

This Month's Highlights

UP FRONT MATTERS

Editorials

- 1 COVID-19 and APOL1: Understanding Disease Mechanisms through Clinical Observation David J. Friedman
• See related article by Shetty et al. (pp. 33–40).

- 2 The Aftermath of AKI: Recurrent AKI, Acute Kidney Disease, and CKD Progression Yumeng Wen and Chirag R. Parikh
• See related article by Hapca et al. (pp. 138–150).

- 4 COVID-19-Associated Acute Kidney Injury: Learning from the First Wave Ron Wald and Sean M. Bagshaw
• See related articles by Chan et al. (pp. 151–160) and Gupta et al. (pp. 161–176), respectively.

- 6 Will Targeting Interleukin-6 in the Anemia of CKD Change Our Treatment Paradigm? Daniel W. Coyne and Robert Fleming
• See related article by Pergola et al. (pp. 211–222).

Review

- 9 Sphingosine-1-Phosphate Metabolism and Signaling in Kidney Diseases Yelena Drexler, Judith Molina, Alla Mitrofanova, Alessia Fornoni, and Sandra Merscher

RAPID COMMUNICATION

- 33 COVID-19-Associated Glomerular Disease Aneesha A. Shetty, Ibrahim Tawhari, Luisa Safar-Boueri, Nay Seif, Ameen Alahmadi, Richard Gargiulo, Vikram Aggarwal, Irtaza Usman, Sergey Kisilev, Ali G. Gharavi, Yahspal Kanwar, and Susan E. Quaggin
• See related editorial by Friedman (pp. 1–2).

BASIC RESEARCH

- 41 Cyclin-Dependent Kinase 1 Activity Is a Driver of Cyst Growth in Polycystic Kidney Disease Chao Zhang, Bruno Balbo, Ming Ma, Jun Zhao, Xin Tian, Yuval Kluger, and Stefan Somlo

- 52 ★Deep Learning-Based Segmentation and Quantification in Experimental Kidney Histopathology

Nassim Bouteldja, Barbara M. Klinkhammer, Roman D. Bülow, Patrick Droste, Simon W. Otten, Saskia Freifrau von Stillfried, Julia Moellmann, Susan M. Sheehan, Ron Korstanje, Sylvia Menzel, Peter Bankhead, Matthias Mietsch, Charis Drummer, Michael Lehrke, Rafael Kramann, Jürgen Floege, Peter Boor, and Dorit Merhof

- 69 Neutrophil-Macrophage Imbalance Drives the Development of Renal Scarring during Experimental Pyelonephritis

Juan de Dios Ruiz-Rosado, Frank Robledo-Avila, Hanna Cortado, Javier Rangel-Moreno, Sheryl S. Justice, Ching Yang, John David Spencer, Brian Becknell, and Santiago Partida-Sanchez

- 86 Transcriptomes of Major Proximal Tubule Cell Culture Models

Syed J. Khundmiri, Lihe Chen, Eleanor D. Lederer, Chin-Rang Yang, and Mark A. Knepper

- 99 ★Humanized C3 Mouse: A Novel Accelerated Model of C3 Glomerulopathy

Kishor Devalaraja-Narashimha, Karoline Meagher, Yifan Luo, Cong Huang, Theodore Kaplan, Anantharaman Muthuswamy, Gabor Halasz, Sarah Casanova, John O'Brien, Rebecca Peyser Boiarsky, John McWhirter, Hans Gartner, Yu Bai, Scott MacDonnell, Chien Liu, Ying Hu, Adrianna Latuszek, Yi Wei, Srinivasa Prasad, Tammy Huang, George Yancopoulos, Andrew Murphy, William Olson, Brian Zambrowicz, Lynn Macdonald, and Lori G. Morton

CLINICAL EPIDEMIOLOGY

- 115 Association of Multiple Plasma Biomarker Concentrations with Progression of Prevalent Diabetic Kidney Disease: Findings from the Chronic Renal Insufficiency Cohort (CRIC) Study

Sarah J. Schrauben, Haochang Shou, Xiaoming Zhang, Amanda Hyre Anderson, Joseph V. Bonventre, Jing Chen, Steven Coca, Susan L. Furth, Jason H. Greenberg, Orlando M. Gutierrez, Joachim H. Ix, James P. Lash, Chirag R. Parikh, Casey M. Rebholz,

<p>Venkata Sabbisetti, Mark J. Sarnak, Michael G. Shlipak, Sushrut S. Waikar, Paul L. Kimmel, Ramachandran S. Vasan, Harold I. Feldman, and Jeffrey R. Schelling, on behalf of the CKD Biomarkers Consortium and the Chronic Renal Insufficiency Cohort (CRIC) Study Investigators</p> <p>127 ★Conventional and Genetic Evidence on the Association between Adiposity and CKD</p> <p>Pengfei Zhu, William G. Herrington, Richard Haynes, Jonathan Emberson, Martin J. Landray, Cathie L.M. Sudlow, Mark Woodward, Colin Baigent, Sarah Lewington, and Natalie Staplin</p> <p>138 The Relationship between AKI and CKD in Patients with Type 2 Diabetes: An Observational Cohort Study</p> <p>Simona Hapca, Moneeza K. Siddiqui, Ryan S.Y. Kwan, Michelle Lim, Shona Matthew, Alex S.F. Doney, Ewan R. Pearson, Colin N.A. Palmer, and Samira Bell, on behalf of the BEAt-DKD Consortium</p> <ul style="list-style-type: none"> • See related editorial by Wen and Parikh (pp. 2–4). 	<p>Andrew J. Admon, Meghan E. Sise, Wei Wang, Chirag R. Parikh, David E. Leaf, and the STOP-COVID Investigators</p> <ul style="list-style-type: none"> • See related editorial by Wald and Bagshaw (pp. 4–6) and article by Chan et al. (pp. 151–160). <p>177 Normalization of Cerebral Blood Flow, Neurochemicals, and White Matter Integrity after Kidney Transplantation</p> <p>Rebecca J. Lepping, Robert N. Montgomery, Palash Sharma, Jonathan D. Mahnken, Eric D. Vidoni, In-Young Choi, Mark J. Sarnak, William M. Brooks, Jeffrey M. Burns, and Aditi Gupta</p> <p>188 Differences in 25-Hydroxyvitamin D Clearance by eGFR and Race: A Pharmacokinetic Study</p> <p>Simon Hsu, Leila R. Zelnick, Yvonne S. Lin, Cora M. Best, Bryan Kestenbaum, Kenneth E. Thummel, Lynn M. Rose, Andrew N. Hoofnagle, and Ian H. de Boer</p> <p>199 Comparison of the Efficacy and Safety of Tacrolimus and Low-Dose Corticosteroid with High-Dose Corticosteroid for Minimal Change Nephrotic Syndrome in Adults</p> <p>Ho Jun Chin, Dong-Wan Chae, Yong Chul Kim, Won Suk An, ChunGyoo Ihm, Dong-Chan Jin, Sung Gyun Kim, Yong-Lim Kim, Yong-Soo Kim, Yoon-Goo Kim, Ho Seok Koo, Jung Eun Lee, Kang Wook Lee, Jieun Oh, Jung Hwan Park, Hongsi Jiang, Hyuncheol Lee, and Sang Koo Lee</p> <p>211 Ziltivekimab for Treatment of Anemia of Inflammation in Patients on Hemodialysis: Results from a Phase 1/2 Multicenter, Randomized, Double-Blind, Placebo-Controlled Trial</p> <p>Pablo E. Pergola, Matt Devalaraja, Steven Fishbane, Michel Chonchol, Vandana S. Mathur, Mark T. Smith, Larry Lo, Kurt Herzog, Rahul Kakkar, and Michael H. Davidson</p> <ul style="list-style-type: none"> • See related editorial by Coyne and Fleming (pp. 6–8). <p>223 Biallelic Pathogenic GFRA1 Variants Cause Autosomal Recessive Bilateral Renal Agenesis</p> <p>Veronica Arora, Suliman Khan, Ayman W. El-Hattab, Ratna Dua Puri, Maria Eugenia Rocha, Rijad Merdzanic, Omid Paknia, Christian Beetz, Arndt Rolfs, Aida M. Bertoli-Avella, Peter Bauer, and Ishwar C. Verma</p> <p>229 ★Intracellular Phosphate and ATP Depletion Measured by Magnetic Resonance Spectroscopy in Patients Receiving Maintenance Hemodialysis</p> <p>Guillaume Chazot, Sandrine Lemoine, Gabriel Kocevar, Emilie Kalbacher, Dominique Sappey-Marinier, Olivier Rouvière, and Laurent Juillard</p>
CLINICAL RESEARCH	
<p>151 AKI in Hospitalized Patients with COVID-19</p> <p>Lili Chan, Kumardeep Chaudhary, Aparna Saha, Kinsuk Chauhan, Akhil Vaid, Shan Zhao, Ishan Paranjpe, Sulaiman Somani, Felix Richter, Riccardo Miotti, Anuradha Lala, Arash Kia, Prem Timsina, Li Li, Robert Freeman, Rong Chen, Jagat Narula, Allan C. Just, Carol Horowitz, Zahi Fayad, Carlos Cordon-Cardo, Eric Schadt, Matthew A. Levin, David L. Reich, Valentin Fuster, Barbara Murphy, John C. He, Alexander W. Charney, Erwin P. Böttlinger, Benjamin S. Glicksberg, Steven G. Coca, and Girish N. Nadkarni, on behalf of the Mount Sinai COVID Informatics Center (MSCIC)</p> <ul style="list-style-type: none"> • See related editorial by Wald and Bagshaw (pp. 4–6) and article by Gupta et al. (pp. 161–176), respectively. <p>161 ★AKI Treated with Renal Replacement Therapy in Critically Ill Patients with COVID-19</p> <p>Shruti Gupta, Steven G. Coca, Lili Chan, Michal L. Melamed, Samantha K. Brenner, Salim S. Hayek, Anne Sutherland, Sonika Puri, Anand Srivastava, Amanda Leonberg-Yoo, Alexandre M. Shehata, Jennifer E. Flythe, Arash Rashidi, Edward J. Schenck, Nitender Goyal, S. Susan Hedayati, Rajany Dy, Anip Bansal, Ambarish Athavale, H. Bryant Nguyen, Anitha Vijayan, David M. Charytan, Carl E. Schulze, Min J. Joo, Allon N. Friedman, Jingjing Zhang, Marie Anne Sosa, Eric Judd, Juan Carlos Q. Velez, Mary Mallappallil, Roberta E. Redfern, Amar D. Bansal, Javier A. Neyra, Kathleen D. Liu, Amanda D. Renaghan, Marta Christov, Miklos Z. Molnar, Shreyak Sharma, Omer Kamal, Jeffery Owusu Boateng, Samuel A.P. Short,</p>	

META-ANALYSIS

- 239 ★**Modifiable Lifestyle Factors for Primary Prevention of CKD: A Systematic Review and Meta-Analysis**

Jaimon T. Kelly, Guobin Su, La Zhang, Xindong Qin, Skye Marshall, Ailema González-Ortiz, Catherine M. Clase, Katrina L. Campbell, Hong Xu, and Juan-Jesus Carrero

LETTERS TO THE EDITOR

- 255 **Post-Mortem Diagnostics in COVID-19 AKI, More Often but Timely**

Jan G. Zijlstra, Matijs van Meurs, and Jill Moser

- See related reply by Rosenstock and Bijol (pp. 255–256) and original article by Golmai et al. in Vol. 31, Iss. 9, 1944–1947.

Authors' Reply

Jordan L. Rosenstock and Vanesa Bijol

- See related letter to the editor by Zijlstra et al. (pp. 255) and original article by Golmai et al. in Vol. 31, Iss. 9, 1944–1947.

Complexities of eGFRs in a Study of Glomerular Physiology

Robert W. Steiner

- See related reply by Collard et al. (pp. 257–258) and original article by Collard et al. in Vol. 31, Iss. 8, 1905–1914.

Authors' Reply

Didier Collard, Lennart van de Velde, Liffert Vogt, and Bert-Jan H. van den Born

- See related letter to the editor by Steiner (pp. 256–257) and original article by Collard et al. in Vol. 31, Iss. 8, 1905–1914.