Preface – Advances in CKD 2016

Renal Research Institute's 18th International Conference on Dialysis, Advances in CKD 2016 in Miami, FL, USA, showcases the recent developments in technology, basic science related to kidney diseases, pediatric nephrology, operational areas and epidemiology. The topics range from the biology of ultraviolet light to acute kidney injury, and span from the US to Africa. The diversity of contributions is a testament to the host of challenges kidney patients, health care providers, and their care givers face.

The first paper in this special issue of *Blood Purification* is related to a patient's life long journey with dialysis. Judy Weintraub draws from her 40 years of experience as a patient with end-stage kidney disease (ESKD) and comes to the conclusion that patients on dialysis can live a productive and happy life. Diet is among those aspects that are most prominently affected by failing kidneys. Tanushree Banerjee describes in her paper the adverse effects of dietary acid load on kidney function. While 'natural products' are valued by many, little is known about the potential harm that they may exert on kidneys. The review on nephrotoxicity of natural products by Mary Nauffal aims to fill that knowledge gap. Exposure to sunlight is frequently cherished, but is also a risk factor for skin cancer. Richard Well provides, in his contribution, fascinating evidence for cardiovascular benefits of sunlight independent of vitamin D. While, in the light of overwhelming evidence, the presence of global warming is hardly disputed any more, its effects on kidney health are largely unknown. Carlos A. Roncal-Jimenez posits in his review that Mesoamerican nephropathy may be one of the first kidney diseases attributed to climate change

and the greenhouse effect. In contrast, diabetic nephropathy has been with us for a very long time and has reached epidemic proportions on a global scale. Yet – as Hillel Sternlicht points out – there is a lack of trial data for a blood pressure goal among patients with diabetic nephropathy. Another global epidemic is acute kidney injury with an increasing occurrence rate and a substantial long-term risk for chronic kidney disease (CKD). Hon Liang Tan describes the current state of tubular markers to prognosticate the risk for progression of kidney disease. The Peer Kidney Care Initiative is a novel effort to explore the epidemiology of kidney diseases. James B. Wetmore describes in his paper recent epidemiological insights gleaned from the analysis of US kidney data. In his contribution, Edward G. Clark criticizes the current trend toward an earlier initiation of renal replacement therapy for acute kidney injury, which he deems not justified, unnecessary, expensive and potentially harmful. Pharmacotherapy in ESKD patients is generally complicated and the use of mineralocorticoid receptor antagonists (MRA) is received with skepticism by some. Andrew S. Bomback reports new findings from recent trials which support the use of MRA in this patient group. With counter-current dialysate flow being the standard, little is known about concurrent flow in continuous veno-venous hemodialysis. Ian Baldwin compares, in his contribution, these 2 dialysate flow patterns. Another rarely explored area is hypoxemia during hemodialysis. In his review, Israel Campos summarizes the current knowledge and reports interesting clinical vignettes, such as hypotension associated with hypoxemia. Intradialytic hyper-

tension is not as unusual as it was previously thought to be; it has been identified as an independent predictor of mortality risk in hypertensive hemodialysis patients. Peter Noel Van Buren reviews mechanisms and treatment of this condition. Insight into physical activities and sleep patterns between dialysis sessions may provide additional valuable information to assist in the care of hemodialysis patients. To that end, Maggie Han reports in a paper the results from a randomized study where patients were equipped with fitness trackers to monitor indicators of physical activity and sleep quality. Adolescents and young adults constitute less than 5% of all ESKD patients. In her review, Maria Ferris provides an overview of the specific care considerations for ESKD patients in this age group. The point that children with CKD are 'not just little

adults' is emphasized by Kaspar in a paper on pediatric CKD. The persistently under-researched question of health-related quality of life is addressed in the paper by Shan Shan Chen, which reviews the symptoms associated with poor health-related quality of life and the evaluation frequency of quality of life so as to improve outcomes.

We hope that you will enjoy the diverse range of papers published in this issue of *Blood Purification* and that you will consider attending next year's 19th International Conference on Dialysis, Advances in CKD 2017, January 2017 in Las Vegas, Nev., USA.

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