1989:61:489-503.

- Prineas JW. The neuropathology of multiple sclerosis. Handbook of clinical neurology, Vol 3. Amsterdam: Elsevier 1985:213-57.
 Prineas JW, Connell F. Remyelination in multiple sclerosis. Ann Neurol
- 1979:5:22-31
- 7 Bradbury M. The concept of the blood brain barrier. 1979, John Wiley, New York
- 8 Springer TA. Adhesion receptors of the immune system. Nature
- 1990;346:425-34. Compston DAS, Scolding NJ, Wren DR, Noble M. The pathogenesis of demyelinating disease: insights from cell biology. *Trends in Neurosciences* 1001/14/175 82 1991;14:175-82.
- Hyri, 14:175-62.
 Winter G, Milstein C. Man-made antibodies. Nature 1991;349:293-9.
 Scolding NJ, Morgan BP, Houston WAJ, Campbell AK, Linington C, Compston DAS. Normal rat serum cytotoxicity against syngeneic oligodendrocytes: complement activation and attack in the absence of
- antimyelin antibodies. J Neurol Sci 1989;89:289-300. 12 Scolding NJ, Houston WAJ, Morgan BP, Campbell AK, Compston DAS. Reversible injury of cultural rat oligodendrocytes by complement. Immunology 1989;67:441-6.
- ology 1989;67:441-6.
 Scolding NJ, Morgan BP, Houston WAJ, Linington C, Campbell AK, Compston DAS. Vesicular removal by oligodendrocytes of membrane attack complexes formed by complement. Nature 1989;339:620-2.
 Scolding NJ, Jones J, Compston DAS, Morgan BP. Oligodendrocyte susceptibility to injury by T cell perforin. Immunology 1990;70:6-10
 Scolding NJ, Campbell AK, Morgan BP, Compston DAS. The role of calcium in oligodendrocyte injury and repair. J Exp Med 1991 (submitted)
- ted)
- ted).
 16 Smith KJ, Hall SM, Schauff CL. Vesicular demyelination induced by raised intracellular calcium. J Neurol Sci 1988;71:19-37.
 17 Griffin FM. Activation of macrophage complement receptors for phagocytosis. In: Adams DO, Hanna MG, eds. Contemporary Topics in Immunobiology. New York, Plenum Press 1984:57-70.
 18 Scolding NJ, Compston DAS. Oligodendrocyte macrophage interactions in vitro triggered by specific antibodies. Immunology 1991:72:127-32.
 19 Kesselring J, Miller DH, McManus DG, et al. Quantitative magnetic resonance imaging in multiple sclerosis: the effect of high dose intravenous steroids. J Neurol Neurosurg Psychiatry 1989;52:14-17.
 20 Raff MC, Miller RH, Noble M. A glial progenitor that develops in vitro into an astrocyte or an oligodendrocyte depending on culture medium. Nature

- an astrocyte or an oligodendrocyte depending on culture medium. Nature
- an astrocyte or an oligodendrocyte depending on culture medium. Nature 1983;303:390-6.
 21 ffrench Constant C, Raff MC. Proliferating bipotential glial progenitor cells in adult rat optic nerve. Nature 1986;319:499-502.
 22 Noble M, Murray K, Stroobant P, Waterfield MD, Riddle P. Platelet derived growth factor promotes division and motility and inhibits premature differentiation of the oliogodendrocyte/type 2 astrocyte progenitor cell. Nature 1988;333:560-2.

Neurological stamp

Aureolus Philippus Theophrastus Bombastus Von Hohenheim or Paracelsus 1493-1541

Paracelsus, one time professor of medicine in Basel, and "father of pharmacology" had a bombastic, impetuous personality but managed to rouse people against existing dogmatism. High self esteem led to his adopting the name Paracelsus, to indicate his authority was equal or superior to that of Celsus. A pioneer in chemical therapeutics he was the first to promote chemical substances in treatment. Paracelsus attacked all medical authorities except Hippocrates. He incurred displeasure by lecturing in German, rather than Latin. Academic colleagues excluded him from university halls, but he continued to give lectures based on his own experiences, many obtained from extensive travels in Europe and the Middle East. He expressed his antagonism for traditional medicine by publicly burning the books of Avicenna, Galen and others. Paracelsus was the first to write on the occupational diseases of miners and to note geographical differences of diseases. His contempt for anatomy was combined with a failure to see how knowledge could be gained from a dead body.

He established the correlation between cretinism and endemic goitre and described the congenital transmission, and mercurial treatment of syphilis. He introduced tincture of opium-labdanum or laudanum-with which he effected miraculous cures probably learnt during his travels in the East. Paracelsus warned against stress and advised avoiding strongly flavoured wines, rich food, anger and women, made observations on epilepsy, took the view that St Vitus' dance was a disease and knew of paralysis and disturbance of speech after head injuries. Ironically his

- Miller RH, ffrench Constant C, Raff MC. The macroglial cells of the rat optic nerve. Ann Rev Neurosci 1989;12:517-34.
 Ransom BR, Butt AM, Black JA. Ultrastructural identification of HRP-injected oligodendrocytes in the intact rat optic nerve. Glia 1991;4:37-45.
 Miller RH, Fulton BP, Raff MC. A novel type of glial cell associated with nodes of Ranvier in rat optic nerve. Eur J Neurosci 1989;11:172-80.
 Wolswijk G, Noble M. Identification of an adult specific glial progenitor cell. Development 1989;105:387-400.
 Wren DR, Noble M. Oligodendrocytes and adult specific O-2A progenitor cells are uniquely susceptible to the lytic effects of complement in the absence of antibody. Proc Natl Acad Sci USA 1989;86:9025-9.
 McDonald WI, Barnes D. Lessons from magnetic resonance imaging in multiple sclerosis. Trends in Neurosciences 1989;12:376-9.
 Fawcett JW, Housden E, Smith-Thomas L, Myer RL. The growth of axons in 3 dimensional astrocyte cultures. Dev Biol 1989;13:449-58.

- Fawcett JW, Housden E, Smith-Thomas L, Myer RL. The growth of axons in 3 dimensional astrocyte cultures. *Dev Biol* 1989;135:449-58.
 Caroni P, Schwab ME. Two membrane protein fractions from rat central myelin with inhibitory properties for neurite growth and fibroblast spreading. *J Cell Biol* 1988;106:1281-8.
 Fawcett JW, Rokos J, Bakst I. Oligodendrocytes repel axons and cause axonal growth cone collapse. *J Cell Sci* 1989;92:93-100.
 Caroni P, Schwab ME. Antibody against myelin associated inhibitor of neurite growth neutralises non-permissive substrate properties of CNS white matter. *Neuron* 1988;1:85-96.
 Schnell L, Schwab ME. Axonal regeneration in the rat spinal cord produced by an antibody against myelin associated neurite growth inhibitors. *Nature* 1990;343:269-72.
 Azuavo AI, Biorklund A, Stenevi U, Carlstedt T, Fetal mesencephalic

- Aguayo AJ, Bjorklund A, Stenevi U, Carlstedt T. Fetal mesencephalic neurones survive and extend long axons across PNS grafts inserted into the adult neostriatium. *Neurosci Letters* 1984;45:53-8.
 Lindvall O, Brundin P, Widner H, et al. Grafts of fetal dopamine neurons
- survive and improve motor function in Parkinson's disease. Science 1990;247:574-7.
- Dunnett SB. Transplantation of embryonic dopamine neurones: what we know from rats. J Neurology 1990;238:65-74.
 Blakemore WF, Crang AJ. Extensive oligodendrocyte remyelination follow-
- ing injection of cultured central nervous system cells into demyelinating
- lesions in the adult central nervous system. Dev Neurosci 1988;10:1-11.
 Blakemore WF, Crang AJ. The relationship between type 1 astrocytes, Schwann cells and oligodendrocytes following transplantation of glial cells into demyelinating lesions in the adult rat spinal cord. J Neurocytol
- into demyelinating lesions in the adult rat spinal cord. J Neurocytol 1989;18:519-28.
 39 Blakemore WF, Crang AJ, Franklin RJM. Transplantation of glial cell cultures into areas of demyelination in the adult CNS. In: Dunnet SB, Richards S-J, eds. Progress in brain research 1990;82:225-32.
 40 Franklin RJM, Crang AJ, Blakemore WB. Transplanted type-1 astrocytes facilitate repair of demyelinating lesions by host oligodendrocytes in adult rat spinal cord. J Neurocytol 1991;20:420-30.



death followed a tavern brawl. Germany honoured him on a stamp issued in 1949. (Stanley Gibbons 1040, Scott 8311).