IN BRIEF

VISUAL SYSTEM

Direct rod input to cone BCs and direct cone input to rod BCs challenge the traditional view of mammalian BC circuitry

Pang, J. –J. *et al. Proc. Natl Acad. Sci. USA* **107**, 395–400 (2010)

Bipolar cells (BCs) in the retina are thought to form synapses with either rods or cones. Here, the authors assessed the relative contribution of different rod and cone pathways to light-evoked responses in depolarizing BCs by using pathway-specific knock-out mice. This revealed that some 'rod BCs' and some 'cone BCs' receive additional direct input from cones and from rods, respectively. Thus, rod and cone inputs to BCs are not completely segregated, opposing a long-held dogma.

NEUROPEPTIDES

A key role of orexin in panic anxiety

Johnson, P. L. *et al. Nature Med.* **16**, 111–115 (2010)

Rats can be made prone to panic attacks by reducing GABA (γ-aminobutyric acid) synthesis in the dorsomedial–perifornical hypothalamus, which contains many orexin neurons. The authors showed that inducing panic attacks in rats, by administering sodium lactate, activated the orexin neurons. Silencing the gene encoding orexin or blocking the orexin receptor prevented this effect, suggesting that orexin contributes to producing the attacks. The cerebrospinal fluid of humans with panic anxiety has elevated levels of orexin, further suggesting that orexin antagonists might be useful in treating panic disorder.

SOCIAL NEUROSCIENCE

Prejudice and truth about the effect of testosterone on human bargaining behaviour

Eisenegger, C. *et al. Nature* 8 December 2009 (doi:10.1038/nature08711)

Testosterone is often assumed to cause antisocial and aggressive behaviour in humans, but evidence for this assumption is scarce. The authors administered testosterone or placebo to women playing a bargaining game and asked them which treatment they thought they had been given. Women who believed that they had received testosterone behaved more unfairly in the game, whereas actual testosterone treatment increased fairness. These findings show an unexpected role for testosterone in social behaviour and highlight the importance of controlling for psychological factors in neurobehavioural studies.

NEURODEGENERATIVE DISEASE

Expression of mutant huntingtin in mouse brain astrocytes causes age-dependent neurological symptoms

Bradford, J. *et al. Proc. Natl Acad. Sci. USA* **106**, 22480–22485 (2009)

In Huntington's disease (HD), striatal medium spiny neurons undergo neurodegeneration. These neurons receive glutamatergic input, which has led to the proposal that glutamate excitotoxicity contributes to neurodegeneration in HD. Glutamate uptake by glia could reduce glutamate excitotoxicity and thereby promote neuronal survival. Here, transgenic mice expressing mutant huntingtin selectively in astrocytes displayed HD-like neuropathology and reduced glutamate uptake in astrocytes. These findings suggest that glial expression of mutant huntingtin might also contribute to pathology in patients with HD.