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Counting the cost of neuroscience research

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Stroke, Alzheimer's disease, dementia, Parkinson's disease, epilepsy: all afflictions of the brain that compromise many of our normal activities and have huge implications for individuals' quality of life.

The current demographic trends show that the UK's population is becoming older. As this happens the incidence of neurodegenerative conditions like Alzheimer's, dementia and Parkinson's disease is also increasing. This has huge social, economical and political implications – further evidence that understanding how the brain works both in health and disease is a challenge that we need to address urgently before the problem of neurodegeneration becomes more evident.

It is estimated that the total direct and indirect costs of stroke to the UK economy amount to 5.5% of the total health care expenditure (around £9 billion a year). For dementia, total costs are almost double, with up to 25% of the NHS hospital beds being occupied by a person with dementia. These costs will continue to increase, because of the ageing of the population, with projected increases of 135% by 2026. Reducing the impact, both at societal and individual level, by developing new means of early diagnosis and new types of treatment for these and other neurological diseases, together with developing new strategies for earlier interventions and preventing measures are constant demanding targets for the neuroscience community carrying out research both at clinical and basic science levels.

The challenge of these tasks, together with the sheer breadth of the field of neuroscience, requires significant levels of investment and financial support. In the current context of drastic and necessary cuts across the NHS and basic research granting bodies, serious attention must be paid to the possibility that exaggerated cuts in the support for neuroscience research might have damaging medium and long-term effects on the ability of the researchers and clinicians to address these challenges.

To give an example, the estimated cost of dementia to UK economy is £20 billion a year, twice the cost of cancer (£12 billion per year), three times the cost of heart disease and four times the cost of stroke. Yet a recent report shows that combined government and charitable investment in dementia research is 12 times lower than spending on cancer research at just £50 million, and three times lower than research on heart disease. Thus, the recent announcement that one of the major funders of UK research, the Biotechnology and Biological Sciences Research Council (BBSRC), would be cutting back at least 20% of their estimated £15 million research support for neurosciences, caused outcry in the research community. Such cuts could endanger not only the leading role of the UK neuroscience community in the world, but also the efforts to enhance and improve the translational research from laboratory to clinic.

Dr Emil Toescu
Senior Lecturer in Neuroscience
School of Clinical and Experimental Medicine

Brain Awareness Week (14–19 March) (http://www.medicine.bham.ac.uk/events/2011/14Mar2011brain-awareness-week.shtml) Brain Awareness Week is a global campaign to increase public awareness of the progress and benefits of brain research. During the week, the scientists who are involved day to day in scientific research, are organising creative and innovative activities in their communities to educate and excite people of all ages about the brain, brain research and the far-reaching importance of such research activities.

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