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Book Review

Selected Methods in Cellular Immunology. Edited by B. B. Mishell and S. M. Shiigi. W. C. Freeman & Co., San Francisco, January, 1980, 486 pp., $29.95 hardbound.

This book is a collection of methodologies devoted almost exclusively to murine cellular immunology. The text is an evolutionary product of the graduate cellular immunology course manual utilized at University of California, Berkeley. The chapters are concisely presented and clearly written by the sundry contributers to this volume. Each protocol is briefly introduced and discussed prior to presentation of procedural detail. The procedures are adequately referenced, and comments concerning critical procedural steps or reagent preparation are frequent. Brief descriptions of data analysis are also presented where appropriate.

The major sections of the text are arranged in a logical sequence building from the basic cellular techniques to the more advanced. The first section deals primarily with the generation of *in vitro* immune responses.

Topics covered include the preparation of lymphocytes and macrophages, with the fundamental considerations of red blood cell removal and cell viability discussed. *In vitro* humoral immune response generation via the classic Mishell-Dutton and the Marbrook methods are presented by the Mishells and Marbrook, respectively. The other major assay procedures that are extensively detailed include hemolytic plaque assays, T-cell mediated cytolytic responses, including ^{51}Cr release, limiting dilution assays for estimation of B or T cell precursors and average clone size, and finally a section on cellular proliferative responses to antigen, mitogen, and histoincompatible cells.

Cell separations are addressed in a separate section, and include techniques using physical adherence, size and density, cell surface markers, and functional selection by inactivation of actively proliferating cells. To augment this section, a rather complete immunochemistry section is included, with methods specifically relating to the production, purification, and testing of antibody directed against cell surface components, haptens with useful cellular applications (e.g., trinitrophenyl, dinitrophenyl-modified carriers), and systems for the analysis of cell surface components and cellular proteins.

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Two very worthwhile and timely chapters are included on the production of hybridomas (Oi and Herzenberg) and two-dimensional gel analysis (P. P. Jones). A well-illustrated chapter devoted to selected surgical procedures utilized in cellular immunology is also included.

As presented, the text is an excellent reference source for laboratories engaged in murine cellular immunology research and is also explicit enough to enable nonimmunologists to perform cellular immunological experiments with minimum pain.

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