Preface

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The 12th annual workshop on 'Eosinophils in Allergy and Related Diseases 1999' was held at Chiwaki Hall in Tokyo. Fifteen reports were selected for these Proceedings. These were mostly basic studies, such as investigations of the mechanism of eosinophil activation, or the biological importance of cytokines, chemokines, and chemoattractants. Recently, excellent reviews have appeared that provide a summary of the basic and clinical evidence about allergic inflammation [Allergy and Asthma; *Nature* 1999;402(suppl 6740); New Millennium; The Conquest of Allergy; *J Allergy Clin Immunol* 2000;105]. It is generally accepted that mediators released by eosinophils are important in the development of chronic allergic inflammation in the upper and lower airways characterized by late asthmatic and nasal reactions, remodeling of bronchial mucosa, and irreversible pathological changes of nasal tissue, although relatively little is known about the mechanism of eosinophil mediator release.

The accumulated knowledge relating to eosinophils should lead to clinical applications. Various approaches to allergy have recently been attempted as therapeutic strategies targeting eosinophils. Immunomodulators (such as FK-506, cyclosporin A, and rapamycin) and adhesion blockers (anti-ICAMs, VLA-4 blocker, and anti-selectins) are known to inhibit eosinophil differentiation and to reduce eosinophil recruitment into local tissues. However, the nonspecific immunomodulators and adhesion blockers widely affect T cell development and cell migration, which are important for immune surveillance of foreign antigens, including microorganisms.

Several ideas for blocking IL-5 have been reported, such as a humanized monoclonal antibody to IL-5 that

prevents local eosinophil recruitment (SB240563: M.J. Leckie), as well as a more specific inhibitor of IL-5 gene transcription factor (polynactin; OM-01; H. Okudaira and M. Mori). On the other hand, met-RANTES and antagonists of CCR3 (a receptor for RANTES, MCP-3, MCP-4 and eotaxin) may be attractive for the functional modulation of eosinophils (H. Heath et al. and J. Elsner et al.). Anti-iNOS would be another candidate for regulating eosinophil mediator function (P.J. Barnes).

To establish any of these approaches as therapeutic tools for the treatment of allergic inflammation, more animal experiments and clinical trials need to be done in the future, especially to confirm reliable efficacy without any serious side effects. We already know that corticosteroids have a strong apoptotic effect on eosinophils and that their topical use is mostly safe. Therefore, any new therapeutic method targeting eosinophil modulation should be equal to or better than corticosteroids. The expansion of micromolecular biology may often lead to ideas that involve the sacrifice of normal function. We must therefore consider whether or not complete elimination of eosinophil function and of local eosinophil recruitment, so-called 'carpet bombing', instead of specific blockade, inhibition, or suppression of eosinophil functions involved in allergic inflammation, gives us any real advantages, because we still do not know all of the activities of eosinophils.

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