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IN BRIEF

MOTOR NEURON DISEASE

ALS and schizophrenia share genetic risk factors

A new study has identified common genetic contributors to amyotrophic lateral sclerosis (ALS) and schizophrenia. The team used genome-wide association study data gathered from over 100,000 individuals and showed that these diseases have a shared polygenic risk, with an estimated genetic correlation of 14.3%, implying that ALS and schizophrenia share some biological processes. In addition, the team found five new ALS-associated genetic loci, which could provide new clues to the pathogenic mechanisms of ALS.

ORIGINAL ARTICLE McLaughlin, R. L. *et al.* Genetic correlation between amyotrophic lateral sclerosis and schizophrenia. *Nat. Commun.* **8**, 14774 (2017)

ALZHEIMER DISEASE

Inhibition of IRE1 signalling reduces AD pathology

The protein kinase and endoribonuclease IRE1 could have a role in Alzheimer disease (AD) pathogenesis, according to new research. Activation of IRE1 was associated with more-advanced AD pathology in human post-mortem brain. In addition, ablation of the RNase domain of IRE1 in a mouse model of AD reduced amyloid plaque burden and astrocyte activation, and ameliorated learning and memory deficits in the animals. The team also found that inhibition of signalling downstream of IRE1 in cultured cells resulted in retention of amyloid precursor protein (APP) within the endoplasmic reticulum, with subsequent degradation of APP at the proteasome. These results suggest that IRE1 represents a novel target for therapy in AD.

ORIGINAL ARTICLE Duran-Aniotz, C. *et al.* IRE1 signaling exacerbates Alzheimer's disease pathogenesis. *Acta Neuropathol.* http://dx.doi.org/10.1007/s00401-017-1694-x (2017)

MULTIPLE SCLEROSIS

Adiposity is associated with increased disability rates after a demyelinating event

High levels of adiposity are associated with poor clinical outcomes in patients with demyelination, a new study has shown. For 5 years, investigators studied 279 patients with a first diagnosis of CNS demyelination, and found that patients with a high BMI, large hip circumference and high levels of triglycerides were more likely to relapse. In addition, the total cholesterol:HDL ratio and levels of adiposity and non-HDL cholesterol correlated with an increased rate of disability, indicating that improvement of lipid profile could reduce the risk of disability after a demyelinating event.

ORIGINAL ARTICLE Tettey, P. *et al.* An adverse lipid profile and increased levels of adiposity significantly predict clinical course after a first demyelinating event. *J. Neurol. Neurosurg. Psychiatry* http://dx.doi.org/10.1136/jnnp-2016-315037 (2017)

SPINAL CORD INJURY

Insights into life expectancy after spinal cord injury

A 70-year observational study conducted in the UK has reported the trends in survival after traumatic spinal cord injury. The team studied 5,483 patients injured between 1943 and 2010, and observed a significant improvement in life expectancy between 1950 and 1980, after which survival plateaued, followed by a small improvement after 2010. The team also used the data to provide current life expectancy estimates for individuals with spinal cord injury, which range from 18.4% to 88.4% compared with the general population, depending on sex, current age and type of injury.

ORIGINAL ARTICLE Savic, G. *et al.* Long-term survival after traumatic spinal cord injury: a 70-year British study. *Spinal Cord* http://dx.doi.org/10.1038/sc.2017.23 (2017)