

Dr. Malcolm Macleod – Treasurer of EuroHYP

Malcolm Macleod is Senior Lecturer and Head of Experimental Neuroscience at the Centre for Clinical Brain Sciences at the University of Edinburgh, and he leads the South East Scotland Stroke Research Network; as a clinical neurologist he is involved in the day to day care of patients with stroke. His research activity extends from the laboratory bench (the effects of pethidine in focal cerebral ischaemia; the neuroprotective effects of increased mineralocorticoid receptor expression in brain following hypothermic cerebral ischaemia) through to clinical trials (UK Chief Investigator for ARCH: Local PI for CADISS, VITATOPS, PERFORM, CLOTS, ENOS, TRA-2P, ROCKET-AF), and he is currently conducting a small pilot study of the feasibility of therapeutic cooling in awake stroke patients. His previous research has included studies of the impact of social deprivation on access to neurological health care.

He has also played a leading role in exploring the reasons for the failure of findings from animal studies to translate to positive clinical trials. He is founding co-ordinator of the Collaborative Approach to Meta-Analysis and Review of Animal Data in Experimental Studies (CAMARADES). He was an invited discussant at the 2008 Stroke Treatment Academic Industry Roundtable (STAIR VI) and has contributed to a number of consensus statements regarding effective translation of the efficacy of stroke drugs from animals to man.

His work has been supported by the UK Medical Research Council, the Wellcome Trust, the Stroke Association, Chest Heart and Stroke Scotland and the Scottish Chief Scientist Office. He is a member of the Editorial Board of PLoS Medicine, has published widely (including the BMJ, Lancet, Lancet Neurology, Annals of Neurology, Stroke, European Journal of Neuroscience, Cerebrovascular Disease) and has acted as a reviewer for among others J.A.M.A., J. Neuroscience, the Lancet, BMJ, Stroke, and Brain Research.

The Centre for Clinical Neurosciences at the University of Edinburgh is a leading centre for stroke research. It has particular expertise in organizing large RCTs in stroke including IST-1 and IST-3 (Sandercock), ECST and GALA (Warlow) and FOOD and CLOTS (Dennis); in acute stroke neuroimaging (Wardlaw, Marshall) and in stroke genetics (Sudlow). Clinical trials are now supported by a designated Clinical Trials Unit and by the MRC Trials Methodology Hub (of which Macleod is a member). There are close links with groups researching hypothermia in traumatic brain injury (Andrews), animal models of stroke (McCulloch) and steroid biology (Seckl).

Selected Publications

Donnan GA, Fisher M, **Macleod M**, Davis SM. Stroke. Lancet. 2008;371:1612-23.

Sena E, van der Worp HB, Howells D and **Macleod M**. How can we improve the pre-clinical development of drugs for stroke?, Trends Neurosci. 2007; 30:433-9.

Perel P, Roberts I, Sena E, Wheble P, Briscoe C, Sandercock P, **Macleod M**, Mignini LE, Jayaram P, Khan KS. Comparison of treatment effects between animal experiments and clinical trials: systematic review. BMJ. 2007 Jan 27;334(7586):197.

Lai M, Horsburgh K, Bae SE, Carter RN, Stenvers DJ, Fowler JH, Yau JL, Gomez-Sanchez CE, Holmes MC, Kenyon CJ, Seckl JR, **Macleod MR**. Forebrain mineralocorticoid receptor overexpression enhances memory, reduces anxiety and attenuates neuronal loss in cerebral ischaemia. Eur J Neurosci. 2007;25:1832-42.

Macleod MR, Davis SM, Mitchell PJ, Gerraty RP, Fitt G, Hankey GJ, Stewart-Wynne EG, Rosen D, McNeil JJ, Bladin CF, Chambers BR, Herkes GK, Young D, Donnan GA Results of a multicentre, randomised controlled trial of intra-arterial urokinase in the treatment of acute posterior circulation ischaemic stroke. Cerebrovasc Dis. 2005;20:12-7.