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IN BRIEF

PAIN

Pain chronification could be related to pre-existing structural abnormalities in the brain

Structural properties of the white matter of the brain might determine an individual's propensity to develop chronic pain, new research indicates. Using diffusion tensor imaging, Mansour *et al.* found that patients who experienced persistent pain after a single episode of subacute back pain (SBP) showed different patterns of white matter structural connectivity from patients in whom the pain resolved. The authors speculate that the structural differences probably preceded the SBP episode.

Original article Mansour, A. R. *et al.* Brain white matter structural properties predict transition to chronic pain. *Pain* 154, 2160–2168 (2013)

MOTOR NEURON DISEASE

A potential plasma biomarker for disease progression in amyotrophic lateral sclerosis

An ELISA study has shown that plasma levels of antibodies against neurofilament (NF) proteins correlate with disease stage in amyotrophic lateral sclerosis (ALS). Elevated NF antibody levels were observed in patients with ALS compared with healthy controls. In addition, patients with advanced ALS exhibited higher levels of NF antibodies than did individuals at earlier stages of the disease. The results raise the possibility that NF immunoreactivity could be a biomarker for disease progression in ALS.

Original article Puentes, F. *et al.* Immune reactivity to neurofilament proteins in the clinical staging of amyotrophic lateral sclerosis. *J. Neurol. Neurosurg. Psychiatry* doi:10.1136/jnnp-2013-305494

MULTIPLE SCLEROSIS

Genotyping study identifies a plethora of new susceptibility variants for multiple sclerosis

The International Multiple Sclerosis (MS) Genetics Consortium has discovered 48 new genetic variants that are associated with increased susceptibility to MS. Using the ImmunoChip genotyping array, which enables fine mapping of immune-related loci, the researchers identified 97 MS-associated single nucleotide polymorphisms, 48 of which were previously unknown. The findings should provide new avenues for exploration of the immune mechanisms underlying MS.

Original article International Multiple Sclerosis Genetics Consortium (IMSGC). Analysis of immune-related loci identifies 48 new susceptibility variants for multiple sclerosis. *Nat. Genet.* doi:10.1038/ng.2770

PARKINSON DISEASE

Patients with Parkinson disease show deposition of α -synuclein in cutaneous autonomic nerves

The Parkinson disease (PD)-associated protein α -synuclein accumulates in cutaneous autonomic nerve fibres in patients with this condition, and can be detected in skin biopsy samples, according to a report published in *Neurology*. The level of α -synuclein deposition in pilomotor and sudomotor nerves was shown to correlate with autonomic dysfunction in PD, and could provide a useful biomarker for this aspect of the disease process.

Original article Wang, N. *et al.* α -Synuclein in cutaneous autonomic nerves. *Neurology* doi:10.1212/WNL.0b013e3182a9f449