



brain
research
trust

registered charity number 263064

Funding research into neurological diseases and conditions

annual review 2005/06

Thank you

It's been a bumper year for the Brain Research Trust, thanks to our supporters whose generosity provided more than one quarter of our donation income. Their donations helped us to raise more than £600,000 and, among many other things, establish a Brain Tumour Fellowship, fund a Discussion Microscope used for many areas of neurological research and purchase a tissue freezer to store samples for epilepsy research. Part of our income came from the more intrepid among you who took part in our Overseas Challenges and Running Events, raising more than £66,000 for research into a variety of neurological conditions.

The BRT also had wonderful support from those who "did their own thing" and donations came from Mr and Mrs Gwilym Jones' Diamond Wedding anniversary celebration, from Anne Merrilees' retirement party, and from the Rahul's family's dinner dance in memory of their mother, Manjeet. And there is the magnificent fundraising effort made by Dr Charles Turner who trekked the high mountains of Patagonia to raise over £5,000 for the Brain Research Trust.



There is more fundraising news and stories in this year's Annual Review for you to read. The BRT staff and Trustees would like to thank each and every one of you for your interest and support. We could not have done it without you!

Suzanne Gibbons
Secretary & Administrator

• *Mr and Mrs Gwilym Jones*

Brain Tumour Fellowship Appeal

The Brain Tumour Fellowship Appeal was our big story for financial year 2005-06. When Sheena McDonald broadcast our appeal on BBC Radio 4 in January, it raised the staggeringly large amount of nearly £54,000.

It also brought us new donors, many of whom had lost friends or relatives from brain tumours. Some of these new 'friends' have made subsequent donations, or have held their own fundraising events, or are planning to. In February, Mr Gordon Davies held his 80th birthday party and raised £385; just before Easter, Mrs Jean Bird organised a concert in her own home which raised £2,000; the Royal College of Music held their RAG week in aid of brain tumour research and raised £970 which went into the Fellowship Fund; Kate Medhurst has started training and fundraising for the April 2007 London Marathon in memory of her husband, Jamie, who died from a brain tumour last year; and last, but by no means least, Leanne Cater (aged 12) a pupil at the Coloma Convent School in Croydon. Leanne's class (7V) raised £70 from cake sales and sponsored silences!!

During the year, we approached many charitable trusts for support for the Fellowship. Among the many who responded, The Freemasons' Grand Charity pledged £150,000 (£50,000 a year for three years) to the Fellowship Appeal. We would like to thank the Grand Charity for this most generous donation which brought the total raised to £375,000.

The Freemasons'
Grand Charity

The Head of the Institute's Neuropathology Division, Professor Sebastian Brandner, has begun the selection process to pick the best candidate for the post from the pile of CVs that came in response to his advertisement.

We would like to thank the many Trusts and other donors who contributed to the Appeal. There is still another £100,000 – but we have five years to find this sum. Anyone who would like to help support the Fellowship, please contact Jenny.



Last year the Institute of Neurology asked if we could help them purchase a new discussion microscope to be used in the neuropathology department. The Institute's Division of Neuropathology undertakes probably the broadest spectrum of neurodiagnostic neuropathology and research in the British Isles.

Functional Imaging Laboratory

The Wellcome Trust has announced a £6.7 million Strategic Award, and the award of Wellcome Trust Centre status, to the world-leading UCL Leopold Muller Functional Imaging Laboratory. The new Centre will be named the Wellcome Centre for Neuroimaging, at UCL. Brain imaging is one of the most exciting areas of modern biomedical science and the Wellcome Trust recognises that the use of non-invasive imaging tools such as functional magnetic resonance imaging (fMRI), magnetoencephalography (MEG) and electroencephalography (EEG) is providing deep insight into brain function in living subjects.

In the vanguard of these developments is the FIL, led by Professor Ray Dolan. It aims to provide an integrated understanding of brain function spanning areas such as vision, cognition, social interaction, emotion, language, memory, decision making and other "higher-order" aspects of brain function.

Understanding how the brain functions is of great intrinsic interest, but the work of the FIL also has practical applications. Neurological and psychiatric disorders remain major health problems, and psychological disorders are predicted to become the leading cause of ill-health globally within the coming decades.

During 2005-06, the BRT's Kinross Fund helped to support Professor Dolan's research programme at a cost of £122,000. In addition, the BRT's Muller Fund spent £198,945 to fund the infrastructure costs of the FIL and committed £400,000 towards the purchase of a new generation 3 Tesla fMRI scanner.

What is a discussion microscope? Well, it's just what it says: a multi-headed microscope at which several people can sit and look at the same images at the same time; allowing them to 'discuss' what they are seeing. The research areas that will benefit from this microscope include, brain tumours – basic research into their origins and in developing new treatments for them; Clinical and experimental epilepsy research; research into myelin disease, such as Multiple Sclerosis and research into dementia and neurodegenerative diseases such as Alzheimer's and Parkinson's.

The uses for such a device are to enable busy consultants, often from many different disciplines, to confer (discuss) round the same table. This speeds up diagnoses. The microscope's other function is in the training of new pathologists and other young scientists in several different areas of research. During the year we were able to raise £37,500 for the new discussion microscope. The total price of the microscope, including software, is £39,357. (Is there anyone who can send a cheque for £1,857?)

We would like to thank the following Trusts for helping purchase this special microscope:- The Norman Family; Bryne Charitable Trust; The Childwick Trust; The Laing Family Trusts; The Cotton Trust; R.M Burton Charitable Trust; The Roger Vere Foundation and The Stephen Barry Charitable Trust.

The Grocers and the Mercers Livery Companies also made generous gifts to help purchase this essential teaching aid and diagnostic aid.

Our supporters did not just raise money for brain tumour research: In April, Ann Merrilees held a 60th Birthday/Retirement Party in Glasgow and raised a terrific £505. Ann heard of Sheena McDonald's broadcast but remembered that her mother had referred to her as a "miracle baby" because she survived a brain haemorrhage with no ill effects other than a "lazy eye". In the sixty years since Ann's birth, we know far, far more about the brain.



Gwilym and Joey Jones of Maidenhead have been BRT supporters for many years (Mrs Joey Jones has received an MBE for her charity work). For their 15th June 2006 Diamond Wedding Anniversary (that's 60 years, by the way!) they decided to send us their "donations in lieu of presents". These gift-aided cheques went to support research at the Institute of Neurology.

PhD Profile: Richard Foxton

Richard has completed his three year BRT PhD Studentship and is now in the process of writing up his PhD thesis in the area of gene therapy. The potential for gene therapy to correct genetic defects in patients with inherited diseases is a popular subject in the media. And rightly so, for if successful, an almost complete cure for a number of inherited conditions could occur.

Richard has been working on a disorder known as tetrahydrobiopterin deficiency (or BH4 for simplicity's sake!) Deficiency of BH4 in the brain results in a failure to produce critical chemicals known as neurotransmitters. In essence, neurotransmitters are the way cells in the brain communicate with each other. Failure to produce these neurotransmitters leads to a wide range of neurological problems that can include difficulty with movement and breathing, epilepsy and low IQ. Currently treatment for BH4 deficiency relies on a cocktail of drugs that attempts to emulate the neurotransmitters that are missing. Whilst such treatments are moderately successful, a complete cure does not occur.

Richard's research project has been investigating ways to correct the primary genetic defect that causes the BH4 deficiency. In his studies, Richard has been working on brain cells that have a genetic defect in their ability to make BH4. Using these cells, Richard introduced small amounts of "normal" DNA that the defective cells can use to make BH4. The DNA gets into the cells by the use of a virus. Viruses (as

we all know from bouts with 'flu) have the ability to enter cells rapidly and forcefully; they also have the ability to bring in small amounts of DNA to be used by cells.

For part of his project, Richard has been collaborating with a group at Oxford University who have produced a virus that contains DNA that can be used by cells to make BH4. To date, Richard has successfully corrected the BH4 deficiency of the cells and excitingly, this has resulted in an increased neurotransmitter production.

The above research findings are very promising and are soon to be submitted to a scientific journal for publication. In addition, Richard has been invited to present his work at a number of prestigious scientific meetings. He has also given oral presentations of his work at international meetings in Holland and Japan – something that PhD students rarely get the opportunity to do. At the Dutch meeting, Richard was awarded a young investigator award for the quality of his BRT-funded research.



Parkinson's Appeal Nears Fundraising Goal

Thanks to the efforts of Mrs Lyn Rothman, Chairman of the Parkinson's Appeal, the Monument Trust and the Edmund J. Safra Philanthropic Foundation have agreed to fund virtually the entire costs of supporting the Chair within the Unit of Functional Neurosurgery at the Institute of Neurology.

This will enable the Unit to continue to carry out research and further refine the techniques used in Deep Brain Stimulation (DBS) operations as a way of treating Parkinson's disease and other movement disorders. Mrs Rothman's fundraising team expanded during the year when Mr Martin Westall,



whose daughter and wife both had successful DBS operations to treat dystonia, came on as Vice Chairman.

Mr Westall organised a donation by text messaging campaign and a radio appeal to raise the Appeal's profile. Mrs Rothman is hoping to have an Art Event and Auction on "The Mind of the Brain" in October 2007 to secure further funds for the Unit.

Amit Rehal's dinner dance on 25th February 2006 raised over £3,300. Amrit and her talented family, supported by many friends and acquaintances, organised a gala dinner dance at the Coliseum in Ilford, Essex. The room was splendid, the food was excellent and the entertainments, including a Bollywood-style dance troupe and a traditional Punjabi drumming group were fantastic.



OTHER EVENTS

In November, 2005 a group of 13 cycling enthusiasts traded winter clothes and the UK's grey skies for a BRT T-shirt, sun, scenery – and sweat – as they cycled through the lush countryside of Thailand and Cambodia to raise money for the Brain Research Trust. The group enjoyed delicious local food, wonderful hospitality and the stupendous ruins of Angkor Wat during their 10-day journey. Each of the participants exceeded their fundraising targets and almost £21,000 was raised from this cycle challenge; Gwyn Hughes from Denbigh raised £1,000 more than was required. Well done to all of you!



OTHER EVENTS

Natalie Smith used a variety of ways to find the money needed for the trip: from car boot sales to a curry night, from recycling mobile phones to the tried and tested method of pestering all and sundry! However, Natalie and the rest of the Borneo adventurers raised the money needed – and more besides.

Many who chose the BRT's Far East "challenges" were motivated by someone they were close to being affected by a neurological condition. Among these were Huntingdon's Disease, stroke, head injury, Alzheimer's, brain tumour and Parkinson's. The total amount raised from overseas events this year exceeded £44,000.

Our other eventers had a good year, too, raising more than £22,600. The BRT had people who ran Marathons (Kent Coastal, Stockholm), Half Marathons (New Forest, Derbyshire, St Albans), Runs (Great North Run, Manchester Run, Nike 10-K), and the London Triathlon; as well as the Itzak brothers who canoed from Devizes to Westminster. Dr Charles Turner, a dentist from Bridgend, Perth, trekked the mountains of Patagonia and raised £5,211.48. Samantha Oxley took on the London Marathon challenge for the second year in a row for the BRT, raising a fantastic total of £2,749.

And Nick Barlow, inspired by Sheena McDonald's January Radio 4 Appeal, walked from Land's End to John O'Groats in memory of his brother, Simon, who died from a brain tumour last year. Nick's weblog provided his supporters with a light-hearted running commentary of his progress and so far he has raised over £2,000 for brain tumour research with more to come.



Another group of intrepid cyclists spent most of 2006 fundraising and training in preparation for a September trip across the beautiful mountains and rainforest of the northern tip of Sabah on the island of Borneo. The group all chose a variety of ways to raise the £2,800 costs of the trip – and some of these were pretty original.

Adrian Clark persuaded an amateur pilot friend to take people up in his 3-seater plane over the Cambridgeshire countryside. His friend needed to do the miles anyway in order to qualify for the next stage of his pilot's licence and the small fee charged was a great source of donations – and such a popular one that Adrian quickly changed his initial plan of just one day's flying to three making it a win-win situation for both men.



STOP PRESS!

In early summer 2006, CSDM Ltd. launched a direct marketing campaign to raise awareness of the BRT's work as well as funds for research at UCL's Institute of Neurology. The BRT Trustees have been very encouraged by the results so far. To those of you who are receiving our Annual Review for the first time as a result of this campaign: many thanks. Your support is greatly appreciated.

Professor Ray Dolan was presented with the "Golden Brain" award by the Minerva Foundation at Berkeley, California. Only one Golden Brain award is made each year and is given for innovative investigations and the resulting influence of those findings on the field of vision and the brain.



In Memorium

Victor Alder	Mrs Jane Janes	Gerald Shanagher
Dr Robin Osler Barnard	Antony Keen	Harold Thornton Smithson
Jill Borlese-Jorgensen	Bill Kellock	Dr Gordon Stewart
Hazel Bradley	Mark Lintell	Francis Sugars
Phyllis Cavanaugh	Pamela Clara Luxton	Norman E. Sutton
Jonathan Clark	Guy Martin	L. Valerie Taylor
Fiona Cooper	Michael Merhemitch	Richard "Dickie" Teague
Lionel Eric Crichton	Maisie Mitchell	Ronald Glen Topp
Peter Howe Crook	Sandra May Moss	Ann Trimming
Jonny Duncan	Ronald Glen Nicholls	Frank Norman Wall
Meta Irene Furnell	Gladys Kate Orion	Fred Watkinson
Sidney Hammond	Peter Albert Page	L.A. Webb
Brenda May Heap	Mrs Manjeet Rahul	Colvin Williams
Jean Eryll Hunt	Chris Rand	Edward Wych
Mrs Agnes Jack	Audrey Roberts	
Diane Jacks	John Stuart Ross	

The Brain Research Trust was very sad to learn of the death in September of Mr Simon Sainsbury, of the Sainsbury Family Trusts, which includes the Monument Trust. Mr Sainsbury was a good friend to Mrs Lyn Rothman, and a staunch supporter of the Parkinson's Appeal among many worthy causes. He will be greatly missed.

Trusts

The 1989 Willan Charitable Trust	Gwyneth Forrester Trust	The Roger Raymond Charitable Trust
A J Burton Charitable Trust	The H B Allen Charitable Trust	The Roger Vere Foundation
Alfred George Ker Trust	Harold & Daphne Cooper Charitable Trust	Rosetrees Trust
The Alison Hillman Charitable Trust	Harold Smith Charitable Trust	The Scotbelge Charitable Trust
Ambrose and Ann Appelbe Trust	The Hedley Denton Charitable Trust	The Scouloudi Foundation
The Andor Charitable Trust	The Henry Lumley Charitable Trust	Shakespeare Lodge No 284
Andrew Anderson Trust	The Ian Askew Charitable Trust	ShareGift
The Ann Brown Charitable	The Ian Fleming Charitable Trust	The Sir James Roll Charitable Trust
Anna & Colin Frizzell Charitable Trust	The Inman Charity	The Sir Robert Gooch Trust
The Anna Rosa Forster Charitable Trust	James Clement Charitable Trust	The Sir Samuel Scott of Yews Trust
Arihant Charitable Trust	The James Ellis Charitable Trust	The Sobell Foundation
The Baker Charitable Trust	James Weir Foundation	South Square Trust
The Bartlett Taylor Charitable Trust	The John Coates Charitable Trust	The Stephen Barry Charitable Trust
Benham Charitable Settlement	The John Pryor Charitable Trust	Stone-Mallabar Charitable Foundation
The Biological Trust	Joseph Strong Frazer Trust	The Sylvia and Colin Shepherd Charitable Trust (Anonymous)
The Bothwell Charitable Trust	Laing Family Trusts	The Thomas J.Horne Memorial Trust
Byrne Charitable Trust	The Lanvern Foundation	The Three 'T' Charity
The Charles Littlewood Hill Trust	Liebenrood Charitable Trust	Tonbridge Methodist Church
The Childwick Trust	Longview Trust	The Tory Family Foundation
The Christopher H R Reeves Charitable Trust	The Major Simon Whitbread Charitable Trust	The Towry Law Charitable Trust
The Claire Hunter Charitable Trust	The Mercers Company Charity Committee	The Valentine Charitable Trust
D M Charitable Trust	The Michael and Anna Wix Charitable Trust	The Valentine Charitable Trust
The Edwin George Robinson Charitable Trust	The Minto Charitable Trust	The Walter Swindon Charitable Trust
The Emerton-Christie Charity	The Morgan Charitable Foundation	The Weinstein Foundation
Employees of Nestle Rowntree York Community Fund	Mr & Mrs J A Pye's No 1 Charitable Settlement	The Wilkinson Charitable Foundation
The Eric Stonehouse Trust	The Muriel Edith Rickman Trust	Woolton Charitable Trust
The Fulmer Charitable Trust	Nancy Roberts Charitable Trust	The Wyseliot Charitable Trust
G M Morrison Charitable Trust	The Netherdale Trust	
The George Henry Collins Charity	The Peacock Foundation	
The Gerald Micklem Charitable Trust	Peter Courtauld Charitable Trust	
The Gilbert Edgar Trust	Private Family Settlement	
The Grand Charity of Freemasons	R M Burton Charitable Trust	
	Robert Luff Foundation	

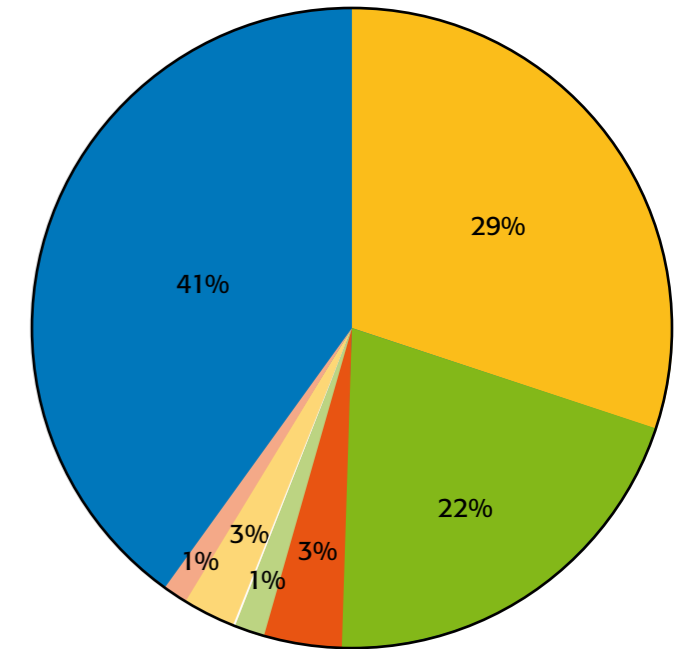
Income

Total income in 2005-06 for the Brain Research Trust was £2,307,000, a 40% increase on 2004-05's total of £1,641,000. Income from Trusts, In Memorium donations and Legacies increased. In addition, investment income grew by more than 20% from 2004-05 (£793,000) to £954,000. The Brain Tumour Fellowship appeal, which began in 2004-05, gathered momentum during 2006 as a result of the BBC Radio 4 Appeal enabling the BRT to raise more than £186,000 during the year for this new position.

Income Graph

Legacies	661,000
Trusts	500,915
Single Donations	80,300
In Memorium Donations	19,425
GAYE	7,560
Events	66,800
Direct Mailing	17,000
Investments	954,000

Total 2,307,000



Income breakdown 2005/06

Expenditure

Expenditure on research increased during the year to £1,530,000 (2004-05, £1,239,000). The increase was due largely to the commitment of £400,000 for a top-of-the-line scanner for the Leopold Muller Functional Imaging Laboratory. The fundraising ratio remained steady at 14p per £.

Total Voluntary Income: £1,353,000

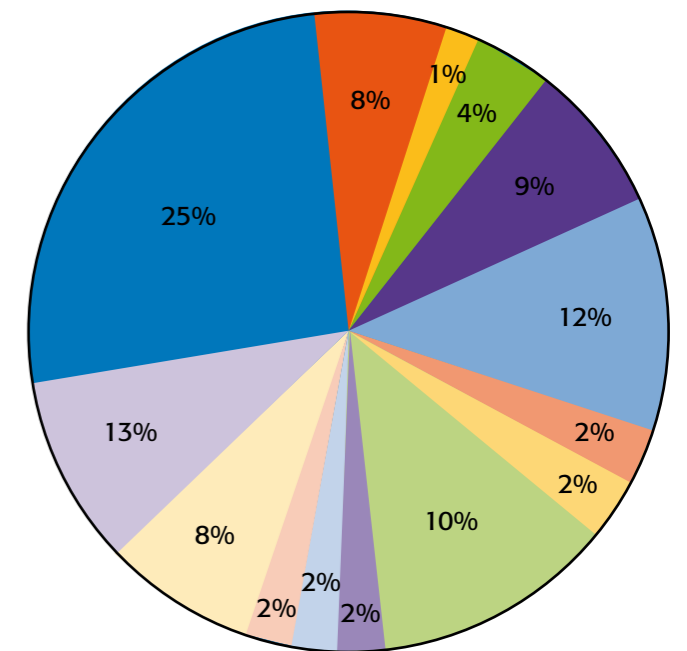
Total Fundraising Costs: £ 186,000

Fundraising ratio of 14p per £

Expenditure Graph

Brain Tumour	121,485
Stroke	21,463
Parkinson's disease	58,248
Motor Neurone Disease	140,787
Spinal Cord Regeneration	182,615
Multiple Sclerosis	35,716
Cerebral Palsy	28,343
Alzheimer's disease, dementia	145,822
Autism	23,319
Migraine	28,270
vCJD	23,344
Neuropsychiatry	122,000
Support costs for Functional Imaging Laboratory	198,945
fMRI scanner	400,000

Total 1,530,357



Funding breakdown 2005/06

The financial information in this Annual Review has been extracted from the Annual Report and Financial Statements for the year ended 31 July 2006, which received an unqualified audit report from haysmacintyre, were approved by the Trustees on 26 October 2006 and submitted to the Charity Commission.

For a full understanding of the financial affairs of The Brain Research Trust, the full Annual Report and Financial Statements can be obtained from The Brain Research Trust, 15 Southampton Place, London WC1A 2AJ.

PROJECTS FUNDED 2005/06

Description	Disease	£ Spent
Research Grants		
Advanced MRI techniques in the evaluation of low-grade gliomas	Brain Tumours	15,485
Research sub-total		15,485
PhD Studentships		
Gene Therapy for Tetrahydrobiopterin Deficiency States	Dopa Responsive Dystonia, Cerebral Palsy, Parkinson's Disease	28,343
Effect of Amyloid- on astrocytic and neuronal cell cultures: role of mitochondria	Alzheimer's Disease, Down Syndrome	27,888
Stable measurements in quantitative brain MRI	MS, epilepsy	27,520
A TMS/tDCS and functional neuroimaging project to study plastic changes in functional connectivity of the human motor cortex	Stroke Movement Disorders	1,883
MRI magnetisation transfer methods to study bound water in the living brain	MS, Epilepsy, Stroke, Dementia, Tumours	890
The social modulation of emotion	Social phobias, autism, Williams syndrome	23,319
Investigation of the interactions of dynein and superoxide dismutase 1 in pathogenesis of amyotrophic lateral sclerosis using mouse models	Neurodegenerative diseases incl ALS, MND	37,787
The Influence of dopamine in trigeminal nociceptive neurotransmission and migraine	Migraine	28,270
Under cellular mechanisms in prion-mediated neurodegeneration	vCJD	23,344
Role of metabotropic glutamate receptors in controlling microglial activation and neurotoxicity in neuro-inflammatory diseases	MS, Alzheimer's Disease	7,306
How are memories made?	Hypoxia, dementia, epilepsy	20,934
PhD sub-total		227,484
Charitable Trusts		
Dr Tracy Warr - FISH (Fluorescence in Situ Hybridisation System)	Brain Tumours	36,000
Dr Rasheed Afinowi – (Cooper C.T, D. J. Fielding Medical Research Trust, Violet Richards)	Stroke	19,580
Dr Simon Pope – (Hospital Savings Association)	Parkinson's Disease	37,447
Susanne Schneider (J. Jacob Astor Charitable Trust)-Trans-cranial magnetic stimulation	Parkinson's Disease	17,301
R. A. Smither – (Peacock Foundation, Charles & Elsie Sykes Trust, Lord Barnby's Foundation, Fox Memorial Trust, Sir Sigmund Warberg V. S.)	Spinal Cord Regeneration	25,615
Dr W. Rakowicz – (TUUT-International Exchange)	Comparative neurology	445
Trusts sub-total		136,388
Other research support to the Institute		
Miriam Marks Department of Neurochemistry: for research into the blood-brain barrier, cell signaling and oxidative stress	Neurochemistry	97,000
Sobell Department of Motor Neuroscience & Movement Disorder: for research into the relationship between movement and the brain; recovery and reorganisation after spinal cord injury; does spinal cord regeneration actually lead to recovery	Neurophysiology	157,000
Graham Watts Laboratory: for research into the mechanisms underlying motoneurone disease	Motor Neurone Disease	103,000
Mary Kinross Charitable Trust: Wellcome Department of Cognitive Neurology	Neuropsychiatry	122,000
Leopold Muller Functional Imaging Laboratory	Cognitive Neurology	198,500
Leopold Muller Functional Imaging Laboratory	fMRI scanner	400,000
University Department of Neurosurgery: Professor David Thomas, Mr. Laurence Watkins, Dr. Tracy Warr	Brain Tumours, acute head injury, image directed neurosurgery	70,000
Functional Neurosurgery Unit - Deep Brain Stimulation Operations	Parkinson's Disease	3,500
Other research sub-total		1,151,000
Grand Total		1,530,357