Gamma-Delta T Cells
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Volume Editors

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Soon after the discovery of the T cell receptor \( \gamma \) and \( \delta \) genes, unique subsets of T cells expressing \( \gamma \delta \) T cell receptors were identified in several tissues. Substantial progress has been made over the last decade or so toward understanding the molecular mechanisms regulating development of \( \gamma \delta \) T cells and their physiological function.

This volume contains seven chapters contributed by experts in different areas related to \( \gamma \delta \) T cells. Rebecca O’Brien and her coworkers give a thorough overview of many areas, including the potential functions of different \( \gamma \delta \) T cell subsets and candidate natural ligands for \( \gamma \delta \) T cell receptors. Koichi Ikuta et al. then describe unique pathways in which signals transmitted from the IL-7 receptor regulate the survival, growth, and differentiation of \( \gamma \delta \) T cells. Kunihiko Tamaki and his coworkers summarize their views on the biology of dendritic epidermal T cells, a resident \( \gamma \delta \) T cell subset in the epidermis of mouse skin, and of dermal \( \gamma \delta \) T cells, which were identified originally in their laboratory. Hiroyuki Matsue introduces the concept of cytokine-mediated communication between dendritic epidermal T cells and other cell types in the skin (e.g., keratinocytes and Langerhans cells). Teruo Shiohara et al. present an overview of the dual function of \( \gamma \delta \) T cells in innate and adaptive immune responses. Alfredo Salerno and his coworkers describe the contributions of \( \gamma \delta \) T cells in contact hypersensitivity responses to reactive haptens on both sensitization and elicitation. Finally, Ji-Lian Cai and Philip Tucker provide an updated review on antigen recognition and the immunoregulatory function of \( \gamma \delta \) T cells.

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