

## IN BRIEF

**NEURO-ONCOLOGY****MET fusion genes implicated as treatment target in paediatric glioblastoma**

Genetic analysis of 53 paediatric glioblastoma tumours has indicated that around 10% of glioblastomas carry novel gene fusions involving the proto-oncogene *MET*. These fusions impaired cell cycle regulation, and induced aggressive glioblastomas in mice. *MET* inhibitors have been approved for treatment of certain non-CNS cancers, and *MET* inhibition improved survival in xenograft models of glioblastoma featuring *MET* fusions. In the clinical setting, however, combination treatments are likely to be needed to avoid tumour resistance.

**ORIGINAL ARTICLE** Bender, S. et al. Recurrent *MET* fusion genes represent a drug target in pediatric glioblastoma. *Nat. Med.* <http://dx.doi.org/10.1038/nm.4204> (2016)

**MULTIPLE SCLEROSIS****Coagulation factors could mediate neuroinflammation in multiple sclerosis**

A new case–control study has reported elevated plasma levels of the coagulation factors prothrombin and factor X in patients with relapsing–remitting or secondary progressive multiple sclerosis (MS). Patients with primary progressive MS did not show elevated coagulation factor levels, suggesting that the coagulation system could contribute to inflammatory aspects of the disease. The findings are in line with previous studies in animal models, which have implicated coagulation factors in processes beyond haemostasis in neuroinflammatory disorders.

**ORIGINAL ARTICLE** Göbel, K. et al. Prothrombin and factor X are elevated in multiple sclerosis. *Ann. Neurol.* <http://dx.doi.org/10.1002/ana.24807> (2016)

**MOVEMENT DISORDERS****Novel genetic risk variants for essential tremor**

The risk of essential tremor has a heritable component, but the genetic variants that contribute to the risk of the disease have remained unknown, and the molecular pathophysiology of the disorder is poorly understood. Now, a new genome-wide association study of 2,807 patients with essential tremor and 6,447 controls has identified novel risk loci for the disorder. After correction for population stratification and multiple testing, variants in the serine/threonine kinase gene *STK32B* and the transcriptional coactivator gene *PPARGC1A* emerged as candidate molecular genetic determinants for essential tremor. However, the results require replication in an independent study.

**ORIGINAL ARTICLE** Müller, S. H. et al. Genome-wide association study in essential tremor identifies three new loci. *Brain* <http://dx.doi.org/10.1093/brain/aww242> (2016)

**CEREBROVASCULAR DISORDERS****Exercise alleviates vascular cognitive impairment**

Aerobic exercise improves cognitive function in older adults with vascular cognitive impairment (VCI), according to findings from a randomized controlled trial published recently in *Neurology*. 70 participants with mild VCI were assigned to thrice-weekly aerobic exercise and usual care including patient education, or usual care only. At 6 months, cognitive function scale score and diastolic blood pressure — a key risk factor for VCI — were improved in the exercise group; however, 6 months after the intervention ended, no significant difference was observed between the exercise and control groups, suggesting that long-term intervention is needed for a lasting benefit.

**ORIGINAL ARTICLE** Liu-Ambrose, T. et al. Aerobic exercise and vascular cognitive impairment. *Neurology* <http://dx.doi.org/10.1212/WNL.0000000000003332> (2016)