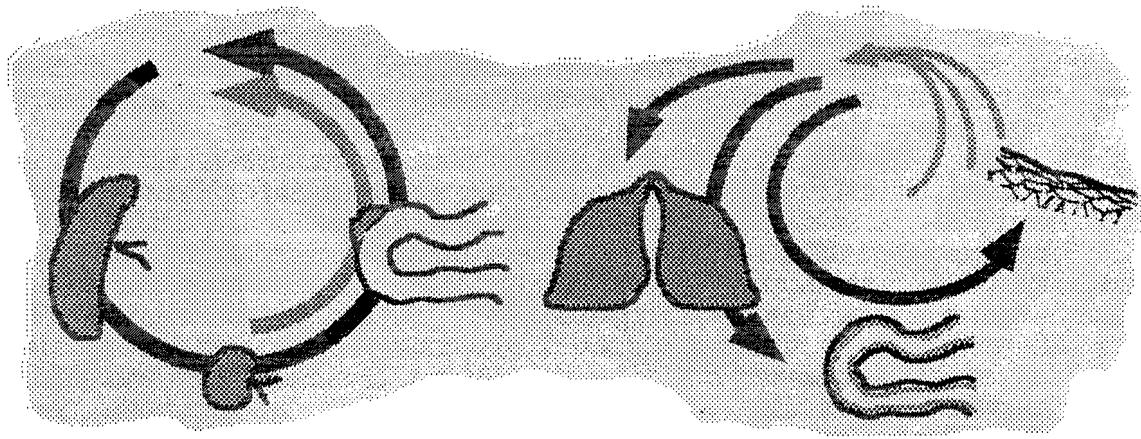

INTERCRINES CONTROL CELL/SITE SPECIFICITY OF LEUKOCYTE INFILTRATES

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Interleukin 8 (IL-8) and macrophage chemotactic and activating factor (MCAF) are representative of two molecular forms of a new family of ten distinct 8-10 KDa cytokines. These "Intercrines" remain unexpressed until induced by various proinflammatory or reparative stimuli, including endotoxin, IL-1 and TNF. Members of this family of cytokines exhibit from 20 to 45% homology in amino acid sequence, are all basic heparin-binding polypeptides and have stimulatory effects on immunity, inflammation, blood flow, vascular permeability, coagulation and wound healing. Characterization of the full activities of these unique cytokines is not yet complete, but there are descriptions of their expression in normal inflammation and repair and in persistent inflammatory disease states. The IL-8 subfamily includes platelet factor 4, beta thromboglobulin, IP 10 and melanoma growth stimulating factor (GRO) and is encoded in chromosome 4, whereas genes of MCAF subfamily consisting of LD78, ACT-2, RANTES and monocyte chemoattractant protein 1 (McP-1) are on chromosome 17. Both share basic structural features and also have unique features characteristic of each subfamily. Systematic examination of the biological effects of representative cytokines in rodent models will be discussed in context with the theme of cell- and site-selective leukocyte emigration from microvasculature.

Local organization

Alf Hamann, Hamburg, FRG