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

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

1323  Overexpression of microRNA-722 fine-tunes neutrophilic inflammation by inhibiting Rac2 in zebrafish

1333  Pumilio2-deficient mice show a predisposition for epilepsy

1343  Early cerebellar deficits in mitochondrial biogenesis and respiratory chain complexes in the KIKO mouse model of Friedreich ataxia

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

1371  Renal scar formation and kidney function following antibiotic-treated murine pyelonephritis