IN BRIEF

INFECTIOUS DISEASE

New target for antimalarials

An attractive strategy to limit the evolution of drug-resistant malaria-causing parasites is to target host factors that are essential for parasite invasion. Now, Zenonos *et al.* describe the development of a high-affinity recombinant chimeric antibody targeting the erythrocyte receptor basigin 1, which is essential for invasion in all tested strains of *Plasmodium falciparum*. The novel antibody prevented invasion of erythrocytes by multiple *P. falciparum* parasite lines *in vitro*, and cleared blood-stage parasites without side effects in a mouse *P. falciparum* infection model.

ORIGINAL RESEARCH PAPER Zenonos, Z. P. *et al.* Basigin is a druggable target for host-oriented antimalarial interventions. *J. Exp. Med.* **212**, 1145–1151 (2015)

OPHTHALMOLOGY

Cholesterol precursor prevents cataracts

Crystallin proteins present in lens fibres contribute to lens transparency and refractive properties. However, these proteins may become aggregated which leads to the formation of cataracts. In two families with extensive congenital cataracts, Zhao *et al.* identify two homozygous mutations in the gene encoding lanosterol synthase (LSS), which generates lanosterol, a cholesterol precursor that is enriched in the lens. *In vitro*, lanosterol reduced crystallin aggregation in cells coexpressing an LSS mutant and a mutant crystallin. Moreover, it reduced cataract severity in lenses isolated from rabbits and in dogs *in vivo*.

ORIGINAL RESEARCH PAPER Zhao, L. *et al.* Lanosterol reverses protein aggregation in cataracts. *Nature* **523**, 607–611 (2015)

CANCER

Targeting LSD1 in small cell lung cancer

The histone-modifying enzyme lysine-specific histone demethylase 1A (LSD1) is overexpressed in many human tumours, and its inhibition reduces cancer cell growth, migration and invasion. Mohammad *et al.* report the discovery and biochemical characterization of an orally available, cyclopropylamine-containing, irreversible LSD1 inactivator, GSK2879552. The small molecule inhibited proliferation of small cell lung cancer (SCLC) cell lines and delayed tumour growth in SCLC xenograft-bearing mice. A DNA hypomethylation signature was found to be predictive of the sensitivity of patient-derived xenograft models of SCLC to the antiproliferative effects of GSK2879552.

ORIGINAL RESEARCH PAPER Mohammad, H. P. *et al.* A DNA hypomethylation signature predicts antitumor activity of LSD1 inhibitors in SCLC. *Cancer Cell* **28**, 57–69 (2015)

GENE THERAPY

Reversing deafness

Dysfunction of inner-ear hair cells results in hearing loss and can be caused by mutations in the gene encoding transmembrane channel-like 1 (TMC1). Here, Askew *et al.* demonstrate that a vector construct consisting of the adeno-associated virus serotype 2/1 (AAV2/1)and the chicken β-actin (CBA) promoter can safely deliver *Tmc1* or its closely related orthologue, *Tmc2*, into the mouse inner ear and drive TMC expression. Intracochlear injection of these vectors promoted hair cell survival, partially restoring sensory transduction, auditory function and startle reflexes in deaf mice carrying *Tmc1* mutations.

ORIGINAL RESEARCH PAPER Askew, C. *et al. Tmc* gene therapy restores auditory function in deaf mice. *Sci. Transl. Med.* **7**, 295ra108 (2015)