

# Comparative Physiology of the Vertebrate Kidney

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William H. Dantzler

# Comparative Physiology of the Vertebrate Kidney

Second Edition



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William H. Dantzer  
Department of Physiology  
University of Arizona, College of Medicine  
Tucson, Arizona  
USA

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# Preface

Like the first edition, this new edition emphasizes the comparative approach to understanding vertebrate renal function. I remain convinced that this approach is of particular value in understanding both the details of renal function at the cellular and molecular levels and the renal role in regulating vertebrate fluid volumes and solute concentrations. My exposure to this approach first occurred during a student research experience in the laboratory of the late Wilbur H. Sawyer, who also provided an introduction to the works of Homer W. Smith and August Krogh. The importance of this approach was reinforced by doctoral and postdoctoral research in the laboratory of the late Bodil Schmidt-Nielsen. It has been confirmed through years of personal experience since then.

My research and my understanding of renal function have been aided through the years by collaboration and discussion with numerous students and postdoctoral associates. Of particular importance in developing my views on comparative renal function, on the relationship of renal structure to function, and on transport processes have been my long-term associations with my colleagues and friends, Eldon J. Braun, Thomas L. Pannabecker, and Stephen H. Wright at the University of Arizona; Stefan Silbernagl at the University of Würzburg, Würzburg, Germany; and Varanuj Chatsudthipong at Mahidol University, Bangkok, Thailand. Much of my personal research over the years has been supported by grants from the United States National Science Foundation and National Institutes of Health.

I thank my fellow scientists for sometimes allowing me to note their unpublished observations. I also thank them and their publishers for permitting me to use many published figures. Finally, and most importantly, I thank my wife, Barbara, not only for enduring my absorption with my work but also for providing the constant encouragement and support that has so greatly aided my progress.

Tucson, AZ  
Spring, 2016

William H. Dantzler



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