

# JASN<sup>®</sup>

JOURNAL OF THE AMERICAN SOCIETY OF NEPHROLOGY

May 2021 • Vol. 32 • No. 5

## *This Month's Highlights*

### UP FRONT MATTERS

#### *Editorials*

- 1009 **Kidney Transplant Rejection Clusters and Graft Outcomes: Revisiting Banff in the Era of "Big Data"**  
George Vasquez-Rios and Madhav C. Menon  
• See related article by Vaulet et al. (pp. 1084–1096).
- 1011 **Monkeying About with Nephron Formation**  
Ian M. Smyth  
• See related article by Schuh et al. (pp. 1097–1112).
- 1013 **Urinary Vesicles: Are They Ready for Real-World Use?**  
Robert W. Hunter and James W. Dear  
• See related article by Blijdorp et al. (pp. 1210–1226).
- #### *Obituaries*
- 1016 **Obituary for Robert Schrier**  
Tomas Berl
- #### *Perspectives*
- 1018 **COVID-19 and Dialysis Patients: Unsolved Problems in Early 2021**  
Alan S. Klinger and Jeffrey Silberzweig
- 1021 **SARS-CoV-2 Vaccines in Kidney Transplant Recipients: Will They Be Safe and Effective and How Will We Know?**  
Madeleine R. Heldman and Ajit P. Limaye
- #### *Reviews*
- 1025 **The Urine Anion Gap: Common Misconceptions**  
Jaime Uribarri and Man S. Oh
- 1029 **COVID-19 and AKI: Where Do We Stand?**  
Paul M. Palevsky

### RAPID COMMUNICATIONS

- 1033 **Kinetics of Anti-SARS-CoV-2 IgG Antibodies in Hemodialysis Patients Six Months after Infection**  
Hamza Sakhi, Djamal Dahmane, Philippe Attias, Thomas Kofman, Magali Bouvier, Nathanael Lapidus, Slim Fourati, and Khalil El Karoui, on behalf of Mondor NephroCov Study Group

### BASIC RESEARCH

- 1037 **Deletion of Myeloid Interferon Regulatory Factor 4 (Irf4) in Mouse Model Protects against Kidney Fibrosis after Ischemic Injury by Decreased Macrophage Recruitment and Activation**  
Kensuke Sasaki, Andrew S. Terker, Yu Pan, Zhilian Li, Shirong Cao, Yinqiu Wang, Aolei Niu, Suwan Wang, Xiaofeng Fan, Ming-Zhi Zhang, and Raymond C. Harris
- 1053 **Crumbs2 Is an Essential Slit Diaphragm Protein of the Renal Filtration Barrier**  
Annika Möller-Kerutt, Juan E. Rodriguez-Gatica, Karin Wacker, Rohan Bhatia, Jan-Peter Siebrasse, Nanda Boon, Veerle Van Marck, Peter Boor, Ulrich Kubitscheck, Jan Wijnholds, Hermann Pavenstädt, and Thomas Weide
- 1071 **Anti-CD20 mAb-Induced B Cell Apoptosis Generates T Cell Regulation of Experimental Myeloperoxidase ANCA-Associated Vasculitis**  
Poh-Yi Gan, Jonathan Dick, Kim M. O'Sullivan, Virginie Oudin, Anne Cao Le, Daniel Koo Yuk Cheong, Raymond Shim, Maliha Alikhan, A. Richard Kitching, Joshua D. Ooi, and Stephen R. Holdsworth
- 1084 **Data-Driven Derivation and Validation of Novel Phenotypes for Acute Kidney Transplant Rejection Using Semi-Supervised Clustering**  
Thibaut Vaulet, Gillian Divard, Olivier Thauvat, Evelyne Lerut, Aleksandar Senev, Olivier Aubert, Elisabet Van Loon, Jasper Callemeyn, Marie-Paule Emonds, Amaryllis Van Craenenbroeck, Katrien De Vusser, Ben Sprangers, Maud Rabeyrin, Valérie Dubois, Dirk Kuypers, Maarten De Vos, Alexandre Loupy, Bart De Moor, and Maarten Naesens

- 1097 The Rhesus Macaque Serves As a Model for Human Lateral Branch Nephrogenesis**  
Meredith P. Schuh, Lyan Alkhudairy, Andrew Potter, S. Steven Potter, Kashish Chetal, Kairavee Thakkar, Nathan Salomonis, and Raphael Kopan
- 1114 Protective Role of the M-Sec-Tunneling Nanotube System in Podocytes**  
Federica Barutta, Shunsuke Kimura, Koji Hase, Stefania Bellini, Beatrice Corbetta, Alessandro Corbelli, Fabio Fiordaliso, Antonella Barreca, Mauro Giulio Papotti, Gian Marco Ghiggeri, Gennaro Salvidio, Dario Roccatello, Valentina Audrito, Silvia Deaglio, Roberto Gambino, Stefania Bruno, Giovanni Camussi, Miriam Martini, Emilio Hirsch, Marilena Durazzo, Hiroshi Ohno, and Gabriella Gruden
- 1131 Renal Inflammation Induces Salt Sensitivity in Male db/db Mice through Dysregulation of ENaC**  
Luciana C. Veiras, Justin Z. Y. Shen, Ellen A. Bernstein, Giovanna C. Regis, DuoYao Cao, Derick Okwan-Duodu, Zakir Khan, David R. Gibb, Fernando P. Dominici, Kenneth E. Bernstein, and Jorge F. Giani
- CLINICAL EPIDEMIOLOGY**
- 1151 Association between Longer Travel Distance for Transplant Care and Access to Kidney Transplantation and Graft Survival in the United States**  
Adrian M. Whelan, Kirsten L. Johansen, Sandeep Brar, Charles E. McCulloch, Deborah B. Adey, Garrett R. Roll, Barbara Grimes, and Elaine Ku
- CLINICAL RESEARCH**
- 1163 Safety and Efficacy of Daratumumab in Patients with Proliferative GN with Monoclonal Immunoglobulin Deposits**  
Ladan Zand, S. Vincent Rajkumar, Nelson Leung, Sanjeev Sethi, Mireille El Ters, and Fernando C. Fervenza
- 1174 Kidney Failure Prediction Models: A Comprehensive External Validation Study in Patients with Advanced CKD**  
Chava L. Ramspek, Marie Evans, Christoph Wanner, Christiane Drechsler, Nicholas C. Chesnaye, Maciej Szymczak, Magdalena Krajewska, Claudia Torino, Gaetana Porto, Samantha Hayward, Fergus Caskey, Friedo W. Dekker, Kitty J. Jager, and Merel van Diepen, on behalf of the EQUAL Study Investigators
- 1187 Podometrics in Japanese Living Donor Kidneys: Associations with Nephron Number, Age, and Hypertension**  
Kotaro Haruhara, Takaya Sasaki, Natasha de Zoysa, Yusuke Okabayashi, Go Kanzaki, Izumi Yamamoto, Ian S. Harper, Victor G. Puelles, Akira Shimizu, Luise A. Cullen-McEwen, Nobuo Tsuboi, Takashi Yokoo, and John F. Bertram
- 1200 BP in Young Adults with CKD and Associations with Cardiovascular Events and Decline in Kidney Function**  
Alexander J. Kula, David K. Prince, Joseph T. Flynn, and Nisha Bansal
- 1210 Comparing Approaches to Normalize, Quantify, and Characterize Urinary Extracellular Vesicles**  
Charles J. Blijdorp, Omar A. Z. Tutakhel, Thomas A. Hartjes, Thierry P. P. van den Bosch, Martijn H. van Heugten, Juan Pablo Rigalli, Rob Willemsen, Usha M. Musterd-Bhaggoe, Eric R. Barros, Roger Carles-Fontana, Cristian A. Carvajal, Onno J. Arntz, Fons A. J. van de Loo, Guido Jenster, Marian C. Clahsen-van Groningen, Cathy A. Cuevas, David Severs, Robert A. Fenton, Martin E. van Royen, Joost G. J. Hoenderop, René J. M. Bindels, and Ewout J. Hoorn
- 1227 IgM Autoantibodies to Complement Factor H in Atypical Hemolytic Uremic Syndrome**  
Massimo Cugno, Silvia Berra, Federica Depetri, Silvana Tedeschi, Samantha Griffini, Elena Grovetti, Sonia Caccia, Donata Cresseri, Piergiorgio Messa, Sara Testa, Fabio Giglio, Flora Peyvandi, and Gianluigi Ardissino
- 1236 Impact of the COVID-19 Pandemic on Nephrology Fellow Training and Well-Being in the United States: A National Survey**  
Kurtis A. Pivert, Suzanne M. Boyle, Susan M. Halbach, Lili Chan, Hitesh H. Shah, Joshua S. Waitzman, Ali Mehdi, Sayna Norouzi, and Stephen M. Sozio
- 1249 Protocadherin 7–Associated Membranous Nephropathy**  
Sanjeev Sethi, Benjamin Madden, Hanna Debiec, Johann Morelle, M. Cristine Charlesworth, LouAnn Gross, Vivian Negron, David Buob, Sidharth Chaudhry, Michel Jadoul, Fernando C. Fervenza, and Pierre Ronco

## LETTERS TO THE EDITOR

**1263 Procurement Biopsy Data Quality Limits  
Comparability of United States and French  
Deceased Donor Kidney Biopsies**

S. Ali Husain and Sumit Mohan

- See related reply by Reese et al. (pp. 1264–1265) and original article by Loupy et al. in Vol. 32, Iss. 2, on pages 397–409.

**1264 Authors' Reply**

Peter P. Reese, Olivier Aubert, and Alexandre Loupy

- See related letter to the editor by Husain et al. (pp. 1263–1264) and original article by Loupy et al. in Vol. 32, Iss. 2, on pages 397–409.

**1265 Receptor-Mediated Endocytosis and  
Differentiation in Proximal Tubule Cell Systems**

Marine Berquez, Patrick Krohn, Alessandro Luciani, and Olivier Devuyst

- See related original article by Knepper et al. in Vol. 32, Iss. 1, on pages 86–97.