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IN BRIEF

GENETICS

Fully humanized mouse model of Huntington disease

Researchers have created the first fully humanized mouse model of Huntington disease (HD), which harbours two human huntingtin (*HTT*) genes—one mutated and one wild-type—and no mouse *Htt* genes. Therapeutic targeting of mutated *HTT* is a challenging strategy owing to the ubiquitous nature of the mutation and the physiological function of wild-type *HTT* alleles. Efforts to overcome such hurdles will benefit from the availability of this new model, termed Hu97/18.

Original article Southwell, A. L. *et al.* A fully humanized transgenic mouse model of Huntington disease. *Hum. Mol. Genet.* doi:10.1093/hmg/dds397

PARKINSON DISEASE

α -Synuclein RNA transcript isoforms associated with Parkinson disease

Lewy bodies, composed largely of α -synuclein (α -syn), are a hallmark of brain pathology in Parkinson disease (PD). Through genetic profiling of postmortem brain tissue from patients with PD, Rhinn *et al.* have found that expression of RNA transcripts of α -syn with an extended 3' untranslated region is associated with risk factors for PD, such as toxin exposure. Moreover, the protein product of this long RNA isoform tended to accumulate away from the synapse and towards mitochondria—a key subcellular target in PD.

Original article Rhinn, H. *et al.* Alternative α -synuclein transcript usage as a convergent mechanism in Parkinson's disease pathology. *Nat. Commun.* **3**, 1084 (2012)

STROKE

Plasma levels of tight-junction proteins can be used to predict haemorrhagic transformation in ischaemic stroke

Patients with ischaemic stroke are at risk of haemorrhagic transformation, but determining which patients will experience this event is challenging. A study involving 458 consecutive patients with stroke has shown that elevated serum levels of tight-junction proteins and markers of blood–brain barrier breakdown, such as occludin and S100B, at admission to hospital are associated with increased risk of haemorrhagic transformation. Early identification of at-risk patients could improve medical management after stroke.

Original article Kazmierski, R. *et al.* Serum tight-junction proteins predict hemorrhagic transformation in ischemic stroke patients. *Neurology* doi:10.1212/WNL.0b013e31826e9a83

MULTIPLE SCLEROSIS

Scoring system to predict response to IFN- β in patients with multiple sclerosis

Response to treatment with IFN- β varies between patients with multiple sclerosis (MS). Now, Sormani and colleagues have developed and validated a simple scoring system to predict response to IFN- β using two large, independent datasets of patients with relapsing–remitting MS. Patients were assigned a score of 0–3 on the basis of the number of new T2 lesions and clinical relapses during the first year of therapy. Higher scores were associated with increased probability of progression at 3 years. This tool could help to inform treatment decision-making at an early stage.

Original article Sormani, M. P. *et al.* Scoring treatment response in patients with relapsing multiple sclerosis. *Mult. Scler.* doi:10.1177/1352458512460605