

This Month's Highlights

UP FRONT MATTERS

Editorials

- 705 The Era of Human Developmental Nephrology**
Ryuichi Nishinakamura
- See related articles by Lindström et al. (pp. 785–805); Lindström et al. (pp. 806–824); and Lindström et al. (pp. 825–840).
- 706 Evolution and Kidney Development: A Rosetta Stone for Nephrology**
Robert L. Chevalier
- See related articles by Lindström et al. (pp. 785–805); Lindström et al. (pp. 825–840); and Lindström et al. (pp. 806–824).

Perspective

- 710 The Benefits of Tubular Proteinuria: An Evolutionary Perspective**
Matias Simons

Brief Reviews

- 713 The UMOD Locus: Insights into the Pathogenesis and Prognosis of Kidney Disease**
Olivier Devuyst and Cristian Pattaro
- 727 Salt-Losing Tubulopathies in Children: What's New, What's Controversial?**
Robert Kleta and Detlef Bockenhauer
- 741 Targeting B Cells and Plasma Cells in Glomerular Diseases: Translational Perspectives**
Eva Schrezenmeier, David Jayne, and Thomas Dörner
- 759 Differentiating Primary, Genetic, and Secondary FSGS in Adults: A Clinicopathologic Approach**
An S. De Vriese, Sanjeev Sethi, Karl A. Nath, Richard J. Glassock, and Fernando C. Fervenza

BRIEF COMMUNICATION

- 775 Reciprocal Spatiotemporally Controlled Apoptosis Regulates Wolffian Duct Cloaca Fusion**
Masato Hoshi, Antoine Reginensi, Matthew S. Joens, James A. J. Fitzpatrick, Helen McNeill, and Sanjay Jain

BASIC RESEARCH

- 785 ★ Conserved and Divergent Features of Human and Mouse Kidney Organogenesis**
Nils O. Lindström, Jill A. McMahon, Jinjin Guo, Tracy Tran, Qiuyu Guo, Elisabeth Rutledge, Riana K. Parvez, Gohar Saribekyan, Robert E. Schuler, Christopher Liao, Albert D. Kim, Ahmed Abdelhalim, Seth W. Ruffins, Matthew E. Thornton, Laurence Basking, Brendan Grubbs, Carl Kesselman, and Andrew P. McMahon
- See related editorials by Nishinakamura (pp. 705–706); and Chevalier (pp. 706–709).
- 806 ★ Conserved and Divergent Features of Mesenchymal Progenitor Cell Types within the Cortical Nephrogenic Niche of the Human and Mouse Kidney**
Nils O. Lindström, Jinjin Guo, Albert D. Kim, Tracy Tran, Qiuyu Guo, Guilherme De Sena Brandine, Andrew Ransick, Riana K. Parvez, Matthew E. Thornton, Laurence Basking, Brendan Grubbs, Jill A. McMahon, Andrew D. Smith, and Andrew P. McMahon
- See related editorials by Nishinakamura (pp. 705–706); and Chevalier (pp. 706–709).
- 825 ★ Conserved and Divergent Molecular and Anatomic Features of Human and Mouse Nephron Patterning**
Nils O. Lindström, Tracy Tran, Jinjin Guo, Elisabeth Rutledge, Riana K. Parvez, Matthew E. Thornton, Brendan Grubbs, Jill A. McMahon, and Andrew P. McMahon
- See related editorials by Nishinakamura (pp. 705–706); and Chevalier (pp. 706–709).
- 841 Tamm-Horsfall Protein Regulates Mononuclear Phagocytes in the Kidney**
Radmila Micanovic, Shehnaz Khan, Danielle Janosevic, Maya E. Lee, Takashi Hato, Edward F. Srouf, Seth Winfree, Joydeep Ghosh, Yan Tong, Susan E. Rice, Pierre C. Dagher, Xue-Ru Wu, and Tarek M. El-Achkar
- 857 GRHL2 Is Required for Collecting Duct Epithelial Barrier Function and Renal Osmoregulation**
Christian Hinze, Janett Ruffert, Katharina Walentin, Nina Himmerkus, Elham Nikpey, Olav Tenstad,

Helge Wiig, Kerim Mutig, Zeliha Yesim Yurtdas, Janet D. Klein, Jeff M. Sands, Federica Branchi, Michael Schumann, Sebastian Bachmann, Markus Bleich, and Kai M. Schmidt-Ott

869 **ApoL1 Overexpression Drives Variant-Independent Cytotoxicity**
John F. O'Toole, William Schilling, Diana Kunze, Sethu M. Madhavan, Martha Konieczkowski, Yaping Gu, Liping Luo, Zhenzhen Wu, Leslie A. Bruggeman, and John R. Sedor

880 **Proteomic Profiling Reveals the Transglutaminase-2 Externalization Pathway in Kidneys after Unilateral Ureteric Obstruction**
Giulia Furini, Nina Schroeder, Linghong Huang, David Boocock, Alessandra Scarpellini, Clare Coveney, Elisa Tonoli, Raghavendran Ramaswamy, Graham Ball, Claudia Verderio, Timothy S. Johnson, and Elisabetta A.M. Verderio

906 **Indoxyl Sulfate Upregulates Liver P-Glycoprotein Expression and Activity through Aryl Hydrocarbon Receptor Signaling**
Tacy Santana Machado, Stéphane Poitevin, Pascale Paul, Nathalie McKay, Noémie Jourde-Chiche, Tristan Legris, Annick Mouly-Bandini, Françoise Dignat-George, Philippe Brunet, Rosalinde Masereeuw, Stéphane Burtey, and Claire Cerini

919 **Exosomal CCL2 from Tubular Epithelial Cells Is Critical for Albumin-Induced Tubulointerstitial Inflammation**
Lin-Li Lv, Ye Feng, Yi Wen, Wei-Jun Wu, Hai-Feng Ni, Zuo-Lin Li, Le-Ting Zhou, Bin Wang, Jian-Dong Zhang, Steven D. Crowley, and Bi-Cheng Liu

936 **CHIP Regulates Aquaporin-2 Quality Control and Body Water Homeostasis**
Qi Wu, Hanne B. Moeller, Donté A. Stevens, Rebekah Sanchez-Hodge, Gabrielle Childers, Marleen L.A. Kortenoeven, Lei Cheng, Lena L. Rosenbaek, Carrie Rubel, Cam Patterson, Trairak Pisitkun, Jonathan C. Schisler, and Robert A. Fenton

949 **Pathogenicity of a Human Laminin β 2 Mutation Revealed in Models of Alport Syndrome**
Steven D. Funk, Raymond H. Bayer, Andrew F. Malone, Karen K. McKee, Peter D. Yurchenco, and Jeffrey H. Miner

961 **Potentiating Tissue-Resident Type 2 Innate Lymphoid Cells by IL-33 to Prevent Renal Ischemia-Reperfusion Injury**
Qi Cao, Yiping Wang, Zhiguo Niu, Chengshi Wang, Ruifeng Wang, Zhiqiang Zhang, Titi Chen,

Xin Maggie Wang, Qing Li, Vincent W.S. Lee, Qingsong Huang, Jing Tan, Minghao Guo, Yuan Min Wang, Guoping Zheng, Di Yu, Stephen I. Alexander, Hui Wang, and David C.H. Harris

977 **Plasma Potassium Determines NCC Abundance in Adult Kidney-Specific γ ENaC Knockout**
Emilie Boscardin, Romain Perrier, Chloé Sergi, Marc P. Maillard, Johannes Loffing, Dominique Loffing-Cueni, Robert Koesters, Bernard C. Rossier, and Edith Hummler

CLINICAL EPIDEMIOLOGY

991 **Magnesium and Risk of Hip Fracture among Patients Undergoing Hemodialysis**
Yusuke Sakaguchi, Takayuki Hamano, Atsushi Wada, Junichi Hoshino, and Ikuto Masakane

1001 **Causes of Death after a Hospitalization with AKI**
Samuel A. Silver, Ziv Harel, Eric McArthur, Danielle M. Nash, Rey Acedillo, Abhijat Kitchlu, Amit X. Garg, Glenn M. Chertow, Chaim M. Bell, and Ron Wald

CLINICAL RESEARCH

1011 **Long-Term Clinical Outcomes after Early Initiation of RRT in Critically Ill Patients with AKI**
Melanie Meersch, Mira Küllmar, Christoph Schmidt, Joachim Gerss, Toni Weinhage, Andreas Margraf, Thomas Ermert, John A. Kellum, and Alexander Zarbock

1020 ★ **Maternal and Fetal Outcomes of Pregnancies in Women with Atypical Hemolytic Uremic Syndrome**
Martina Gaggl, Christof Aigner, Dorottya Csuka, Ágnes Szilágyi, Zoltán Prohászka, Renate Kain, Natalja Haninger, Maarten Knechtelsdorfer, Raute Sunder-Plassmann, Gere Sunder-Plassmann, and Alice Schmidt

1030 ★ **Fibrotic Venous Remodeling and Nonmaturation of Arteriovenous Fistulas**
Laisel Martinez, Juan C. Duque, Marwan Tabbara, Angela Paez, Guillermo Selman, Diana R. Hernandez, Chad A. Sundberg, Jason Chieh Sheng Tey, Yan-Ting Shiu, Alfred K. Cheung, Michael Allon, Omaid C. Velazquez, Loay H. Salman, and Roberto I. Vazquez-Padron

1041 **Acidosis and Deafness in Patients with Recessive Mutations in FOXI1**
Sven Enerbäck, Daniel Nilsson, Noel Edwards, Mikael Heg Lind, Sumaya Alkanderi, Emma Ashton,

Asma Deeb, Feras E.B. Kokash, Abdul R.A. Bakhsh, William van't Hoff, Stephen B. Walsh, Felice D'Arco, Arezoo Daryadel, Soline Bourgeois, Carsten A. Wagner, Robert Kleta, Detlef Bockenhauer, and John A. Sayer

- 1049** ★ **Control of Humoral Response in Renal Transplantation by Belatacept Depends on a Direct Effect on B Cells and Impaired T Follicular Helper-B Cell Crosstalk**
Claire Leibler, Allan Thiolat, Carole Hénique, Chloé Samson, Caroline Pilon, Marie Tamagne,

France Pirenne, Benoit Vingert, José L. Cohen, and Philippe Grimbert

- 1063** **Uremic Solute-Aryl Hydrocarbon Receptor-Tissue Factor Axis Associates with Thrombosis after Vascular Injury in Humans**
Vijaya B. Kolachalama, Moshe Shashar, Faisal Alousi, Sowmya Shivanna, Keshab Rijal, Mostafa E. Belghasem, Joshua Walker, Shinobu Matsuura, Gary H. Chang, C. Michael Gibson, Laura M. Dember, Jean M. Francis, Katya Ravid, and Vipul C. Chitalia