

This Month's Highlights

UP FRONT MATTERS

Editorials

- 1 **Specialized Regulatory T Cells for Optimal Suppression of T Cell Responses in GN**
Kathrin Eller and Alexander R. Rosenkranz
• See related article by Nosko et al. (pp. 185–196).
- 3 **mTOR: Pumping Nutrients into Tubules**
Ken Inoki
• See related article by Grahammer et al. (pp. 230–241).
- 5 **Is Dietary Red Meat Kidney Toxic?**
Nimrit Goraya and Donald E. Wesson
• See related article by Lew et al. (pp. 304–312).
- 7 **SGLT2 Inhibitors—Sweet Success for Diabetic Kidney Disease?**
Ian H. de Boer and Steven E. Kahn
• See related article by Heerspink et al. (pp. 368–375).

Brief Reviews

- 12 **Understanding and Communicating Medical Risks for Living Kidney Donors: A Matter of Perspective**
Krista L. Lentine and Dorry L. Segev
- 25 **Corticosteroids in IgA Nephropathy: Lessons from Recent Studies**
Rosanna Coppo
- 34 **Does Renal Repair Recapitulate Kidney Development?**
Melissa Helen Little and Pamela Kairath

BRIEF COMMUNICATIONS

- 47 ★ **CD8⁺ T Cells Effect Glomerular Injury in Experimental Anti-Myeloperoxidase GN**
Janet Chang, Peter Eggenhuizen, Kim M. O'Sullivan, Maliha A. Alikhan, Stephen R. Holdsworth, Joshua D. Ooi, and A. Richard Kitching

- 56 **In Primary Aldosteronism, Mineralocorticoids Influence Exosomal Sodium-Chloride Cotransporter Abundance**
Martin J. Wolley, Aihua Wu, Shengxin Xu, Richard D. Gordon, Robert A. Fenton, and Michael Stowasser
- 64 **IgA1 Glycosylation Is Heritable in Healthy Twins**
Hannah J. Lomax-Browne, Alessia Visconti, Charles D. Pusey, H. Terence Cook, Tim D. Spector, Matthew C. Pickering, and Mario Falchi
- 69 **Exome Sequencing Discerns Syndromes in Patients from Consanguineous Families with Congenital Anomalies of the Kidneys and Urinary Tract**
Asaf Vivante, Daw-Yang Hwang, Stefan Kohl, Jing Chen, Shirlee Shril, Julian Schulz, Amelie van der Ven, Ghaleb Daouk, Neveen A. Soliman, Aravind Selvin Kumar, Prabha Senguttuvan, Elijah O. Kehinde, Velibor Tasic, and Friedhelm Hildebrandt
- 76 **Intestinal Dysbiosis, Barrier Dysfunction, and Bacterial Translocation Account for CKD-Related Systemic Inflammation**
Kirstin Andersen, Marie Sophie Kesper, Julian A. Marschner, Lukas Konrad, Mi Ryu, Santhosh Kumar VR, Onkar P. Kulkarni, Shrikant R. Mulay, Simone Romoli, Jana Demleitner, Patrick Schiller, Alexander Dietrich, Susanna Müller, Oliver Gross, Hans-Joachim Ruscheweyh, Daniel H. Huson, Bärbel Stecher, and Hans-Joachim Anders

BASIC RESEARCH

- 85 ★ **MAP17 Is a Necessary Activator of Renal Na⁺/Glucose Cotransporter SGLT2**
Michael J. Coady, Abdulah El Tarazi, René Santer, Pierre Bissonnette, Louis J. Sasseville, Joaquim Calado, Yoann Lussier, Christopher Dumayne, Daniel G. Bichet, and Jean-Yves Lapointe

- 94** **I κ B Kinase Inhibitor Attenuates Sepsis-Induced Cardiac Dysfunction in CKD**
Jianmin Chen, Julius E. Kieswich, Fausto Chiazza, Amie J. Moyes, Thomas Gobetti, Gareth S.D. Purvis, Daniela C.F. Salvatori, Nimesh S.A. Patel, Mauro Perretti, Adrian J. Hobbs, Massimo Collino, Muhammad M. Yaqoob, and Christoph Thiemermann
- 106** **Inducible Expression of Claudin-1 in Glomerular Podocytes Generates Aberrant Tight Junctions and Proteinuria through Slit Diaphragm Destabilization**
Yongfeng Gong, Abby Sunq, Robyn A. Roth, and Jianghui Hou
- 118** **The Joubert Syndrome Protein Inpp5e Controls Ciliogenesis by Regulating Phosphoinositides at the Apical Membrane**
Wenyan Xu, Miaomiao Jin, Ruikun Hu, Hong Wang, Fan Zhang, Shialou Yuan, and Ying Cao
- 130** **Double Knockout of the Na⁺-Driven Cl⁻/HCO₃⁻ Exchanger and Na⁺/Cl⁻ Cotransporter Induces Hypokalemia and Volume Depletion**
Anne Sinning, Nikita Radionov, Francesco Trepiccione, Karen I. López-Cayuqueo, Maximilien Jayat, Stéphanie Baron, Nicolas Cornière, R. Todd Alexander, Juliette Hadchouel, Dominique Eladari, Christian A. Hübner, and Régine Chambrey
- 140** **Klotho May Ameliorate Proteinuria by Targeting TRPC6 Channels in Podocytes**
Ji-Hee Kim, Jian Xie, Kyu-Hee Hwang, Yueh-Lin Wu, Noelynn Oliver, Minseob Eom, Kyu-Sang Park, Nestor Barrezueta, In-Deok Kong, R. Paul Fracasso, Chou-Long Huang, and Seung-Kuy Cha
- 152** **α 1-Receptor Agonism Protects against Renal Ischemia-Reperfusion Injury**
Adam Hosszu, Zsuzsanna Antal, Lilla Lenart, Judit Hodrea, Sandor Koszegi, Dora B. Balogh, Nora F. Banki, Laszlo Wagner, Adam Denes, Peter Hamar, Peter Degrell, Adam Vannay, Attila J. Szabo, and Andrea Fekete
- 166** **Krüppel-Like Factor 15 Mediates Glucocorticoid-Induced Restoration of Podocyte Differentiation Markers**
Sandeep K. Mallipattu, Yiqing Guo, Monica P. Revelo, Lucia Roa-Peña, Timothy Miller, Jason Ling, Stuart J. Shankland, Agnieszka B. Bialkowska, Victoria Ly, Chelsea Estrada, Mukesh K. Jain, Yuan Lu, Avi Ma'ayan, Anita Mehrotra, Rabi Yacoub, Edward P. Nord, Robert P. Woroniecki, Vincent W. Yang, and John C. He
- 185** **T-Bet Enhances Regulatory T Cell Fitness and Directs Control of Th1 Responses in Crescentic GN**
Anna Nosko, Malte A. Kluger, Paul Diefenhardt, Simon Melderis, Claudia Wegscheid, Gisa Tieg, Rolf A.K. Stahl, Ulf Panzer, and Oliver M. Steinmetz
• See related editorial by Eller and Rosenkranz (pp. 1–2).
- 197** **G Protein-Coupled Receptor-G-Protein $\beta\gamma$ -Subunit Signaling Mediates Renal Dysfunction and Fibrosis in Heart Failure**
Fadia A. Kamal, Joshua G. Travers, Allison E. Schafer, Qing Ma, Prasad Devarajan, and Burns C. Blaxall
- 209** **The ClC-K2 Chloride Channel Is Critical for Salt Handling in the Distal Nephron**
J. Christopher Hennings, Olga Andrini, Nicolas Picard, Marc Paulais, Antje K. Huebner, Irma Karen Lopez Cayuqueo, Yohan Bignon, Mathilde Keck, Nicolas Cornière, David Böhm, Thomas J. Jentsch, Régine Chambrey, Jacques Teulon, Christian A. Hübner, and Dominique Eladari
- 218** ★ **Ferroptosis, but Not Necroptosis, Is Important in Nephrotoxic Folic Acid-Induced AKI**
Diego Martin-Sanchez, Olga Ruiz-Andres, Jonay Poveda, Susana Carrasco, Pablo Cannata-Ortiz, Maria D. Sanchez-Niño, Marta Ruiz Ortega, Jesus Egido, Andreas Linkermann, Alberto Ortiz, and Ana B. Sanz
- 230** **mTOR Regulates Endocytosis and Nutrient Transport in Proximal Tubular Cells**
Florian Grahammer, Suresh K. Ramakrishnan, Markus M. Rinschen, Alexey A. Larionov, Maryam Syed, Hazim Khatib, Malte Roerden, Jörn Oliver Sass, Martin Helmstaedter, Dorothea Osenberg, Lucas Kühne, Oliver Kretz, Nicola Wanner, Francois Jouret, Thomas Benzing, Ferruh Artunc, Tobias B. Huber, and Franziska Theilig
• See related editorial by Inoki (pp. 3–5).
- 242** **Loss of Cystic Fibrosis Transmembrane Regulator Impairs Intestinal Oxalate Secretion**
Felix Knauf, Robert B. Thomson, John F. Heneghan, Zhirong Jiang, Adedotun Adebamiro, Claire L. Thomson, Christina Barone, John R. Asplin, Marie E. Egan, Seth L. Alper, and Peter S. Aronson
- 250** **Wnt7b Signaling from the Ureteric Bud Epithelium Regulates Medullary Capillary Development**
LaToya Ann Roker, Katrina Nemri, and Jing Yu

260 **Natriuretic Peptide Receptor Guanylyl Cyclase-A in Podocytes is Renoprotective but Dispensable for Physiologic Renal Function**
Janina Staffel, Daniela Valletta, Anna Federlein, Katharina Ehm, Regine Volkmann, Andrea M. Füchsl, Ralph Witzgall, Michaela Kuhn, and Frank Schweda

278 **Increase of Total Nephron Albumin Filtration and Reabsorption in Diabetic Nephropathy**
Keita P. Mori, Hideki Yokoi, Masato Kasahara, Hirotaka Imamaki, Akira Ishii, Takashige Kuwabara, Kenichi Koga, Yukiko Kato, Naohiro Toda, Shoko Ohno, Koichiro Kuwahara, Tomomi Endo, Kazuwa Nakao, Motoko Yanagita, Masashi Mukoyama, and Kiyoshi Mori

CLINICAL EPIDEMIOLOGY

291 ★ **High Level of Fasting Plasma Proenkephalin-A Predicts Deterioration of Kidney Function and Incidence of CKD**
Christina-Alexandra Schulz, Anders Christensson, Ulrika Ericson, Peter Almgren, George Hindy, Peter M. Nilsson, Joachim Struck, Andreas Bergmann, Olle Melander, and Marju Orho-Melander

304 **Red Meat Intake and Risk of ESRD**
Quan-Lan Jasmine Lew, Tazeen Hasan Jafar, Hiromi Wai Ling Koh, Aizhen Jin, Khuan Yew Chow, Jian-Min Yuan, and Woon-Puay Koh
• See related editorial by Goraya and Wesson (pp. 5–7).

313 **The Substantial Loss of Nephrons in Healthy Human Kidneys with Aging**
Aleksandar Denic, John C. Lieske, Harini A. Chakkerla, Emilio D. Poggio, Mariam P. Alexander, Prince Singh, Walter K. Kremers, Lilach O. Lerman, and Andrew D. Rule

321 ★ **Trimethylamine N-Oxide and Cardiovascular Events in Hemodialysis Patients**
Tariq Shafi, Neil R. Powe, Timothy W. Meyer, Seungyoung Hwang, Xin Hai, Michal L. Melamed, Tanushree Banerjee, Josef Coresh, and Thomas H. Hostetter

CLINICAL RESEARCH

333 **Genome-Wide Gene Expression Profiling of Randall's Plaques in Calcium Oxalate Stone Formers**
Kazumi Taguchi, Shuzo Hamamoto, Atsushi Okada, Rei Unno, Hideyuki Kamisawa, Taku Naiki, Ryosuke Ando, Kentaro Mizuno, Noriyasu Kawai, Keiichi Tozawa, Kenjiro Kohri, and Takahiro Yasui

348 **Rituximab for Severe Membranous Nephropathy: A 6-Month Trial with Extended Follow-Up**
Karine Dahan, Hanna Debiec, Emmanuelle Plaisier, Marine Cachanado, Alexandra Rousseau, Laura Wakselman, Pierre-Antoine Michel, Fabrice Mihout, Bertrand Dussol, Marie Matignon, Christiane Mousson, Tabassome Simon, and Pierre Ronco, on behalf of the GEMRITUX Study Group

359 ★ **Premature T Cell Senescence in Pediatric CKD**
Roshan P. George, Aneesh K. Mehta, Sebastian D. Perez, Pamela Winterberg, Jennifer Cheeseman, Brandi Johnson, Jean Kwun, Stephanie Monday, Linda Stempora, Barry Warshaw, and Allan D. Kirk

368 **Canagliflozin Slows Progression of Renal Function Decline Independently of Glycemic Effects**
Hiddo J. L. Heerspink, Mehul Desai, Meg Jardine, Dainius Balis, Gary Meininger, and Vlado Perkovic
• See related editorial by de Boer and Kahn (pp. 7–10).

META-ANALYSIS

377 **AKI and Long-Term Risk for Cardiovascular Events and Mortality**
Ayodele Odutayo, Christopher X. Wong, Michael Farkouh, Douglas G. Altman, Sally Hopewell, Connor A. Emdin, and Benjamin H. Hunn