



**Cover:** In a new experimental model of urinary tract infection (UTI), male C3H mice are infected with uropathogenic *Escherichia coli*, and treatment with ceftriaxone (the first-line parenteral treatment for complicated UTI in human patients) beginning 5 days later achieves microbiologic cure. A significant proportion of mice nonetheless develop renal scarring, recapitulating a common complication of pyelonephritis in children which has implications for long-term renal function. Gomori trichrome staining of mouse kidney sections 4 weeks after antibiotic treatment demonstrates collagen deposition (blue) in the scar, replacement and retraction of cortical tissue, and thickening of the capsule over the scar. The scar also features an extensive chronic leukocytic infiltrate, suggesting an ongoing and active process long after resolution of infection. See article by Olson et al. on page 1371. Cover image by Patrick Olson is licensed under a Creative Commons Attribution 4.0 International license.

### REVIEW

- 1273 Intraluminal valves: development, function and disease  
**Geng, X., Cha, B., Mahamud, M. R. and Srinivasan, R. S.**

### CLINICAL PUZZLE

- 1289 Understanding the aetiology and resolution of chronic otitis media from animal and human studies  
**Bhutta, M. F., Thornton, R. B., Kirkham, L.-A. S., Kerschner, J. E. and Cheeseman, M. T.**

### RESEARCH ARTICLES

- 1301 Lysyl oxidases regulate fibrillar collagen remodelling in idiopathic pulmonary fibrosis  
**Tjin, G., White, E. S., Faiz, A., Sicard, D., Tschumperlin, D. J., Mahar, A., Kable, E. P. W. and Burgess, J. K.**
- 1313 RhoB blockade selectively inhibits autoantibody production in autoimmune models of rheumatoid arthritis and lupus  
**Mandik-Nayak, L., DuHadaway, J. B., Mulgrew, J., Pigott, E., Manley, K., Sedano, S., Prendergast, G. C. and Laury-Kleintop, L. D.**
- 1323 Overexpression of microRNA-722 fine-tunes neutrophilic inflammation by inhibiting *Rac2* in zebrafish  
**Hsu, A. Y., Wang, D., Gurol, T., Zhou, W., Zhu, X., Lu, H.-Y. and Deng, Q.**

- 1333 *Pumilio2*-deficient mice show a predisposition for epilepsy  
**Follwaczny, P., Schieweck, R., Riedemann, T., Demleitner, A., Straub, T., Klemm, A. H., Bilban, M., Sutor, B., Popper, B. and Kiebler, M. A.**

- 1343 Early cerebellar deficits in mitochondrial biogenesis and respiratory chain complexes in the KIKO mouse model of Friedreich ataxia  
**Lin, H., Magrane, J., Rattelle, A., Stepanova, A., Galkin, A., Clark, E. M., Dong, Y. N., Halawani, S. M. and Lynch, D. R.**

### RESOURCE ARTICLES

- 1353 Comprehensive analysis of gene expression patterns in Friedreich's ataxia fibroblasts by RNA sequencing reveals altered levels of protein synthesis factors and solute carriers  
**Napierala, J. S., Li, Y., Lu, Y., Lin, K., Hauser, L. A., Lynch, D. R. and Napierala, M.**
- 1371 Renal scar formation and kidney function following antibiotic-treated murine pyelonephritis  
**Olson, P. D., McLellan, L. K., Liu, A., Briden, K. L., Tiemann, K. M., Daugherty, A. L., Hruska, K. A. and Hunstad, D. A.**