Methods in Enzymology

Volume 174

BIOMEMBRANES

Part U

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Biomembranes

Part U

Cellular and Subcellular Transport: Eukaryotic (Nonepithelial) Cells

EDITED BY

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Preface

Biological transport is part of the Biomembranes series of *Methods in Enzymology*. It is a continuation of methodology concerned with membrane function. This is a particularly good time to cover the topic of biological membrane transport because there is now a strong conceptual basis for its understanding. The field of transport has been subdivided into five topics.

1. Transport in Bacteria, Mitochondria, and Chloroplasts
2. ATP-Driven Pumps and Related Transport
3. General Methodology of Cellular and Subcellular Transport
4. Cellular and Subcellular Transport: Eukaryotic (Nonepithelial) Cells
5. Cellular and Subcellular Transport: Epithelial Cells

Topic 1 covered in Volumes 125 and 126 initiated the series. Topic 2 is covered in Volumes 156 and 157, Topic 3 in Volumes 171 and 172, and Topic 4 in Volumes 173 and 174. The remaining topic will be covered in subsequent volumes of the Biomembranes series.

Topic 4 is divided into two parts: this volume (Part U) which covers transport by isolated subcellular organelle fractions, purified components as well as transport in plants, plant organelles, and single cell eukaryotes, and Volume 173 (Part T) which deals mainly with intact cells; major emphasis is on the red cell, derived red cell preparations and the anion transporter.

We are fortunate to have the good counsel of our Advisory Board. Their input insures the quality of these volumes. The same Advisory Board has served for the complete transport series. Valuable input on the outlines of the five topics was also provided by Qais Al-Awqati, Ernesto Carafoli, Halvor Christensen, Isadore Edelman, Joseph Hoffman, Phil Knauf, and Hermann Passow. Additional valuable input for Volumes 173 and 174 was obtained from Ioav Cabanchik, John Exton, Arnošt Kotyk, and Aser Rothstein.

The names of our advisory board members were inadvertently omitted in Volumes 125 and 126. When we noted the omission, it was too late to rectify the problem. For volumes 125 and 126, we are also pleased to acknowledge the advice of Angelo Azzi, Youssef Hatefi, Dieter Oesterhelt, and Peter Pedersen.

The enthusiasm and cooperation of the participants have enriched and made these volumes possible. The friendly cooperation of the staff of Academic Press is gratefully acknowledged.

These volumes are dedicated to Professor Sidney Colowick, a dear friend and colleague, who died in 1985. We shall miss his wise counsel, encouragement, and friendship.

SIDNEY FLEISCHER
BECCA FLEISCHER

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