Preface

The Renal Research Institute's 13th International Conference on Dialysis, Advances in CKD 2011 in Miami emphasizes recent developments in operational areas, technology, biology of uremia, and epidemiology.

On January 1, 2011, in the USA, a new era in dialysis reimbursement began. This new reimbursement system ('the bundle') will have a substantial impact on all aspects of the economics of end-stage renal disease (ESRD) care. The morning session of the first day is dedicated to this new reality.

Jay B. Wish discusses the Medicare Conditions for Coverage (CfC) for dialysis facilities which make the medical director responsible for all levels of quality patient care in the facility. Wolfgang Winkelmayer reviews the potential effects of the bundle on drug prescription in dialysis patients. Patterns of medication treatment of ESRD patients will likely be revisited and one can expect pronounced adjustments, in particular in the treatment of anemia, management of bone and mineral metabolism, and vascular access intervention.

In recent years, the gut has received increased attention as the source of uremic toxicity. Eberhard Ritz presents novel insights into the 'intestinal-renal syndrome'. Patients with chronic kidney disease (CKD) must manage numerous medical treatments and lifestyle changes that strain their treatment adherence. Motivational Interviewing is a novel approach to enhance patients' motivation for change. Steve Martino reviews its basic principles, techniques, and outcomes. Sodium is a well-recognized uremic toxin. In a keynote address, Hans Oberleithner presents an extensive review of the effects of salt on vascular endothelium, a major target for aldoste-

rone where it controls nonexcitable sodium channels (ENaCs) in the endothelium. Lars Penne introduces novel concepts of aligning dialysate and serum sodium as one of the means to reduce intradialytic sodium loading in hemodialysis patients.

In recognition of the paramount importance of fluid control, novel wearable devices are under development to provide continuous ultrafiltration; Stanley Cortell addresses what a first-generation wearable device might accomplish. Insulin-dependent diabetes mellitus frequently results in renal failure; Bernd Schröppel discusses the current state of combined kidney and pancreas transplantation, the most definitive treatment for this patient group to date. Hydrogen sulfide (H_2S) is one of the three currently known gasotransmitters. Alessandra F. Perna reviews the significance of H_2S in uremia biology, in particular its role in vascular regulation. Gerard M. London has contributed substantially to our current understanding of vascular pathophysiology in ESRD and its relationship to outcomes. His keynote address provides a comprehensive overview of this important field. Richard Amerling proposes the highly controversial issue of AV fistula 'toxicity'. The development of a peritoneal dialysis (PD) program is the focus of a talk by Frederic O. Finkelstein, under whose guidance and leadership a highly successful PD center was established.

The appropriateness of CKD staging at all ages is the center of a debate between Frederick J. Kaskel and Roger N. Greenwood, a topic of far-reaching public health consequences. Paolo Raggi reviews the rapidly evolving field of cardiovascular imaging in patients with CKD to investigate structural and functional cardiovascular changes.

Patients with CKD are frequently treated with multiple drugs and have altered pharmacokinetics and pharmacodynamics. Ali J. Olyaei presents a quantitative approach to drug dosing in CKD. Sleep disorders are a well-recognized co-morbidity in dialysis patients; however, the pathophysiology and clinical aspects of sleep disorders in pre-dialysis CKD patients are less well understood. Andreas Pierratos discusses diagnosis and treatment of sleep disorders in all stages of CKD. Assessment of health-related quality of life is necessary to quantitatively test whether interventions improve the health and well-being of this compromised patient population. Mark Unruh reviews current instruments in that field with special reference to the FHN trial. Claudio Ronco presents a web-based data collection and data management tool based on the most recent acute kidney injury definition/classification system and its implementation in a prospective observational multicenter study. David M. Spiegel presents a review of magnesium homeostasis in health and in CKD, with a particular focus on ESRD, and the potential role of magnesium as a phosphate binder and its role in cardiovascular and bone health. Little attention has been given to the role of micronutrients in renal disease, in particular in cardiorenal syndrome, and Peter A. McCullough introduces new data and concepts in this field. CKD anemia management is the focus of a talk given by Lynda Anne Szczech entitled 'CKD anemia management in turmoil; what should be done?' In the light of the bundle, the US renal community struggles with how to create incentives for quality care and maximize patient quality of life while minimizing the risk. Cardiovascular disease and many other complications of CKD are mediated by oxidative stress, inflammation, and dyslipidemia. In his keynote address, Nosratola D. Vaziri reviews the nature and mechanisms of CKD-induced lipid disorders and their adverse consequences. Arjun D. Sinha and John

Daugirdas debate the pros and cons of assistive technology to probe for dry weight. The issue is whether or not assistive technologies offer an opportunity to improve on the subjective clinical examination for the setting of dry weight. Medical advances have increased the survival rates of adolescents and emerging adults with CKD and ESRD. Maria E. Diaz-Gonzalez de Ferris discusses the medical and psychosocial characteristics of adolescent renal patients and possible strategies for their care.

The Renal Research Institute (RRI) is dedicated to advancing therapy options for dialysis patients to provide the highest caliber of care based on advanced clinical technology. The RRI is committed to research and innovation that will lead to improved patient outcomes and quality of life. It has active national and international research programs with strong academic alliances with the University of Michigan, Ann Arbor, Mich., University of North Carolina, Chapel Hill, N.C., University of Rochester and Beth Israel Medical Center, New York, N.Y., St. Raphael Hospital/Yale, New Haven, Conn., University of Massachusetts, Lowell, Mass., USA and the University of Maastricht, The Netherlands, among others. RRI has a long history of generating over 20 peer-reviewed publications annually with over 40 abstracts accepted and presented at scientific conferences, e.g. ASN, ISN, ERA-EDTA, ASAIIO, and NKF.

We hope that you will enjoy the wide range of papers published in this issue of *Blood Purification* and that you will consider attending next year's 14th International Conference on Dialysis, Advances in CKD 2012, January 25–27, 2012 at the Innisbrook Resort, Tarpon Springs, Fla., USA.

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