- 5 Zubenko GS, Sullivan P, Nelson JP, *et al.* Brain imaging abnormalities in mental disorders of late life. *Arch Neurol* 1990;47:1107–11.
- 6 Dupont RM, Jernigan TL, Heindel W, *et al.* Magnetic resonance imaging and mood disorders. Localization of white matter and other subcortical abnormalities. *Arch Gen Psychiatry* 1995;52:747–55.
- 7 Baloh RW, Yue Q, Socotch TM, *et al.* White matter lesions and disequilibrium in older people. I. case-control comparison. *Arch Neurol* 1995;52:970–4.
- 8 Schmidt R, Hayn M, Fazekas F, *et al.* Magnetic resonance imaging white matter hyperintensities in clinically normal elderly individuals. Correlations with plasma concentrations of naturally occurring antioxidants. *Stroke* 1996;27:2043–7.
- 9 Breteler MMB, van Swieten JC, Bots ML, *et al.* Cerebral white matter lesions, vascular risk factors, and cognitive function in a population-based study: the Rotterdam Study. *Neurology* 1994;44:1246–52.
- 10 Longstreth WT, Manolio TA, Arnold A, *et al.*, for the Cardiovascular Health Study collaborative Research Group. Clinical correlates of white matter findings on cranial magnetic resonance imaging of 3301 elderly people. The Cardiovascular Health Study. *Stroke* 1996;27:1274–82.
- 11 Yoshioka A, Hardy M, Youkin DP, *et al.* α -amino-3-hydroxy-5-methyl-4-isoxazolepropionate (AMPA) receptors mediate excitotoxicity in the oligodendroglial lineage. *J Neurochem* 1995;64:2442–8.
- 12 Oka A, Belliveau MJ, Rosenberg PA, *et al.* Vulnerability of oligodendroglia to glutamate: pharmacology, mechanism, and prevention. *J Neurosci* 1993;13:1441–53.
- 13 Wallin A, Blennow K, Fredman P, *et al.* Blood brain barrier function in vascular dementia. *Acta Neurol Scand* 1990;81:318–22.
- 14 Katoh S, Simogaki H, Onodera A, *et al.* Development of the revised version of Hasegawa's dementia scale (HDS-R) (in Japanese). *Jpn J Geriatr Psychiatry* 1991;2:1339–47.
- 15 Folstein MF, Folstein SE, McHugh PR. Mini-mental state: a practical method for grading the cognitive state of patients for clinician. *J Psychiatr Res* 1975;12:189–98.
- 16 Deyl Z, Hyanek J, Horakova M. Profiling of amino acids in body fluids and tissues by means of liquid chromatography. *J Chromatogr* 1986;379:177–250.
- 17 Fazekas F, Chawluk JB, Alavi A, *et al.* MR signal abnormalities at 1.5T in Alzheimer's dementia and normal aging. *AJNR Am J Neuroradiol* 1987;8:421–26.
- 18 Fazekas F, Kleinert R, Offenbacher H, *et al.* Pathologic correlates of incidental MRI white matter signal hyperintensities. *Neurology* 1993;43:1683–9.
- 19 Politi V, D'Alessio S, Di Stazio G, *et al.* Antioxidant properties of indole-3-pyruvic acid. In: Filippini GA, *et al.* *Recent advances in tryptophan research*. New York: Plenum Press, 1996;291–298.
- 20 Schneider H, Cervos-Navarro J. Acute gliopathy in spinal cord and brain stem induced by 6-aminonicotinamide. *Acta Neuropathol* 1974;27:11–23.
- 21 Griffiths IR, Kelly PAT, Grome JJ. Glucose utilization in the central nervous system in the acute gliopathy due to 6-aminonicotinamide. *Lab Invest* 1981;44:547–52.
- 22 Shinagawa S. Serotonin protects C6 glioma cells from glutamate toxicity. *Neuroscience* 1994;59:1043–50.

NEUROLOGICAL STAMP

Theodore Schwann (1810–82)

The German physiologist Theodore Schwann made one of the great biological discoveries when he founded modern histology by defining the cell as the basic unit. He has not been honoured philatelically but has been the subject of a German postal cancellation. While Professor of Anatomy and Physiology at Liege he described (1838) the myelin sheath as a fat-like substance which he considered to be a secondary deposit on the inner surface of a structural cell membrane (called neurilemma by Bichat). He also investigated muscular contraction and nerve structure, discovered muscle in the upper oesophagus, and coined the term metabolism for the chemical changes that take place in living tissue. He also formulated the basic principles of embryology and the role played by micro-organisms in putrefaction.

L F HAAS