# RESEARCH HIGHLIGHTS

## **IN BRIEF**

#### **NEURODEGENERATIVE DISEASE**

Rapid amyloid- $\beta$  (A $\beta$ ) plaque deposition is evident in a substantial proportion of patients with traumatic brain injury (TBI). Johnson et al. have now established that a polymorphism in the gene encoding the A $\beta$ -degrading enzyme neprilysin is positively associated with the risk of A $\beta$  deposition after TBI. Patients with TBI who had more than 41 GT repeats were shown to have an increased risk of rapid A $\beta$  plaque deposition, whereas individuals with 20 GT repeats in one allele had a reduced risk of A $\beta$  deposition. These data indicate that a genetic screen could be developed to test individuals at high risk of TBI, such as military personnel.

Original article Johnson, V. E. et al. A neprilysin polymorphism and amyloid- $\beta$  plaques after traumatic brain injury. J. Neurotrauma doi:abs/10.1089/ neu.2008.0843

#### PARKINSON DISEASE

Parkinson disease (PD) is characterized by the selective loss of nigrostriatal dopaminergic neurons. The activity of these neurons is tightly controlled by L-type voltage-operated calcium channels, which become dysregulated with age. These neurons might, therefore, be particularly vulnerable to impaired calcium homeostasis. This idea was supported by the demonstration, in a Japanese population, that a polymorphism in the gene coding for the calcium buffer calbindin-1 was associated with an increased risk of PD. Soto-Ortolaza *et al.* have now shown, however, that no such association exists in four white populations, indicating that the effects of the calbindin polymorphism on PD risk might be population specific.

Original article Soto-Ortolaza, A. I. et al. Calbindin-1 association and Parkinson's disease. *Eur. J. Neurol.* doi:10.1111/j.1468-1331.2009.02769.x

### **MIGRAINE**

In numerous controlled trials, the antiepileptic drug topiramate has proved to be an effective prophylactic treatment for migraine. Migraine is associated with a host of symptoms, and one symptom in particular—vertigo—has been relatively little studied. In a new study, Gode et al. demonstrate that both 50 mg/day and 100 mg/day doses of topiramate used in a prophylactic treatment regime markedly decrease the frequency of monthly headache and vertigo attacks, as well as reducing vertigo and headache severity. The 100 mg/day dose was associated with an increased incidence of adverse effects, but the authors conclude that a 50 mg/day dose of topiramate is a suitable therapeutic dose.

**Original article** Gode, S. *et al.* Clinical assessment of topiramate therapy in patients with migrainous vertigo. *Headache* doi:10.1111/j.1526-4610.2009.0149.x