

Book Reviews

Cell and Molecular Biology

SEM ATLAS OF CELLS AND TISSUE
by Tsuneo Fujita, Keiichi Tanaka,
and Junichi Tokunaga. 1981. Igaku-
Shoin Medical Publishers Inc. (New
York 10020). 338 p. 332 SEM photos
(over 100 full-page plates). \$90.00
hardback.

This is an attractively printed and carefully selected atlas of scanning electron micrographs (SEM) assembled by the authors from their active research at Niigata University, Tottori University, and Kagoshima University (schools listed in sequence of their authors' affiliations).

The pages are 11-11/16" × 8-3/16" (oversize) and printed on a good quality paper.

The preface on page iii summarizes well this book:

We three authors of this volume have worked with the SEM in distant places in Japan but have continuously formed a hot team promoting mutual technical cooperation and information exchange. We now feel that it is timely to publish a collection of our micrographs prepared by field emission microscopes and using the newest techniques of specimen preparation.

The SEM pictures of muscle end-plates (Chinese Hamster), and male reproductive system (rat) are clear and of special interest.

This volume should be a valuable asset to a SEM or transmission electron microscopy (TEM) course. As a source of references and pictures of systems (at present SEM resolution limits), it should be useful for library and supplementary use in cell biology, histology, anatomy and physiology, and microscopy courses.

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Microbiology

MICROBES IN ACTION: A LABORATORY MANUAL OF MICROBIOLOGY

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Science Teaching Center
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by Harry W. Seeley, Jr. and Paul J. VanDemark. 1981. 3rd ed. W.H. Freeman and Company (San Francisco). 385 p. \$10.95. Instructor's manual available.

This is an excellent, up-dated revision of a well-known and well-used laboratory manual. The manual is used in the elementary bacteriology classes at Cornell University and emphasizes the "fundamental" approach to microbiology. The purpose of the manual is to provide a basic training in the handling and understanding of microorganisms.

This manual not only emphasizes the classical methods in aseptic technique, media preparation, and culturing, but also includes new exercises in areas such as microbial genetics, virology, and immunology. The authors indicate that the basic approach is ecological, emphasizing the natural relationship between organisms and their environment. This is clearly illustrated in the sections on environmental influences and the microbial interrelationships sections on water, food, and soil.

The major units reveal the variety and scope of the manual: microscope, culturing, staining, media preparation, determination of numbers, environmental influences, relationships, enzymatic reactions, isolation and identification, variation-mutation, recombination, viruses, eucaryotes and water, sanitation, pollution, food,

soil, and medical microbiology. New exercises are included to illustrate developments in the major units. Also included are tests used to determine genetic characteristics from plasmids and multi-test systems.

Concern for proper technique and laboratory safety is evident with basic suggestions and regulations included at the beginning of the Manual. Exercises have been chosen that minimize exposure to potentially hazardous chemicals and pathogens.

This is an excellent laboratory manual for introductory microbiology and bacteriology classes. High school teachers will find this an excellent reference manual with a wealth of ideas for a microbiology class and for student projects.

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SELECTED EXERCISES FROM MICROBES IN ACTION: A LABORATORY MANUAL OF MICROBIOLOGY

by Harry W. Seeley, Jr. and Paul VanDemark. 1981. W.H. Freeman and Company (San Francisco). 268 p. \$9.95. Instructor's manual available.

This shorter version of *Microbes in Action* contains 54 selected exercises. It is an excellent laboratory manual for introductory microbiology and bacteriology classes.

This version includes all the units of *Microbes in Action* except for the unit on Preparation of Media and Methods of Sterilization. The exercises have been carefully chosen to represent the fundamentals of microbiology, including new exercises in microbial genetics, virology, immunology, and eucaryotes. Included also is a new exercise on the Ames Test—Detection of Chemical Carcinogens.

This is an excellent manual for the less in-depth introductory class. The manual could also be used in a general biology class at both the college and the secondary levels.

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