
Preface

The chemokines family of small proteins are involved in numerous biological processes ranging from hematopoiesis, angiogenesis, and basal leukocyte trafficking to the extravasation and tissue infiltration of leukocytes in response to inflammatory agents, tissue damage, and bacterial or viral infection. Chemokines exert their effects through a family of seven G-protein coupled transmembrane receptors. Worldwide interest in the chemokine field surged dramatically early in 1996, with the finding that certain chemokine receptors were the elusive coreceptors, required along with CD4, for HIV infection.

Today, though over 40 human chemokines have been described, the number of chemokine receptors lags behind—only 17 human chemokine receptors have been identified so far. What has emerged over the years is that most chemokine receptors bind several distinct ligands, and indeed the majority of chemokines are able to bind to multiple chemokine receptors, explaining to some extent the apparent disparity in the numbers of chemokines and receptors. Yet in spite of the apparent redundancy in chemokine/chemokine receptor interactions, it is clear that in vivo, spatial, temporal, and indeed cell- and tissue-specific expression of both chemokines and their receptors are important factors in determining the precise nature of cellular infiltrates in physiological and pathological processes.

Understanding chemokines and chemokine receptor biology requires a melange of research activities in many different disciplines including molecular biology, protein chemistry, and immunology. The aim of *Chemokine Protocols* is to make readily available, in one volume, the principal techniques used by leading researchers in the chemokine field. We have attempted to cover all aspects of chemokine biology ranging from the cloning and characterization of chemokines and their receptors, through to the use of animal models to study chemokine function in vivo. Each chapter also includes relevant background information, as well as providing a useful bibliography for more detailed analysis, making the study of chemokines accessible at all levels of experience.

The editors would like to thank Ms. Nadine Huber for her excellent assistance with the preparation of the manuscripts, and Serono Pharmaceutical Research Institute for covering the cost of the color artwork. We would also thank Dr. Manuel Peitsch and Dr. Jeff Shaw for molecular modeling.

Amanda E. I. Proudfoot

Timothy N. C. Wells

Christine A. Power



<http://www.springer.com/978-0-89603-722-9>

Chemokine Protocols

Proudfoot, A.E.I.; Wells, T.N.C.; Power, C. (Eds.)

2000, XIII, 353 p., Hardcover

ISBN: 978-0-89603-722-9

A product of Humana Press