

JASN[®]

JOURNAL OF THE AMERICAN SOCIETY OF NEPHROLOGY

January 2022 • Vol. 33 • No. 1

This Month's Highlights

UP FRONT MATTERS

Editorials

- 1 **Genome-wide Admixture Mapping of eGFR and CKD Identify European and African Ancestry-of-Origin Loci in US Hispanics/Latinos**

Jordan G. Nestor and Cheryl A. Winkler

• See related article by Horimoto et al. (pp. 77–87)

- 4 **★A Novel Pathological Mechanism of Tertiary Lymphoid Structure Formation in the Renal Pelvis**

Shinya Yamamoto and Motoko Yanagita

• See related article by Ichii et al. (pp. 88–107)

- 6 **Disarming the Old Foe. Restoring T-Cell Immune Function with mTor-Inhibitors to Tackle Cytomegalovirus Infection**

Oriol Bestard and Elena Crespo

• See related article by Kaminski et al. (pp. 121–137)

- 9 **Nudging Behavioral Economics into Nephrology Care Delivery Research**

Adam S. Wilk and Delphine S. Tuot

• See related article by Fukuma et al. (pp. 175–185)

Perspective

- 12 **We Must all Join the Effort to Dismantle Environmental Racism**

Ziyad Al-Aly

Review

- 15 **Regrow or Repair: An Update on Potential Regenerative Therapies for the Kidney**

Melissa H. Little and Benjamin D. Humphreys

RESEARCH LETTER

- 33 **COVID-19 Vaccine Type and Humoral Immune Response in Patients Receiving Dialysis**

Pablo Garcia, Shuchi Anand, Jialin Han, Maria E. Montez-Rath, Sumi Sun, Tiffany Shang, Julie Parsonnet, Glenn M. Chertow, Brigitte Schiller, and Graham Abra

RAPID COMMUNICATIONS

- 39 **Estimating Nephron Number from Biopsies: Impact on Clinical Studies**

Darya Morozov, Neda Parvin, Mark Conaway, Gavin Oxley, Edwin J. Baldeomar, Aleksandra Cwiek, Kim deRonde, Scott C. Beeman, Jennifer R. Charlton, and Kevin M. Bennett

- 49 **Real-World Effectiveness and Immunogenicity of BNT162b2 and mRNA-1273 SARS-CoV-2 Vaccines in Patients on Hemodialysis**

Scott Sibbel, Katherine McKeon, Jiacong Luo, Karl Wendt, Adam G. Walker, Tara Kelley, Rachael Lazar, Meredith L. Zywno, Jeffrey J. Connaire, Francesca Tentori, Amy Young, and Steven M. Brunelli

META-ANALYSIS

- 59 **Systematic Review and Meta-Analyses of the Effects of Phosphate-Lowering Agents in Nondialysis CKD**

Nicole M. Lioufas, Elaine M. Pascoe, Carmel M. Hawley, Grahame J. Elder, Sunil V. Badve, Geoffrey A. Block, David W. Johnson, and Nigel D. Toussaint

BASIC RESEARCH

- 77 **Genome-Wide Admixture Mapping of Estimated Glomerular Filtration Rate and Chronic Kidney Disease Identifies European and African Ancestry-of-Origin Loci in Hispanic and Latino Individuals in the United States**

Andrea R.V.R. Horimoto, Diane Xue, Jianwen Cai, James P. Lash, Martha L. Daviglius, Nora Franceschini, and Timothy A. Thornton

• See related editorial by Nestor and Winkler (pp. 1–3)

- 88 **★Close Association between Altered Urine–Urothelium Barrier and Tertiary Lymphoid Structure Formation in the Renal Pelvis during Nephritis**

Osamu Ichii, Marina Hosotani, Md. Abdul Masum, Taro Horino, Yuki Otani, Takashi Namba, Teppei Nakamura, Elewa Yaser Hosny Ali, and Yasuhiro Kon

• See related editorial by Yamamoto and Yanagita (pp. 4–6)

Red star ★ indicates articles that are features in This Month's Highlights.

- 108 **★GWAS in Mice Maps Susceptibility to HIV-Associated Nephropathy to the Ssbp2 Locus**
 Nicholas J. Steers, Yask Gupta, Vivette D. D'Agati, Tze Y. Lim, Natalia DeMaria, Anna Mo, Judy Liang, Kelsey O. Stevens, Dina F. Ahram, Wan Yee Lam, Mihai Gagea, Lalitha Nagarajan, Simone Sanna-Cherchi, and Ali G. Gharavi
- 121 **mTOR Inhibitors Prevent CMV Infection through the Restoration of Functional $\alpha\beta$ and $\gamma\delta$ T cells in Kidney Transplantation**
 Hannah Kaminski, Gabriel Marseres, Nathalie Yared, Marie-Julie Nokin, Vincent Pitard, Atika Zouine, Isabelle Garrigue, Séverine Loizon, Myriam Capone, Xavier Gauthereau, Maria Mamani-Matsuda, Roxane Coueron, Raúl V. Durán, Benoît Pinson, Isabelle Pellegrin, Rodolphe Thiébaud, Lionel Couzi, Pierre Merville, and Julie Déchanet-Merville
 • See related editorial by Bestard and Crespo (pp. 6–8)
- 138 **Super-Resolution Imaging of the Filtration Barrier Suggests a Role for Podocin R229Q in Genetic Predisposition to Glomerular Disease**
 Linus Butt, David Unnersjö-Jess, Martin Höhne, Robert Hahnfeldt, Dervla Reilly, Markus M. Rinschen, Ingo Plagmann, Paul Diefenhardt, Sebastian Brähler, Paul T. Brinkkötter, Hjalmar Brismar, Hans Blom, Bernhard Schermer, and Thomas Benzing
- 155 **Three-Dimensional Visualization of the Podocyte Actin Network Using Integrated Membrane Extraction, Electron Microscopy, and Machine Learning**
 Chengqing Qu, Robyn Roth, Pongpratch Puapatanakul, Charles Loitman, Dina Hammad, Guy M. Genin, Jeffrey H. Miner, and Hani Y. Suleiman
- CLINICAL RESEARCH**
- 175 **Effect of Nudge-Based Intervention on Adherence to Physician Visit Recommendations and Early Health Outcomes among Individuals Identified with Chronic Kidney Disease in Screens**
 Shingo Fukuma, Shusaku Sasaki, Masataka Taguri, Rei Goto, Toshihiro Misumi, Yusuke Saigusa, and Yusuke Tsugawa
 • See related editorial by Wilk and Tuot (pp. 9–11)
- 186 **★Advanced Tertiary Lymphoid Tissues in Protocol Biopsies are Associated with Progressive Graft Dysfunction in Kidney Transplant Recipients**
 Yu Ho Lee, Yuki Sato, Mitsuru Saito, Shingo Fukuma, Masaya Saito, Shigenori Yamamoto, Atsushi Komatsuda, Nobuhiro Fujiyama, Shigeru Satoh, Sang-Ho Lee, Peter Boor, Tomonori Habuchi, Jürgen Floege, and Motoko Yanagita
- 201 **Activation of the Calcium Receptor by Calcimimetic Agents Is Preserved Despite Modest Attenuating Effects of Hyperphosphatemia**
 William G. Goodman, Donald T. Ward, Kevin J. Martin, Debra Drayer, Carol Moore, Jiahong Xu, James Lai, Yun Chon, and Edward F. Nemeth
- 213 **Alpha Globin Gene Copy Number Is Associated with Prevalent Chronic Kidney Disease and Incident End-Stage Kidney Disease among Black Americans**
 A. Parker Ruhl, Neal Jeffries, Yu Yang, Rakhi P. Naik, Amit Patki, Lydia H. Pecker, Bryan T. Mott, Neil A. Zakai, Cheryl A. Winkler, Jeffrey B. Kopp, Leslie A. Lange, Marguerite R. Irvin, Orlando M. Gutierrez, Mary Cushman, and Hans C. Ackerman
- 225 **Hyperkalemia Risk with Finerenone: Results from the FIDELIO-DKD Trial**
 Rajiv Agarwal, Amer Joseph, Stefan D. Anker, Gerasimos Filippatos, Peter Rossing, Luis M. Ruilope, Bertram Pitt, Peter Kolkhof, Charlie Scott, Robert Lawatscheck, Daniel J. Wilson, and George L. Bakris, on behalf of the FIDELIO-DKD Investigators
- 238 **★Discovery of Autoantibodies Targeting Nephritin in Minimal Change Disease Supports a Novel Autoimmune Etiology**
 Andrew J.B. Watts, Keith H. Keller, Gabriel Lerner, Ivy Rosales, A. Bernard Collins, Miroslav Sekulic, Sushrut S. Waikar, Anil Chandraker, Leonardo V. Riella, Mariam P. Alexander, Jonathan P. Troost, Junbo Chen, Damian Fermin, Jennifer L. Yee, Matthew G. Sampson, Laurence H. Beck, Jr., Joel M. Henderson, Anna Greka, Helmut G. Rennke, and Astrid Weins
- ERRATA**
- 253 **Correction: Manipulation of Nephron-Patterning Signals Enables Selective Induction of Podocytes from Human Pluripotent Stem Cells**