THE RED CELL MEMBRANE

A Model for Solute Transport

Edited by

B. U. Raess
and ***G. Tunnicliff***

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Godfrey Tunnicliff

Indiana University School of Medicine
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The Red Cell Membrane

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The Red Cell Membrane
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Cancer Markers
Edited by ***Stewart Sell,*** 1980

Preface

> "After being frequently urged to write upon this subject, and as often declining to do it, from apprehension of my own inability, I am at length compelled to take up the pen, however unqualified I may still feel myself for the task."
>
> ***William Withering, M.D.***[1]

I have yet to find a description or a quote that better summarizes my initial ambivalence towards embarking on such an endeavor as participating in putting together this monograph. The impetus for *The Red-Cell Membrane: A Model for Solute Transport* has been a simple, genuine desire to bring together an authoritative account of the "state of the art and knowledge" in the red-cell-membrane transport field. In particular, it seems important to emphasize the pivotal role the red cell has played for several decades in the discovery and the elucidation of mechanisms of plasma-membrane transport processes. It is only with such knowledge that we can hope to push ahead and make progress in this exciting, multifaceted area. Eventually, one hopes to not only further our knowledge of red cells, but apply the newly gained insights to any other cell with the common denominator of the plasma membrane.

In this compendium of reviews, the reader will find that the term model will take on a variety of gists and meanings. In some chapters, the red cell has been chosen as a model membrane solely on the basis of its preeminent design and simplicity. In other chapters, the model is chosen for its predictive powers by using a more sophisticated approach, i.e., the description and mathematical treatment of a set of experimentally generated data. To each his own! Our hope is that the combination of the two applications will help us visualize and explain, in a simplified way, the intricacies and complexities of life in and around the plasma membrane.

Clearly, one must realize that, within the constraints of a manageable review of the field's development in the past decade or so, many important topics and questions had to be omitted. Making the choices and decisions of what to include or, by contrast, omit or, for that matter, whose expertise to call upon was a thoroughly humbling and occasionally

frustrating experience. Unfortunately, many excellent investigators could not be included, but their views are recognized in articles treating their particular disciplines.

Perhaps more importantly, this project has given me the opportunity to step off the teacher's dais (or daze, as the case may be on any given day) and become a listener to old mentors and new experts once again. It is my sincere hope that readers and students in "transportology" will enjoy and learn as much as I have since joining Goff Tunnicliff in organizing the present work.

B. U. Raess

[1]In *An Account of the Foxglove, and Some of Its Medical Uses; with Practical Remarks on Dropsy, and Other Diseases.* Birmingham MDCCLXXXV.

Contributors

JAVIER ALVAREZ • *Departamento de Bioquimica y Biologia Molecular y Fisiologia, Facultad de Medicina, Universidad de Valladolid, Valladolid, Spain*

LEE ANN BAXTER-LOWE • *Clinical Laboratories, The Blood Center of Southeastern Wisconsin, Milwaukee, Wisconsin*

P. J. BJERRUM • *Department of Clinical Chemistry, University Hospital, Copenhagen, Denmark*

RHODA BLOSTEIN • *Departments of Medicine and Biochemistry, Montreal General Hospital Research Institute, McGill University, Montreal, Quebec, Canada*

ROBERT M. BOOKCHIN • *Department of Medicine, Albert Einstein College of Medicine, Bronx, New York*

ANTHONY CARRUTHERS • *Department of Biochemistry, University of Massachusetts Medical Center, Worcester, Massachusetts*

J. CLIVE ELLORY • *University Laboratory of Physiology, University of Oxford, Oxford, UK*

BIRTHE FODER • *Department of Clinical Physiology and Nuclear Medicine, University Hospital, Copenhagen, Denmark*

CAROL J. FREEMAN • *Physiological Laboratory, Cambridge University, Cambridge, UK*

JAVIER GARCÍA-SANCHO • *Departamento de Bioquimica y Biologia Molecular y Fisiologia, Facultad de Medicina, Universidad de Valladolid, Valladolid, Spain*

GEORGE GÁRDOS • *Department of Cell Metabolism, National Institute of Haematology and Blood Transfusion, Budapest, Hungary*

PATRICIO J. GARRAHAN • *Instituto de Quimica y Fisicoquimica Biologicas, Facultad de Farmacia y Bioquimica, Buenos Aires, Argentina*

LOWELL E. HOKIN • *Department of Pharmacology, University of Wisconsin Medical School, Madison, Wisconsin*

MICHAEL L. JENNINGS • *Department of Physiology and Biophysics, University of Texas Medical Branch at Galvaston, Galvaston, Texas*
PHILIP A. KNAUF • *Department of Biophysics, University of Rochester School of Medicine and Dentistry, Rochester, New York*
VIRGILIO L. LEW • *Physiological Laboratory, Cambridge University, Cambridge, UK*
PAOLO LULY • *Dipartimento di Biologia, II Universita Degli Studi di Roma, Roma, Italy*
OLGA E. ORTIZ • *Department of Medicine, Albert Einstein College of Medicine, Bronx, New York*
B. U. RAESS • *Department of Pharmacology and Toxicology, Indiana University School of Medicine, Evansville, Indiana*
ALCIDES F. REGA • *Instituto de Quimica y Fisicoquimica Biologicas, Facultad de Farmacia y Bioquimica, Buenos Aires, Argentina*
BASIL D. ROUFOGALIS • *Department of Biochemistry, University of Sydney, Sydney, Australia*
BALÁZS SARKADI • *Department of Cell Metabolism, National Institute of Haematology and Blood Transfusion, Budapest, Hungary*
OLE SCHARFF • *Department of Clinical Physiology and Nuclear Medicine, University Hospital, Copenhagen, Denmark*
H. J. SCHATZMANN • *Veterinär Pharmakologisches Institut, Universität Bern, Bern, Switzerland*
GORDON W. STEWART • *Department of Medicine, University College London, London, UK*
GODFREY TUNNICLIFF • *Department of Biochemistry, Indiana University School of Medicine, Evansville, Indiana*
ANTONIO VILLALOBO • *Instituto de Investigaciones Biomedicas, Facultad de Medicina U.A.M., Madrid, Spain*
FRANK F. VINCENZI • *Department of Pharmacology, University of Washington, Seattle, Washington*

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