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IN BRIEF

BEHAVIOURAL NEUROSCIENCE

Diabetes, dopamine and depression

Type 2 diabetes, characterized by insulin resistance, has been linked to mood disorders, but the underlying mechanisms are not well understood. Kleinridders *et al.* now show that mice lacking the insulin receptor in the brain display increased depression- and anxiety-like behaviours. Decreased dopamine release in the striatum was also observed in these mice, and anti-depressant drugs that increase dopamine levels attenuated depression-like behaviours. These findings suggest that mood disorders in diabetes are caused by insulin resistance in the CNS and involve disruption of dopaminergic pathways.

ORIGINAL RESEARCH PAPER Kleinridders, A. *et al.* Insulin resistance in brain alters dopamine turnover and causes behavioral disorders. *Proc. Natl Acad. Sci. USA* **112**, 3463–3468 (2015)

NEUROGENESIS

Support from the cortex

Adult neurogenesis is supported by the vasculature, but the contribution of different vascular cell types to this support is not clear. Here, the authors found that both pericytes and endothelial cells from the mouse ventricular–subventricular zone (V–SVZ), a key neurogenic niche, promoted proliferation and differentiation of neural stem cells *in vitro*. Unexpectedly, they also showed that isolated vascular cells from the cortex, a non-neurogenic region, supported these processes even more potently. Thus, vascular cells in non-neurogenic regions may have a latent capacity to support neurogenesis.

ORIGINAL RESEARCH PAPER Crouch, E. E. *et al.* Regional and stage-specific effects of prospectively purified vascular cells on the adult V-SVZ neural stem cell lineage. *J. Neurosci.* **35**, 4528–4539 (2015)

COGNITIVE NEUROSCIENCE

Visual fixation predicts function

Cognitive development occurs as a linked cascade of emerging skills, but how the visual abilities of infants contribute to cognitive function later in childhood has yet not been investigated. Here, Stjerna *et al.* studied the link between visual fixation performance in newborns and later cognitive function. Children that had good visual fixation scores as newborns performed better in visual motor and visual reasoning tasks at 2 and 5 years of age, respectively, than those with poor visual fixation as newborns. Thus, visual fixation in infancy can serve as a predictor of later cognitive outcomes.

ORIGINAL RESEARCH PAPER Stjerna, S. *et al.* Visual fixation in human newborns correlates with extensive white matter networks and predicts long-term neurocognitive development. *J. Neurosci.* **35**, 4824–4829 (2015)

MYELINATION

Promoting polarity

Oligodendrocytes change shape during myelination, suggesting that correct modulation of cell polarity is essential to their function. Jarjour *et al.* showed that the protein Scribble, an evolutionarily conserved regulator of cell polarity, is increased in mouse oligodendrocytes as they differentiate. Oligodendrocyte-specific deletion of the gene encoding Scribble reduced developmental myelination in the CNS and impaired remyelination following a demyelinating lesion. This suggests that Scribble is an important modulator of oligodendrocyte function during development and repair.

ORIGINAL RESEARCH PAPER Jarjour, A. A. *et al.* The polarity protein Scribble regulates myelination and remyelination in the central nervous system. *PLoS Biol.* **13**, e1002107 (2015)