

Preface to the Sixth Edition

The base of knowledge in many sectors of physiology has again grown considerably in magnitude and depth since the last edition of this book was published. Many advances, especially the successful application of the methods of molecular biology and gene technology brought completely new insight into cell signalling and communication as well as into many integrative functions of the body. This made it necessary to edit and, in some cases, enlarge some parts of the book, especially the chapters on blood clotting, water homeostasis, regulation of body weight, iron metabolism, sleep-wake cycle, memory and sound reception.

In recent years, more pathophysiological aspects and clinical examples have been added to the curricula of medical physiology. To make allowance for this development also in this color atlas, the numerous references to clinical medicine are marked by **blue margin bars**, and **pathophysiological and clinical key-words** are attached at the bottom of each text page. They should make it easier to recognize the relevance of the physiological facts for clinical medicine at a glance, and to find quickly more information on these topics in textbooks of pathophysiology (e.g. in our *Color Atlas of Pathophysiology*) and clinical medicine.

I am very grateful for the many helpful comments from attentive readers and for the welcome feedback from my peers, this time especially from Prof. R. *Renate Lüllmann-Rauch*, Kiel, Prof. *Gerhardt Burckhardt*, Göttingen, Prof. *Detlev Drenckhahn*, Würzburg, and Dr. *Michael Fischer*, Mainz as well as from my colleagues and staff at the Department of Physiology in Würzburg. It was again a great pleasure to work with *Rüdiger Gay* and *Astried Rothenburger*, to whom I am deeply indebted for revising many illustrations in the book and for designing a number of new color plates. To them I extend my sincere thanks. I am also indebted to the publishing staff, *Rachel Swift*, a very competent editor, and *Elisabeth Kurz*, for invaluable production assistance. I would also like to thank *Katharina Völker* for her ever observant and conscientious assistance in preparing the index.

I hope that also the 6th Edition of the *Color Atlas of Physiology* will prove to be a valuable tool for helping students better understand physiological correlates, and that it will be a valuable reference for practicing physicians and scientists, to help them recall previously learned information and gain new insights in physiology.

Würzburg, September 2008
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Preface to the First Edition

In the modern world, visual pathways have outdistanced other avenues for informational input. This book takes advantage of the economy of visual representation to indicate the simultaneity and multiplicity of physiological phenomena. Although some subjects lend themselves more readily than others to this treatment, inclusive rather than selective coverage of the key elements of physiology has been attempted.

Clearly, this book of little more than 300 pages, only half of which are textual, cannot be considered as a primary source for the serious student of physiology. Nevertheless, it does contain most of the basic principles and facts taught in a medical school introductory course. Each unit of text and illustration can serve initially as an overview for introduction to the subject and subsequently as a concise review of the material. The contents are as current as the publishing art permits and include both classical information for the beginning students as well as recent details and trends for the advanced student.

A book of this nature is inevitably derivative, but many of the representations are new and, we hope, innovative. A number of people have contributed directly and indirectly to the completion of this volume, but none more than *Sarah Jones*, who gave much more than editorial assistance. Acknowledgement of helpful criticism and advice is due also to Drs. *R. Greger*, *A. Ratner*, *J. Weiss*, and *S. Wood*, and Prof. *H. Seller*. We are grateful to *Joy Wieser* for her help in checking the proofs. *Wolf-Rüdiger* and *Barbara Gay* are especially recognized, not only for their art work, but for their conceptual contributions as well. The publishers, Georg Thieme Verlag and Deutscher Taschenbuch Verlag, contributed valuable assistance based on extensive experience; an author could wish for no better relationship. Finally, special recognition to Dr. *Walter Kumpmann* for inspiring the project and for his unquestioning confidence in the authors.

Basel and Innsbruck, Summer 1979
Agamemnon Despopoulos
Stefan Silbernagl

From the Preface to the Third Edition

The first German edition of this book was already in press when, on November 2nd, 1979, *Agamennon Despopoulos* and his wife, *Sarah Jones-Despopoulos* put to sea from Bizerta, Tunisia. Their intention was to cross the Atlantic in their sailing boat. This was the last that was ever heard of them and we have had to abandon all hope of seeing them again.

Without the creative enthusiasm of *Agamennon Despopoulos*, it is doubtful whether this book would have been possible; without his personal support it has not been easy to continue with the project. Whilst keeping in mind our original aims, I have completely revised the book, incorporating the latest advances in the field of physiology as well as the welcome suggestions provided by readers of the earlier edition, to whom I extend my thanks for their active interest.

Würzburg, Fall 1985
Stefan Silbernagl



Dr. Agamennon Despopoulos

Born 1924 in New York; Professor of Physiology at the University of New Mexico, Albuquerque, USA, until 1971; thereafter scientific adviser to CIBA-GEIGY, Basel.