

## This Month's Highlights

### UP FRONT MATTERS

#### Editorials

1777 **From People to Lab Rats to People—Study of Exercise in CKD**

Kirsten L. Johansen

- See related article by Avin et al. (pp. 1898–1909).

1778 **Transplantation of Kidneys from HCV Viremic Donors in the United States: A Missed Opportunity to Inform Clinical Decision Making and Health Policy**

John S. Gill, Richard N. Formica, and Josh Levitsky

- See related article by Potluri et al. (pp. 1939–1951).

1780 **Machine Learning Comes to Nephrology**

Kevin V. Lemley

- See related articles by Ginley et al. (pp. 1953–1967) and Hermsen et al. (pp. 1968–1979).

1782 **Biologic Underpinnings of Type 1 Diabetic Kidney Disease**

John R. Sedor and Barry I. Freedman

- See related article by Salem et al. (pp. 2000–2016).

#### Review

1785 **CKD: A Call for an Age-Adapted Definition**

Pierre Delanaye, Kitty J. Jager, Arend Bökenkamp, Anders Christensson, Laurence Dubourg, Bjørn Odvar Eriksen, François Gaillard, Giovanni Gambaro, Markus van der Giet, Richard J. Glasscock, Olafur S. Indridason, Marco van Londen, Christophe Mariat, Toralf Melsom, Olivier Moranne, Gunnar Nordin, Runolfur Palsson, Hans Pottel, Andrew D. Rule, Elke Schaeffner, Maarten W. Taal, Christine White, Anders Grubb, and Jan A. J. G. van den Brand

- See related perspectives by Wesson (pp. 1806–1807) and Chertow and Beddhu (pp. 1807–1809).

#### Perspectives

1806 **Does eGFR by Any Number Mean the Same?**

Donald E. Wesson

- See related review by Delanaye et al. (pp. 1785–1805) and perspective by Chertow and Beddhu (pp. 1807–1809).

1807 **Modification of eGFR-Based CKD Definitions: Perfect, or Enemy of the Good?**

Glenn M. Chertow and Srinivasan Beddhu

- See related review by Delanaye et al. (pp. 1785–1805) and perspective by Wesson (pp. 1806–1807).

### RAPID COMMUNICATION

1811 ★ **A Toolbox to Characterize Human Induced Pluripotent Stem Cell–Derived Kidney Cell Types and Organoids**

Jessica M. Vanslambrouck, Sean B. Wilson, Ker Sin Tan, Joanne Y.-C. Soo, Michelle Scurr, H. Siebe Spijker, Lakshi T. Starks, Amber Neilson, Xiaoxia Cui, Sanjay Jain, Melissa Helen Little, and Sara E. Howden

### BASIC RESEARCH

1825 **Tubular GM-CSF Promotes Late MCP-1/CCR2-Mediated Fibrosis and Inflammation after Ischemia/Reperfusion Injury**

Leyuan Xu, Diana Sharkey, and Lloyd G. Cantley

1841 **Tissue-Resident Macrophages Promote Renal Cystic Disease**

Kurt A. Zimmerman, Cheng J. Song, Zhang Li, Jeremie M. Lever, David K. Crossman, Addison Rains, Ernard J. Aloria, Nancy M. Gonzalez, John R. Bassler, Juling Zhou, Michael R. Crowley, Dustin Z. Revell, Zhaoqi Yan, Dan Shan, ETTY N. Benveniste, James F. George, Michal Mrug, and Bradley K. Yoder

1857 **Mitochondria Permeability Transition versus Necroptosis in Oxalate-Induced AKI**

Shrikant Ramesh Mulay, Mohsen M. Honarpisheh, Orestes Foresto-Neto, Chongxu Shi, Jyaysi Desai,

Zhi Bo Zhao, Julian A. Marschner, Bastian Popper, Ewa Miriam Buhl, Peter Boor, Andreas Linkermann, Helen Liapis, Rostyslav Bilyy, Martin Herrmann, Paola Romagnani, Ilya Belevich, Eija Jokitalo, Jan U. Becker, and Hans-Joachim Anders

**1870 Anti-CD45RB Antibody Therapy Attenuates Renal Ischemia-Reperfusion Injury by Inducing Regulatory B Cells**

Taishi Fang, Tai Yeon Koo, Jae-Ghi Lee, Joon Young Jang, Yixuan Xu, Ju Hee Hwang, Sunjoo Park, Ji-Jing Yan, Jung-Hwa Ryu, Yeon-Mi Ryu, Sang-Yeob Kim, Kyung-Suk Suh, and Jaeseok Yang

**1886 Glomerular Function and Structural Integrity Depend on Hyaluronan Synthesis by Glomerular Endothelium**

Bernard M. van den Berg, Gangqi Wang, Margien G. S. Boels, M. Cristina Avramut, Erik Jansen, Wendy M. P. J. Sol, Franck Lebrin, Anton Jan van Zonneveld, Eelco J. P. de Koning, Hans Vink, Hermann-Josef Gröne, Peter Carmeliet, Johan van der Vlag, and Ton J. Rabelink

**1898 Voluntary Wheel Running Has Beneficial Effects in a Rat Model of CKD-Mineral Bone Disorder (CKD-MBD)**

Keith G. Avin, Matthew R. Allen, Neal X. Chen, Shruthi Srinivasan, Kalisha D. O'Neill, Ashley D. Troutman, Garrison Mast, Elizabeth A. Swallow, Mary Beth Brown, Joseph M. Wallace, Teresa A. Zimmers, Stuart J. Warden, and Sharon M. Moe

• See related editorial by Johansen (pp. 1777–1778).

**1910 TRPC6 Binds to and Activates Calpain, Independent of Its Channel Activity, and Regulates Podocyte Cytoskeleton, Cell Adhesion, and Motility**

Louise K. Farmer, Ruth Rollason, Daniel J. Whitcomb, Lan Ni, Alexander Goodliff, Abigail C. Lay, Lutz Birnbaumer, Kate J. Heesom, Shang-Zhong Xu, Moin A. Saleem, and Gavin I. Welsh

**1925 KLF4 in Macrophages Attenuates TNF $\alpha$ -Mediated Kidney Injury and Fibrosis**

Yi Wen, Xiaohan Lu, Jiafa Ren, Jamie R. Privratsky, Bo Yang, Nathan P. Rudemiller, Jiandong Zhang, Robert Griffiths, Mukesh K. Jain, Sergei A. Nedospasov, Bi Cheng Liu, and Steven D. Crowley

## CLINICAL EPIDEMIOLOGY

**1939 ★National Trends in Utilization and 1-Year Outcomes with Transplantation of HCV-Viremic Kidneys**

Vishnu S. Potluri, David S. Goldberg, Sumit Mohan, Roy D. Bloom, Deirdre Sawinski, Peter L. Abt, Emily A. Blumberg, Chirag R. Parikh, James Sharpe, K. Rajender Reddy, Miklos Z. Molnar, Meghan Sise, and Peter P. Reese

• See related editorial by Gill et al., (pp. 1778–1780).

## CLINICAL RESEARCH

**1953 ★Computational Segmentation and Classification of Diabetic Glomerulosclerosis**

Brandon Ginley, Brendon Lutnick, Kuang-Yu Jen, Agnes B. Fogo, Sanjay Jain, Avi Rosenberg, Vignesh Walavalkar, Gregory Wilding, John E. Tomaszewski, Rabi Yacoub, Giovanni Maria Rossi, and Pinaki Sarder

• See related editorial by Lemley (pp. 1780–1781) and article by Hermsen et al. (pp. 1968–1979).

**1968 ★Deep Learning–Based Histopathologic Assessment of Kidney Tissue**

Meyke Hermsen, Thomas de Bel, Marjolijn den Boer, Eric J. Steenbergen, Jesper Kers, Sandrine Florquin, Joris J. T. H. Roelofs, Mark D. Stegall, Mariam P. Alexander, Byron H. Smith, Bart Smeets, Luuk B. Hilbrands, and Jeroen A. W. M. van der Laak

• See related editorial by Lemley (pp. 1780–1781) and article by Ginley et al. (pp. 1953–1967).

**1980 ★Effects of Selonsertib in Patients with Diabetic Kidney Disease**

Glenn M. Chertow, Pablo E. Pergola, Fang Chen, Brian J. Kirby, John S. Sundy, and Uptal D. Patel, for the GS-US-223-1015 Investigators

**1991 Burden of CKD and Cardiovascular Disease on Life Expectancy and Health Service Utilization: a Cohort Study of Hong Kong Chinese Hypertensive Patients**

Eric Yuk Fai Wan, Esther Yee Tak Yu, Weng Yee Chin, Daniel Yee Tak Fong, Edmond Pui Hang Choi, Eric Ho Man Tang, and Cindy Lo Kuen Lam

**2000 ★Genome-Wide Association Study of Diabetic Kidney Disease Highlights Biology Involved in Glomerular Basement Membrane Collagen**

Rany M. Salem, Jennifer N. Todd, Niina Sandholm, Joanne B. Cole, Wei-Min Chen, Darrell Andrews,

Marcus G. Pezzolesi, Paul M. McKeigue, Linda T. Hiraki, Chengxiang Qiu, Viji Nair, Chen Di Liao, Jing Jing Cao, Erkka Valo, Suna Onengut-Gumuscu, Adam M. Smiles, Stuart J. McGurnaghan, Jani K. Haukka, Valma Harjutsalo, Eoin P. Brennan, Natalie van Zuydam, Emma Ahlqvist, Ross Doyle, Tarunveer S. Ahluwalia, Maria Lajer, Maria F. Hughes, Jihwan Park, Jan Skupien, Athina Spiliopoulou, Andrew Liu, Rajasree Menon, Carine M. Boustany-Kari, Hyun M. Kang, Robert G. Nelson, Ronald Klein, Barbara E. Klein, Kristine E. Lee, Xiaoyu Gao, Michael Mauer, Silvia Maestroni, Maria Luiza Caramori, Ian H. de Boer, Rachel G. Miller, Jingchuan Guo, Andrew P. Boright, David Tregouet, Beata Gyorgy, Janet K. Snell-Bergeon, David M. Maahs, Shelley B. Bull, Angelo J. Canty, Colin N.A. Palmer, Lars Stechemesser, Bernhard Paulweber, Raimund Weitgasser, Jelizaveta Sokolovska, Vita Rovite, Valdis Pīrāgs, Edita Prakapiene, Lina Radzeviciene, Rasa Verkauskiene, Nicolae Mircea Panduru, Leif C. Groop, Mark I. McCarthy, Harvest F. Gu, Anna Möllsten, Henrik Falhammar, Kerstin Brismar, Finian Martin, Peter Rossing, Tina Costacou, Gianpaolo Zerbini, Michel Marre, Samy Hadjadj, Amy J. McKnight, Carol Forsblom, Gareth McKay, Catherine Godson, A. Peter Maxwell, Matthias Kretzler, Katalin Susztak, Helen M. Colhoun, Andrzej Krolewski, Andrew D. Paterson, Per-Henrik Groop, Stephen S. Rich, Joel

N. Hirschhorn, Jose C. Florez, and SUMMIT Consortium, DCCT/EDIC Research Group, GENIE Consortium

- See related editorial by Sedor and Freedman (pp. 1782–1783).

**2017**    **Glomerular Immunodeposits of Patients with IgA Nephropathy Are Enriched for IgG Autoantibodies Specific for Galactose-Deficient IgA1**

Dana V. Rizk, Manish K. Saha, Stacy Hall, Lea Novak, Rhubell Brown, Zhi-Qiang Huang, Huma Fatima, Bruce A. Julian, and Jan Novak

**META-ANALYSIS**

**2027**    **APOL1 Kidney Risk Variants and Cardiovascular Disease: An Individual Participant Data Meta-Analysis**

Morgan E. Grams, Aditya Surapaneni, Shoshana H. Ballew, Lawrence J. Appel, Eric Boerwinkle, L. Ebony Boulware, Teresa K. Chen, Josef Coresh, Mary Cushman, Jasmin Divers, Orlando M. Gutiérrez, Marguerite R. Irvin, Joachim H. Ix, Jeffrey B. Kopp, Lewis H. Kuller, Carl D. Langefeld, Michael S. Lipkowitz, Kenneth J. Mukamal, Solomon K. Musani, Rakhi P. Naik, Nicholas M. Pajewski, Carmen A. Peralta, Adrienne Tin, Christina L. Wassel, James G. Wilson, Cheryl A. Winkler, Bessie A. Young, Neil A. Zakai, and Barry I. Freedman