

149 Cardiovascular Disorders in Hemodialysis

Editors: C. Ronco, A. Brendolan, Vicenza; N.W. Levin, New York, N.Y.

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150 Peritoneal Dialysis

A Clinical Update

Editors: C. Ronco, R. Dell'Aquila, M.P. Rodighiero, Vicenza

XII + 354 p., 45 fig., 8 in color, 20 tab., hard cover, 2006. ISBN 978-3-8055-8119-6

151 Obesity and the Kidney

Editor: G. Wolf, Jena

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152 Mechanisms and Significance of Cell Volume Regulation

Editor: F. Lang, Tübingen

VI + 276 p., 37 fig., 7 in color, 4 tab., 2006

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It is essential for the survival of cells to maintain their volume within certain limits: Pro-found alterations interfere with the integrity of the cell membrane and the cytoskel-et al architecture. Cells use various methods to adjust osmotic pressure gradients which in turn govern water movement across cell membranes. The most rapid and efficient means is ion transport across the cell membrane. However, to avoid excessive altera-tions of intracellular ion concentration, cells additionally employ organic osmolytes for osmoregulation and modify their metabolism, thus generating or disposing osmoti-cally active organic substances. But a given cell uses only part of the cell volume regula-tory mechanisms at their disposal: The large repertoire available allows for a selection of those which have the least untoward impact on cell function.

The present book is a collection of reviews on the various aspects of cell volume regula-tion, written by internationally leading experts, and constitutes a valuable addition to the library of those working in the field.

Cover illustration: Acute cell swelling and cell shrinkage mediated activation of kinases and their targets. For details see Alexander and Grinstein, pp. 105-124.

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