

MRC Centre for Neuromuscular Diseases

UCL PI Current Support

Giulio Cossu

MRC- TSCR: Engineering human artificial chromosomes containing the dystrophin locus for autologous cell therapy of Duchenne Muscular Dystrophy.

Pending (Informally I was informed that the grant was awarded- no official letter) 2012-2013

ERC-Advanced Investigator Grant 233263

STEM CELLS FOR DMD (Novel strategies for the cell therapy of muscular dystrophies) 2009-2013

OPTISTEM (Optimization of stem cell therapy for degenerative epithelial and muscle diseases) 2009-2013

EC-FP7 IP 223098 Coordinator

ANGIOSCAFF (Angiogenesis-inducing Bioactive and Bioresponsive Scaffolds in Tissue Engineering) 2009-2012

EC-FP7 IP 214402-2

BIODESIGN (Rational Bioactive Materials Design for Tissue Regeneration) 2012-2014

EC-FP7 IP 262948-2

Michael Duchen

Wellcome Trust 2007-2012. £778,157 co-applicant with Prof AW Segal (medicine UCL) Ion channels related to neutrophil NADPH oxidase.

MRC (2009) through the iDBA (M3i awards), £20,000. coapplicant with Arokia Nathan 'near infra-red bio-imaging using phototransistors'

MRC/Wellcome Trust Strategic award in Neurodegenerative Diseases. 2010-2015 Total funding ~£5.9M 'Understanding Parkinson's disease: lessons from biology' (coapplicant with John Hardy, Nick Wood, Tony Schapira and others). £340,289.452 to Duchen lab

BHF (PG/10/005) 2010-2013 £231,431. Investigating the role of NAADP signaling in ischaemia-reperfusion injury. Collaboration with Derek Yellon and Sean Davidson.

Muscular Dystrophy Association (174047) 2010-2013 (\$375,000) 07/01/2010- 06/30/2013 Uncovering the role of mitochondria in the pathogenesis of core myopathies CoPI with Francesco Muntoni (ICH)

Muscular Dystrophy Campaign 2010-2013 (RA 4/842; ~£70,000) in partnership with BBSRC funding for 4 years PhD studentship for Katherine Heath 'Unravelling the role of mitochondrial dysfunction in Central Core Disease' with Francesco Muntoni (ICH)

UCL 'Impact studentship' 2010-2013 £32,000 from UCL and £32,000 from National Hospital development Foundation and other charities. 'Contributions of impaired ionic homeostasis and metabolism in the progression of myopathy in muscle channelopathies., Jointly with Mike Hanna (MRC CNMD)

Federation Francaise de Cardiologie; fellowship funding for Fabrice Ivanès 06/2009-05/2011 70,000Euros. The roles of free radicals and calcium signaling in ischaemic reperfusion injury in the heart.

RNID 01/2011-10/2014. (G52_Gale) £149,977. Cochlear Reactive Oxygen Species And Mitochondrial function In Noise-Induced Hearing Loss. Co-applicant with Jonathan Gale (Ear Institute.

Alzheimer's Research Trust 2010-2011 £30,000. Pilot project to gain preliminary data towards mapping the progress of Alzheimer's disease for the purpose of finding new drug targets. CoPI with Frances Edwards and Francesca Cacucci.

Parkinson's UK Project grant 2011-2013 £106835 G-1101 Interaction between mitochondrial biogenesis and complex I inhibition in the pathogenesis of Parkinson's.

CBRC (Comprehensive Biomedical Research Centre, UCL) £67,000 2011-2012 : 'Pilot Understanding the pathophysiology of muscle disease associated with mutations of mitochondrial proteins'. (with Mike Hanna, MRC CNMD)

Elizabeth Fisher

Thierry Latran Foundation

2 years from September 2009 to August 2011 €100,000

To investigate the role of TDP43 in motor neurons through studying a unique *Tdp43* mutant mouse

With Linda Greensmith and Abraham Acevedo-Arozena

2 hours per week

MOTOR NEURONE DISEASE ASSOCIATION

PhD studentship 3 years from Oct 2011 to Sept 2014 £110,000

Characterising a unique mouse model with SOD1-amyotrophic lateral sclerosis and the same mutation as found in humans

4 hours per week

With Abraham Acevedo

Linda Greensmith

1999-present The Graham Watts Bequest (5 years, recurring)

Renewal of Program Grant for research into Motor Neuron Disease

L Greensmith (Principal Investigator) - Approx. £120,000 per annum

2008-2011 Motor Neurone Disease Association (Ref: Greensmith/Apr08/6038)

Changes in nerve excitability during disease progression in animal models of MND

L Greensmith and H Bostock – Co-Investigators - £73,958

2008-2011 Motor Neurone Disease Association (Ref: Malaspina/Apr08/RF/6039)

Disease biomarkers in a SOD1-G93A mouse model of amyotrophic lateral sclerosis and their translational potential in human disease

A Malaspina, L Greensmith, G Giovannoni, R Orrell & A Petzold - £ 160,178

2008-2011 MRC Studentship -Karli Montague

Investigating the role of ER stress in Spinal Bulbar Muscular Atrophy

Approx £90,000

2009-2012 Kennedy's Disease Research Donation

Investigating the pathogenesis of Kennedy's Disease

L Greensmith and M Hanna– Co-investigators- £187,764

2009-2010 Medical Research Council Showcase Grant (G0801760)

New approaches to therapy for Inclusion Body Myositis

D Sattelle (Lead), L Greensmith, M Hanna, D Scopes, SD Buckingham- £154, 658

2009-2011 Brain Research Trust

A Pilot project to investigate new physiological models of amyotrophic lateral sclerosis

EM Fisher, L Greensmith and M Koltzenburg Co-PIs - £60,000

- 2009-2011 The Thierry Latran Foundation
To investigate the role of TDP43 in motor neurons through studying a unique *Tdp43* mutant mouse
EM Fisher, L Greensmith and A Avocado Co PIs - €100,000
- 2009-2011 Arthritis Research Campaign (Ref: 19255)
Arimoclomol for sporadic inclusion body myositis: safety and tolerability of a novel therapeutic approach
M Hanna, L Greensmith, J Holton, M Parton, A Miller and A Malaspina -£133,414
- 2009-2012 National Centre for Replacement, Refinement and Reduction of Animals in Research (NC3Rs) (Ref:G0900762)
Engineering fully functional, integrated skeletal muscle
M Lewis, L Greensmith and V Mudera - £403,876
- 2010-2011 GlaxoSmithKline R&D Ltd
Research Collaboration Agreement – testing potential neuroprotective agents in an in vitro model of ALS
L Greensmith - £78,000
- 2010-2012 The Thierry Latran Foundation
Bioengineered Optogenetic Respiratory ganglion (BORG) / Restoration of respiratory motor function through optogenetics neural implants
I Lieberam, L Greensmith and P Degenaar - €80,000
- 2010-2013 MRC Clinical Research Training Fellowship- Dr Pietro Fratta
Characterization and molecular investigation of pathogenesis in a novel model of human familial ALS.
E Fisher, M Hanna, L Greensmith and E Stupka – Co-Supervisors - £247,107
- 2011-2016 EEC FP7 (Tackling Human Diseases through Systems Biology Approaches)
European multidisciplinary ALS network identification to cure motor neuron Degeneration- Euro-MOTOR
Lead Applicant – L Van den Berg €900,0000
UCL lead – L Greensmith Co-Investigator E Fisher (UCL budget - €499.604)
- 2011-2012.1 Motor Neuron Disease Association (Ref:Greensmith/Oct10/6367)
Efficacy Study of Cogane in SOD1 mice
L Greensmith - £42,000
- 2011-2014 Motor Neuron Disease Association – PhD Studentship
Characterising a unique mouse model with SOD1-amyotrophic lateral sclerosis and the same mutation found in human ALS families
E Fisher, A Acevedo and L Greensmith - £110,000
- 2011-2015 BBSRC Partnership CASE Studentship with GSK
Pharmacological modification of axonal transport mechanisms
L Greensmith - £144,000

Michael Hanna

Medical Research Council 01/02/08 – 31/01/13	Mike Hanna £2,471, 144	MRC Centre for Neuromuscular Diseases
Medical Research Council 01/01/09 – 31/12/11	Mike Hanna £269,400	Mitochondrial Disease Patient Cohort

Muscular Dystrophy campaign 2008-2011	Mike Hanna (Co-PI) Approx. £450,000	Combined Dubowitz and Institute of Neurology neuromuscular centre grant
NCG 01/04/04 – ongoing	Mike Hanna £1.2m P/A	Muscle channel disease service
National Institutes of Health 01/08/04 – 31/08/11	Mike Hanna £130,000	Clinical Investigation in Neurological Channelopathies (CINCH)
UCLH Fast Track Grant 01/06/10 – 31/05/11	Mike Hanna £32,000	Investigation of nuclear encoded proteins and their role in formation of Mitochondrial DNA mutations
Arthritis Research Campaign 06/04/10 - 05/10/11	Mike Hanna £133,413	Arimoclomol for sIBM. With Pedro Machado
Medical Research Council 01/09/10 – 01/09/13 Clinical Research Training Fellowship	Mike Hanna £180,627	Identifying novel disease genes in patients with skeletal muscle channelopathies with Dipa Raja Rayan
UCL/UCLH CBRC 01/04/11 – 31/03/12 Flexibility and Sustainability Funding	Mike Hanna £46,785	Support grade 7 research associate (MRI Physicist) with John Thornton & Tarek Tarek Yousry
Wellcome Trust Equipment Grant 01/09/11 – 01/08/16	Co PI with H Houlden, M Reilly, S Sisodiya, J Hardy & N Wood £661,363	A next generation sequencer for the ION
Medical Research Council Project Grant £320,000 01/07/11 – 01/06/14	Co PI with H Houlden & M Reilly	Using next generation sequencing to investigate neuromuscular disorders
UCL/UCLH CBRC 01/09/11 – 01/08/16 Capital Bid	Co PI with H Houlden, £339,000 M Reilly, S Sisodya J Hardy & N Wood	A next generation sequencer for the ION
NIHR CLRN 27/07/10 – 26/07/12 Contingency Funding	Mike Hanna £67,540	HYP HOP (Research Nurse salary)
NIHR CLRN 27/07/10 – 26/07/12	Mike Hanna £66,641	Arimoclomol for IBM

	regional gene expression in the human brain			
Alzheimer's Research Trust (postdoc Fellowship for Selina Wray)	Investigating mechanisms of tau mediated neurodegeneration in a human neuronal model of the tauopathies	161,951.00	01/10/2009	30/09/2012
Brain Research Trust	Finding risk genes....	75,000.00	01/09/2009	30/08/2011
Parkinson Disease Society (G-0907) Studentship	Genetic variability in expression and splicing of Parkinson's risk genes	163,668.00	01/10/2009	30/09/2012
MRC G0901254	Mapping the genetic architecture of global gene and exon expression in the human brain to understand common diseases	1,000,517.00	01/02/2010	31/01/2013
Wellcome/MRC WT089698 (Co-PIs – Profs Hardy, Schapira, Wood)	Investigation into the pathogenesis and course of Parkinson's syndrome	4,356,262.31	01/03/2010	28/02/2015
Wellcome Trust (Fellowship for Kerri Kinghorn)	Dissecting alpha synuclein pathology in drosophila	162,279.00	01/08/2010	31/07/2013
Fidelity Foundation & Alzheimer's Research Trust	Whole exome sequencing of Alzheimer's disease	325,839.04 346,000.00	01/08/2010	30/09/2012
Corsan Foundation (Studentship for Helen Crehan)	Understanding idiopathic Parkinson's disease	95,528.00	27/09/2010	30/09/2013

Henry Houlden

MRC Senior Clinical Fellowship. The Pathophysiology and Genetics of Spinocerebellar ataxia. 2010 – 2015. £1.6M.

Wellcome Trust Grant. Development of a Next Generation Sequencing Facility for UCL Institute of Neurology. 2011 – 2016. £661,363.

CBRC Capital Award. Development of a Next Generation Sequencing Facility for UCL Institute of Neurology, additional funding to purchase an Illumina HiSeq Sequencer. 2011. £339,000.

MRC Project Grant. Next Generation Gene Discovery in Inherited Neuropathy, 2011 -2014. £522,000.

CBRC Project Grant. Development of Next Generation Sequencing Pathways. 2012 – 2015. £198,600.

Kristjan Jessen

01-OCT-2004 to 30-JUN-2011 The Wellcome Trust Programme Grant (with R Mirsky and D Parkinson) Signals that control cell fate and plasticity in the Schwann cell lineage £996,727

01 NOV 2006-31 OCT 2009 Wellcome Trust Project Grant. The role of Notch in glial development and myelination in the peripheral nervous system. development £ 229,336

01-NOV-2007 to 31-JAN-2012 MRC Project grant principal applicant with co-applicant R Mirsky "Control of demyelination by the c-Jun pathway. £325,392.

01-MAR-2007 to 31-MAY-2010 MRC project grant co-applicant with C Ruhrburg (principal applicant). Defining the role of VEGF-A signalling in glia during development and regeneration. £377,380; my share £15,126

01-OCT-2008 to 30-SEP-2012 Wellcome Trust PhD Studentship £ 155,846

01-APR-2008 to 31-MAR-2012 EU FP7 Collaborative project. Leader Dies Meijer, with R Mirsky, P Brophy, E Peles, L Wrabetz and ML Feltri. C Klambt, KA Nave, L Scarabottoli. Neuron-Glia interactions in nerve development and disease. £2,300,000, our share £310,000.

2008-2009 Clinical Research and Development Fast Track Grant (UCLH). The investigation of demyelinating signalling pathways (especially the Jun-NH2-terminal kinases/c-Jun signalling pathway) in inherited and acquired demyelinating neuropathies (with Drs M Reilly, H Houlden and S Brandtner). £30,007.

01-JUN-2010 to 31-MAY-2015 Wellcome Trust Programme Grant (with R Mirsky) Mechanisms of Schwann cell myelination and dedifferentiation) £1,284,915

Martin Koltzenburg

Functional Imaging of trigeminal mechanisms of pain	UCLH/CBRC	£180,000	01/02/2009	31/09/2012
Investigating the target engagement of ion channels in human peripheral nerve	MRC	£286,209	01/01/2010	30/10/2012
Blockade of nociceptors - the primary nerve fibres of the pain pathway - using novel subtype	CBRC/Rosetrees Trust	£50,000	01/08/2011	30/01/2012

selective sodium channel blockers

Dimitri Kullmann

Oct 2011 – Sept 2018	Wellcome Trust Investigator award “Synaptic Neurology” £2,471,061
Jan 2011-Jul 2011	Alzheimers Research Trust “Beta-amyloid, prion proteins and nicotinic alpha7 receptor signalling in hippocampal interneurons” (DM Kullmann, I Oren) £25,084
Oct 2010 – Sept 2013	Wellcome Trust “Optogenetic manipulation of interneuron function” (DM Kullmann, N Kessar, M Hausser) £497,024
Jan 2010 – Dec 2012	MRC “Modulation of neurotransmitter release by cannabinoid receptors at individual cortical synapses” (DA Rusakov, T Jensen, DM Kullmann) £579,316
Jan 2010 – jun 2010	Alzheimers Research Trust “Interactions of beta-amyloid and alpha7 nicotinic receptors in hippocampal interneurons” (DM Kullmann, I Oren, AD Randall) £29,167
Oct 2009 – Sep 2014	European Research Council: Advanced Grant “Long-term synaptic plasticity in interneurons: mechanisms and computational significance” €2,500,000.
Oct 2009 –Sept 2011	Epilepsy Research UK “Potassium channels in epilepsy” (MC Walker, DM Kullmann, S Schorge) £99,397
Oct 2009 –Sept 2012	Wellcome Trust: “Virally-delivered shRNA for focal epilepsy” (S Schorge, DM Kullmann, MC Walker) £242,321
April 2009 – Mar 2012	MRC: “Lentiviral potassium channel expression to treat focal neocortical epilepsy” (DM Kullmann, S Schorge, MC Walker) £1,008,392
Dec 2008 – Dec 2011	MRC: “Presynaptic ion channel dysfunction in the forebrain” (DM Kullmann, A Ruiz, DA Rusakov) £1,110,785

Jennifer Morgan

Funding agency and Title	Amount	Dates
Muscular Dystrophy Campaign – Project Grant. The role of extracellular matrix components on satellite cell function. P.I. (co-applicants: Francesco Muntoni, UCL and Susan Brown, IC)	£160,390	2008-2011
Medical Research Council. MRC Translational Centre Grant. Co-applicant (co-applicants: Francesco Muntoni UCL, Martin Koltzenburg National Hospital for Neurology and Neurosurgery, Sebastian Brandner UCL, Michael Duchon UCL; Elizabeth Fisher UCL, Linda Greensmith UCL, Kristjan Jessen UCL Dimitri Kullmann UCL, Mary Reilly UCL, Alan Thompson UCL, Tarek Yousry UCL, Mike Hanna UCL P.I.)	£2,471,144	2008-2013
Wellcome Trust University Award. The role of stem and progenitor cell populations in skeletal muscle homeostasis, repair and regeneration. P.I.	£559,676	2008-2013
Duchenne Parent Project, Netherlands – Project Grant. The contribution of human stem cells to functional satellite cells. P.I. (co-applicant: Francesco Muntoni, UCL)	£148,400	2008-2010
Action Duchenne - Project Grant.	£50,000	2008-2009

Muscle-derived stem cells to treat Duchenne muscular dystrophy. P.I. (co-applicant: Francesco Muntoni, UCL)		
Medical Research Council. A phase I/II clinical trial in Duchenne Muscular Dystrophy using systemically-delivered antisense oligonucleotides. Co-applicant (Francesco Muntoni, UCL P.I.)	£576,399	2008-2011
Muscular Dystrophy Campaign - Project Grant. Factors affecting the self-renewal of mouse satellite cells. P.I.	£228,275	2009-2012
Association Française contre les myopathies. Satellite cell self-renewal in vivo. P.I. (co-applicant: Francesco Muntoni, UCL)	26,000 euros	2008-2010
CHRAT PhD studentship. Lentivirally-mediated stem cell therapy for Duchenne muscular dystrophy. P.I. (co-applicants: Francesco Muntoni, UCL, Adrian Thrasher, UCL)	£64,350	2009-2012
International Collaborative effort for DMD (ICE). Towards clinical trials for DMD using gene and cell therapies combined with exon skipping. Co-applicant (co-applicants: Francesco Muntoni, UCL, Luis Garcia, Institut du Myologie P.I.)	£232,291	2009-2010
Medical Research Council. Lentivirally-modified stem cells to treat Duchenne muscular dystrophy. P.I. (co-applicants: Francesco Muntoni, UCL, Adrian Thrasher, UCL, Oliver Danos, UCL, Hanns Lochmuller Newcastle University)	£1,215,192	2010-2013
European Union. Bio-NMD: Identifying and validating pre-clinical biomarkers for diagnostics and therapeutics of neuromuscular disorders. Co-applicant (co-applicants: Francesco Muntoni, UCL, Peter-Bram 't Hoen, Annemieke Aartsma-Rus, LUMC, Hanns Lochmuller, Kate Bushby, Volker Straub, Newcastle University, Paolo Bonaldo, University of Padova, Guiseppe Novelli, University of Rome, Alessandra Ferlini, UNIFE P.I.)	£576, 520	2009-2012
Wellcome Trust. Advanced antisense oligonucleotide technology for exon skipping in Duchenne Muscular Dystrophy. Co-applicant (co-applicants: Francesco Muntoni, UCL, Volker Straub, Kate Bushby, Newcastle University, Dominic Wells, Royal Veterinary College, George Dickson, Royal Holloway, Michael Gait, Matthew Wood, Oxford P.I.)	£2,468,621 (total)	2010-2013
Association Française contre les myopathies. Advances in oligonucleotide-mediated exon skipping for DMD and related disorders. Co-applicant (co-applicants: Francesco Muntoni, UCL P.I., Ian Eperon, Leicester University, Matthew Wood, Oxford P.I.)	Awarded, but awaiting set-up	2010-2013

Francesco Muntoni

2007-2011. *EU-FP6*. TREAT-NMD Network Of Excellence in Neuromuscular Disease. 60 months. E 10,000,000 (E 200,000 to ICH). Bushby & Straub PIs, Muntoni co-investigator.

2009-2011. *Muscular Dystrophy Campaign*. Centre Grant.. 36 months. £ 450,000. Muntoni PI, Hanna and Reilly Co-PIs.

2007-2012. *MRC*. MRC Translational Research centre for Neuromuscular Disorders. £ 409,000. Hanna PI, Muntoni ICH PI and Centre Deputy Director.

2008-2011. *EU-NMD CHIP*. A diagnostic chip for neuromuscular disorders. 36 months. E 308,200. Levy EU PI, Muntoni co-investigator and London PI.

2009-2011. *SMA –Europe*. Outcome measures in SMA type II and III. 24 months. E 194,000. Mercuri PI, Muntoni co-investigator

2008-2011. *Muscular Dystrophy Campaign*. Stem cell function in dystroglycanopathies. 36 months. £ 160,000. Morgan PI, Muntoni co-investigator.

2009-2014. *NIH*. Natural history of Charcot Marie Tooth Disease in Children and Adults. 60 months. \$ 5,000,000. Reilly PI, Muntoni co-investigator.

2008-2012 *ICE- Parent Project*. Towards clinical trials for DMD using gene and cell therapies combined with exon skipping. (48 months) Euros 360,000. Garcia L PI; Muntoni and Morgan UK co-investigators.

2009-2011 *AFM*. The expression of LARGE as a therapeutic approach in the dystroglycanopathies. (24 months). E 130,000. Muntoni PI

Mary Reilly

CLRN grant to support NIH RDCRC natural history study (PI) £108,000 (2011-2012)

MRC - Using Next Generation Sequencing to investigate neuromuscular disorders. Project grant (CO-PI) £320,000 (2011-2014)

Wellcome Trust – A next generation sequencer for the Institute of Neurology. Equipment Grant” (CO-PI) £661,363 (2011 – 2016)

UCL CBRC – A next generation sequencer for the Institute of Neurology. Capital bid (CO-PI) £339,000 (2011-2016)

NIH RDCRC grant for “Inherited Neuropathy Consortium” (CO-Director) approx. \$8 million (2009-2014)

Ipsen training grant for Dr. Alex Rossor (£50,000) (2010-2011).

NIHR Doctoral Research Training Fellowship for Dr. Taibish Saifee “The clinical spectrum and pathophysiology of tremor in peripheral neuropathy” (Supervisor) £333,790. (2010-2013)

Muscular Dystrophy Association (US) grant “Genetic Modifiers of the CMT1A phenotype” (Mentor on development grant for Henry Houlden) \$180,000 (2009-2012)

Muscular dystrophy campaign grant “Strengthening Hip Flexors to improve walking distance in people with Charcot-Marie-Tooth disease” (PI) £117,802 (2008-2010)

UCLH / UCL Comprehensive Biomedical Research Centre “Investigation of the genes responsible for Charcot Marie tooth disease and related disorders in a UK population and development/implementation of diagnostic guidelines and genetic testing” (PI) £93,001 (2008-2010)

CRDC project grant “Pathomechanism and possible treatment strategies for distal hereditary neuropathies secondary to HSP27 mutations (CO-PI) £79,798 (2008-2010)

Muscular Dystrophy campaign centre grant "Combined Dubowitz and Institute of Neurology neuromuscular centre grant (CO-PI) Approx. £450,000 (2008-2011)

MRC Centre grant for London Newcastle Centre for Neuromuscular disease (CO-PI) approx. £3.3 million (2008-2013)

CRDC fast track grant "The investigation of demyelinating signalling pathways in inherited and acquired demyelinating neuropathies" (PI) £30,000 (2008-2009)

Muscular dystrophy campaign grant "Randomised double blind placebo controlled trial of long-term ascorbic acid treatment in Charcot-Marie-Tooth disease type 1A" (PI) £210,601 (2006-2009)

John Thornton

Principle Applicant: £46,785 NIHR UCLH/UCL CBRC Flexibility and Sustainability Funding scheme

Co-I: £386,160 CBRC (2009-2012) Improving surgical outcome in patients with low grade gliomas using advanced pre- and intra-operative MRI; PI Tarek Yousry

Co-I: £160k CBRC/SBRC (2010-12) Congenital superior oblique weakness: clinical findings, MRI and genes; PI Annegret Dahlmann-Noor

Tarek Yousry

£90,000 CBRC (2008 - 2012) Longitudinal assessment of regional and total muscle mass using MRI (PI)