IN BRIEF

LEARNING AND MEMORY

Emotional memory tagging

In animals, short-term memories generated by weak behavioural training can be strengthened and converted to long-term memories by a subsequent novel experience, such as exposure to a new environment. The authors here showed that a similar phenomenon occurs in humans: participants' recollection of otherwise neutral objects was enhanced if other objects from the same conceptual category (in this case, tools or animals) were subsequently paired with an electric shock. Such selective consolidation of memories that are associated with meaningful events may explain why we are able to remember specific, but otherwise unimportant, episodic details of emotional experiences.

ORIGINAL RESEARCH PAPER Dunsmoor, J. E. *et al.* Emotional learning selectively and retroactively strengthens memories for related events. *Nature* http://dx.doi.org/10.1038/nature14106 (2015)

CELL BIOLOGY OF THE NEURON

Skin cells clear neuronal debris

Cutaneous injuries can damage the somatosensory neurons that innervate the skin, and repair of these neurons requires the debris generated by degenerating axons to be removed. The authors found that, in zebrafish, cutaneous axon debris resulting from a laser-induced injury was not cleared by 'professional phagocytes' such as leukocytes or glial cells. Instead, the debris was phagocytosed by epidermal cells. Thus, vertebrate epidermal cells (like their invertebrate counterparts) may have a more general role in the clearance of neuronal debris during development and after injury.

ORIGINAL RESEARCH PAPER Rasmussen, J. P. *et al.* Vertebrate epidermal cells are broad-specificity phagocytes that clear sensory axon debris. *J. Neurosci.* **35**, 559–570 (2015)

NEUROIMMUNOLOGY

Immune cells drive resilience

In recent years, the concept of a bidirectional regulatory relationship between the brain and the immune system has gained support. Here, the authors isolated lymphocytes from mice subjected to chronic social defeat stress and adoptively transferred these cells into naive mice. The recipients exhibited reduced anxiety and depression-related behaviours as well as anti-inflammatory cytokine and microglial profiles. This suggests that psychological stress can modify adaptive immune cells in a long-lasting manner that may boost resilience to stress.

ORIGINAL RESEARCH PAPER Brachman, R. A. *et al.* Lymphocytes from chronically stressed mice confer antidepressant-like effects to naive mice. *J. Neurosci.* **35**, 1530–1538 (2015)

SYNAPTIC TRANSMISSION

Transporter trafficking

Glutamate transporters make a crucial contribution to neuronal signalling by rapidly removing excess glutamate from the synaptic cleft. Here, the authors showed that surface trafficking of the astrocytic glutamate transporter GLT1 (also known as EAAT2) was regulated by neuronal and glial activity. Blocking the surface trafficking of GLT1 altered the kinetics of excitatory postsynaptic currents. Thus, the surface mobility of transporters on astrocytes has an important role in controlling the time course of neurotransmitter action at synapse.

ORIGINAL RESEARCH PAPER Murphy-Royal, C. *et al.* Surface diffusion of astrocytic glutamate transporters shapes synaptic transmission. *Nature Neurosci.* **18**, 219–226 (2015)