

Editorial

Introduction to a new Editor

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I became interested in developmental physiology early in my career while performing bedside pharmacodynamic studies on the cardiovascular, renal and endocrine actions of dopamine in the preterm infant. The results of these observational studies provided evidence for the developmentally regulated and dose-dependent cardiovascular and renal hemodynamic and epithelial effects of dopamine in the preterm infant. To explore the nature of these actions at the tissue and cellular level, I then turned to whole animal models and renal proximal tubule cell preparations. The results of these studies shed new light on the developmentally regulated mechanisms of the glomerular actions of dopamine and provided the first evidence for the physiological role of the hormone in the short-term regulation of the Na^+, K^+ -ATPase enzyme. Later, using the tools of state-of-the-art molecular biology, I studied the renal tubular dopaminergic system and the expression of the renal dopamine receptors. Finally, using the knowledge gained from the work in the laboratory, I have recently reinitiated the bedside physiology studies describing the organ-specific blood flow responses to dopamine during human development. Further studies will focus on establishing novel and

etiology-specific treatment modalities of neonatal shock.

In addition to my research activities, I have been committed to graduate and postgraduate education of the next generation of physicians and physician scientists. As recognition of this commitment, I have recently received prestigious teaching awards from both the University of Pennsylvania and The Children's Hospital of Philadelphia, Philadelphia, Pennsylvania.

Finally, as one of the new editors of this Journal, I would like to promote translation of findings from the field of basic research to the clinician at the bedside, in an effort to enhance communication between the molecular biologist/cellular physiologist and the modern-day physician. I believe that both sides, and ultimately our patients, will benefit from such interaction. Therefore, a new series of editorial reviews will be launched in the forthcoming issues, focusing on physiology- and pathophysiology-based novel treatment approaches and on describing the latest findings of developmental biology in organ development and the potential impact of this rapidly evolving field on the management of sick neonates in the present and near future.