

CONTENTS

Color plates follow the Contents.

Volume 1

SECTION I

Elements of Normal Renal Structure and Function, 1

- 1 Anatomy of the Kidney, 3
Kirsten M. Madsen and C. Craig Tisher
- 2 Developmental Biology of the Kidney, 73
Kevin T. Bush, Robert O. Stuart, and Sanjay K. Nigam
- 3 Biology of Renal Cells in Culture, 105
Pierre Ronco, Raymond Ardaillou, Laurent Baud, and Gerard Friedlander
- 4 Cell-Cell and Cell-Matrix Interactions, 199
John K. Crean, Hugh Redmond Brady, and Hamid Rabb
- 5 The Metabolic Basis of Solute Transport, 231
Bruce C. Kone
- 6 The Molecular Basis of Solute Transport, 261
Matthias A. Hediger, David B. Mount, Andreas Rolfs, and Michael F. Romero
- 7 The Renal Circulations, 309
Lance D. Dworkin and Barry M. Brenner
- 8 Glomerular Ultrafiltration, 353
David A. Maddox and Barry M. Brenner
- 9 Renal Transport of Glucose, Amino Acids, Sodium, Chloride, and Water, 413
Orson W. Moe, Michel Baum, Christine A. Berry, and Floyd C. Rector, Jr.
- 10 Control of Renal Potassium Excretion, 453
Gerhard Malnic, Matthew A. Bailey, and Gerhard Giebisch

-
- 11 Renal Acidification Mechanisms, 497
L. Lee Hamm
 - 12 Renal Transport of Calcium, Magnesium, and Phosphate, 535
Alan S. L. Yu
 - 13 The Cell Biology of Vasopressin Action, 573
Dennis Brown and Soren Nielsen
 - 14 Urine Concentration and Dilution, 599
Mark A. Knepper and Gerardo Gamba
 - 15 Renal Handling of Organic Anions and Cations: Excretion of Uric Acid, 637
Domenic A. Sica and Anton C. Schoolwerth
 - 16 Vasoactive Peptides and the Kidney, 663
Riccardo Candido, Louise M. Burrell, Karin A. Jandeleit-Dahm, and Mark E. Cooper
 - 17 Arachidonic Acid Metabolites and the Kidney, 727
Raymond C. Harris and Matthew D. Breyer

SECTION II

Disturbances in Control of Body Fluid Volume, 775

- 18 Control of Extracellular Fluid Volume and the Pathophysiology of Edema Formation, 777
Zaid A. Abassi, Joseph Winaver, and Karl L. Skorecki
- 19 Pathophysiology of Water Metabolism, 857
Tomas Berl and Joseph Verbalis
- 20 Acid-Base Disorders, 921
Thomas D. DuBose, Jr.
- 21 Disorders of Potassium Balance, 997
David B. Mount and Kambiz Zandi-Nejad
- 22 Clinical Disturbances of Calcium, Magnesium, and Phosphate Metabolism, 1041
Martin R. Pollak and Alan S. L. Yu

SECTION III

Pathogenesis of Renal Disease, 1077

- 23 Approach to the Patient with Kidney Disease, 1079
Robert D. Toto
- 24 Laboratory Assessment of Kidney Disease: Clearance, Urinalysis, and Kidney Biopsy, 1107
John R. Silkensen and Bertram L. Kasiske
- 25 Interpretation of Urine Electrolyte and Acid-Base Parameters, 1151
Mitchell L. Halperin, Mogamat Razeen Davids, and Kamel S. Kamel
- 26 Radiologic Assessment of the Kidney, 1183
Hedvig Hricak, Maya Meux, and Gautham Reddy
- 27 Acute Renal Failure, 1215
Hugh Redmond Brady, Michael R. Clarkson, and Wilfred Lieberthal
- 28 Primary Glomerular Disease 1293
Ronald J. Falk, J. Charles Jennette, and Patrick H. Nachman
- 29 Secondary Glomerular Disease, 1381
Gerald B. Appel, Jai Radhakrishnan, and Vivette D. D'Agati
- Index, i

Volume 2

- 30 Tubulointerstitial Diseases, 1483
Carolyn J. Kelly and Eric G. Neilson
- 31 Urinary Tract Infection, Pyelonephritis, and Reflux Nephropathy, 1513
Nina E. Tolkoff-Rubin, Ramzi S. Cotran, and Robert H. Rubin
- 32 Disorders of the Renal Arteries and Veins, 1571
Michael Yudd and Francisco Llach
- 33 Microvascular Diseases of the Kidney, 1601
Hussein H. Karnib and Kamal F. Badr
- 34 Toxic Nephropathy, 1625
Biff F. Palmer and William L. Henrich
- 35 The Kidney and Hypertension in Pregnancy, 1659
Mark S. Paller and Jeffrey J. Connaire
- 36 Inherited Disorders of the Renal Tubule, 1697
Alain Bonnardeaux and Daniel G. Bichet
- 37 Cystic Diseases of the Kidney, 1743
Jared J. Grantham and Franz Winklhofer