Preface

The 39th Annual Symposium on the Biology of Skin, held September 24–27, 1989, addressed the topic “Cell Receptors in Cutaneous Biology.” Cell Receptors was originally conceived to encompass a full scope of receptor and signaling molecules as prototypes of both cell membrane and intracellular ligands which interact with cells or molecules. The growth of knowledge in the past two decades has been so rapid that early drafts of the program soon became unwieldy because of the number of new developments in this important field. We decided, therefore, to limit this symposium to “Interleukin, Immunoglobulin-Family and Matrix Receptors.” A future symposium will examine receptors which influence gene expression such as corticoid, retinoid, and thyroid receptors and will focus in greater detail on receptor signaling within the cell. The 28 diverse, comprehensive, and complementary presentations over a two and a half day period is testimonial to the rapid expansion of cross-disciplinary interest and productivity among investigative dermatologists, cell and developmental biologists, immunologists, biochemists, and molecular biologists.

Indeed, such arbitrary divisions among “types” of investigators are becoming somewhat artificial as more and more scientists of biology are concerning themselves with similar events as they attempt to discern why cells behave the way they do. As observed in a recent editorial, nearly all biologic sciences “are converging on two central phenomena, namely, signal transmission and differential gene expression” [1]. Though not the stated intent of this symposium, it was precisely this focus which involved specific receptors, various classes of cellular signaling molecules or pathways, and consequent gene expression that emerged as the common theme.

Whether dealing with the biology of cytokines, their receptors, their autocrine and paracrine effects; whether discussing the biochemistry or molecular basis of antigenic diversity and response displayed by the immune system; whether addressing cell-cell or cell-matrix adhesion and the interaction of integrins and their ligands and the effects of cytokines on the regulated expression of these ligands; or whether delineating and modeling the pivotal roles of various cells, such as keratinocytes and endothelial cells, in initiating and modulating developmental, inflammatory, immunologic, and reparative mechanisms in the skin, all participants addressed in one fashion or another one or both of these two global biologic concerns. The admixture of scientists looking from various perspectives in the pleasant atmosphere of the Oregon coast made for an informative and stimulating meeting.

Five years ago when the symposium focused on the immunobiology of the skin, it was established that the skin served a more complex role in the immune response than as a mere target of systemic effector cells and mediators. Although that symposium addressed to some degree the role of specific receptors in the cutaneous immune response, greater emphasis was given to the contribution of bone marrow-derived cells of Langerhans, the Thy-1+ dendritic epidermal cell, and soluble mediators involved in mediating immune responses. Furthermore, receptors were studied at that point more as cellular phenotypic markers than as communication channels, though certainly function was inherently understood to be associated with phenotype. The current meeting has demonstrated that our understanding of the biochemical and molecular functions of such cell-surface molecules and their ligands has evolved and matured, expanding to include non-hematopoietic cells as well. We can now speak as well of “activated” keratinocytes and endothelial cells which express, secrete, and respond to a myriad of bioactive proteins secreted by or expressed on other cells. In short, this meeting updated our understanding not only of certain cell-surface receptors, but also the mechanisms of activation and the cellular consequences of receptor activation that ultimately results in altered gene expression and altered cellular biology.

Since 1979, these symposia have addressed ten major topics in cutaneous biology: Photobiology, The Dermis, The Keratinocyte, Oncogenic Viruses, Immunology, Genetics and Prenatal Diagnosis, Nutrition, Pigment Cell Biology and Oncology, Vascular Elements of the Dermis and Receptors. Particular appreciation is expressed for funding by both the Public Health Service and our colleagues in industry who have each contributed over $200,000 to defray the travel, meeting, and publication costs. In addition, $30,000 has been awarded by the Medical Research Foundation of Oregon. 267 domestic and 38 foreign scientists have contributed during this decade. Special gratitude is expressed to The Journal of Investigative Dermatology for the rapid and high-quality publication of the proceedings of these meetings and to our coordinating staff, Mrs. Diane Zoller and Mrs. Ruth Ann Smith. The staff at our convention retreat, Salthaven Lodge at Gleneden Beach on the central Oregon Coast, has provided unfailing superior performance in a setting long remembered by speakers and participants. Guidance and oversight for the meetings have been provided by the Officers and Directors of the Cutaneous Biology Foundation who presently are Richard D. Sontheimer, M.D., and Robert A. Briggaman, M.D.

We now enter a period of transition. Responsibility for the symposia will be transferred to the new Symposium Chairman David A. Norris, M.D. of Denver, Colorado in 1992. It is our hope that these meetings remain a central and premiere expression of the latest advances in cutaneous biology and provide an inspiration for new investigators seeking a niche for the expression of their own scientific curiosity.

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REFERENCE