



**Cover:** High HDAC9 expression is associated with B cell malignancies and the article by Gil et al. on page 1483 suggests that deregulation of this epigenetic modifier can promote lymphoproliferative disease and lymphoma. Impaired p53 tumor suppressor activity in this mouse model is thought to be an important factor in disease development. Immunofluorescence analysis of spleen sections using antibodies against total p53 (top left, green) and acetylated p53 (top right, green) in wild-type control mice compared with total p53 (bottom left, green) and acetylated p53 (bottom right, green) in mice expressing transgenic histone deacetylase 9 (HDAC9) in the B cell lineage. Both wild-type endogenous and transgenic HDAC9 are stained red. Image provided by Louise Howell and licenced under a Creative Commons Attribution 4.0 International licence.

## REVIEW

- 1419** Renal disease pathophysiology and treatment: contributions from the rat  
**Mullins, L. J., Conway, B. R., Menzies, R. I., Denby, L. and Mullins, J. J.**

## RESEARCH ARTICLES

- 1435** Heterotypic mouse models of canine osteosarcoma recapitulate tumor heterogeneity and biological behavior  
**Scott, M. C., Tomiyasu, H., Garbe, J. R., Cornax, I., Amaya, C., O'Sullivan, M. G., Subramanian, S., Bryan, B. A. and Modiano, J. F.**
- 1445** Whole-genome sequence, SNP chips and pedigree structure: building demographic profiles in domestic dog breeds to optimize genetic-trait mapping  
**Dreger, D. L., Rimbault, M., Davis, B. W., Bhatnagar, A., Parker, H. G. and Ostrander, E. A.**
- 1461** Lurbinectedin induces depletion of tumor-associated macrophages, an essential component of its *in vivo* synergism with gemcitabine, in pancreatic adenocarcinoma mouse models  
**Céspedes, M. V., Guillén, M. J., López-Casas, P. P., Sarno, F., Gallardo, A., Álamo, P., Cuevas, C., Hidalgo, M., Galmarini, C. M., Allavena, P., Avilés, P. and Mangués, R.**
- 1473** *Helicobacter pylori* VacA, acting through receptor protein tyrosine phosphatase  $\alpha$ , is crucial for CagA phosphorylation in human duodenum carcinoma cell line AZ-521  
**Nakano, M., Yahiro, K., Yamasaki, E., Kurazono, H., Akada, J., Yamaoka, Y., Niidome, T., Hatakeyama, M., Suzuki, H., Yamamoto, T., Moss, J., Isomoto, H. and Hirayama, T.**
- 1483** Deregulated expression of HDAC9 in B cells promotes development of lymphoproliferative disease and lymphoma in mice  
**Gil, V. S., Bhagat, G., Howell, L., Zhang, J., Kim, C. H., Stengel, S., Vega, F., Zelent, A. and Petrie, K.**
- 1497** Microglia activation in a pediatric rabbit model of tuberculous meningitis  
**Tucker, E. W., Pokkali, S., Zhang, Z., DeMarco, V. P., Klunk, M., Smith, E. S., Ordonez, A. A., Penet, M.-F., Bhujwala, Z., Jain, S. K. and Kannan, S.**
- 1507** Recovery of erectile function comparing autologous nerve grafts, unseeded conduits, Schwann-cell-seeded guidance tubes and GDNF-overexpressing Schwann cell grafts  
**May, F., Buchner, A., Matiassek, K., Schlenker, B., Stief, C. and Weidner, N.**

## RETRACTION

- 1513** Retraction: The generation and characterization of novel *Col1a1*<sup>FRT-Cre-ER-T2-FRT</sup> and *Col1a1*<sup>FRT-STOP-FRT-Cre-ER-T2</sup> mice for sequential mutagenesis  
**Zhang, M. and Kirsch, D. G.**