British Heart Foundation

Research Grant Awards 2009/2010

BEATING HEART DISEASE TOGETHER

British Heart Foundation

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Introduction

In the year April 2009 to March 2010 the British Heart Foundation (BHF) awarded grants totalling just over £48 million* for research into the causes, prevention, diagnosis and treatment of diseases of the heart and circulation.

The BHF has three research grant committees which meet four or more times a year. The members of each committee are experts in various aspects of basic and clinical cardiovascular research. Applications are sent to independent reviewers before being assessed by the committee. Judgements are made on factors such as scientific merit, relevance to cardiovascular disease, timeliness, relationship to other work in the field, and value for money. Approximately one-third of applications are successful.

In 2009-2010 the Chairs and Programme Grants Committee agreed £21 million for Programme Grants and other major projects such as Special Projects and Infrastructure Grants. There were 27 chairholders (also referred to as BHF Professors) in post during the year. Each chairholder is site-visited every five years to assess past research performance and future plans. The visiting team includes internationally renowned scientists. The annual cost of maintaining BHF chairholders' core funding amounted to £5.9 million, and one new Personal Chair was awarded totalling £1.3 million to Professor Z Mallat, University of Cambridge. The Fellowships Committee awarded 60 applications for personal awards costing £14.6 million. The Project Grants Committee awarded 87 applications to the value of £15 million.

The pages that follow list BHF chairholders in post during the year and new awards made for Fellowships, Programme Grants, Project Grants and other awards.

Full details of all types of awards offered by the BHF, and the application process, appear on the BHF website **bhf.org.uk/research**

* This represents the figure recorded in the audited accounts, having made adjustments for mid-term reviews on Programme Grants, departmental costs and closed grants.

BHF chairholders

Listed by town

University of Birmingham

The Chair of Cardiovascular Medicine
Held by: **Professor M P Frenneaux** MBBS MD FRACP FACC FRCP FESC FMedSci – *retired September 2009*

Major interests: Novel medical treatments for heart failure; using pacemakers to ameliorate heart failure and improve cardiac function in hypertrophic cardiomyopathy; links between depression and heart disease.

University of Birmingham

The Chair of Cardiovascular Sciences and Cellular Pharmacology
Held by: **Professor S P Watson** BSc PhD FMedSci

Major interest: The cell and molecular biology of blood platelets in haemostasis and thrombosis.

University of Bristol

The Chair of Cardiac Surgery
Held by: **Professor G D Angelini** MD MCh FRCS

Major interests: Coronary artery bypass surgery, including off-pump techniques and methods to reduce restenosis; improving surgery for heart defects in infants.

University of Bristol

The Chair of Vascular Cell Biology
Held by: **Professor A C Newby** MA PhD

Major interest: The cell and molecular biology of atherosclerosis and restenosis.

University of Cambridge

The Chair of Cardiovascular Sciences
Held by: **Professor M R Bennett** BSc MBChB MA PhD FRCP FAHA FMedSci

Major interest: The molecular mechanisms controlling smooth muscle cell proliferation, ageing and death in atherosclerosis.

University of Cambridge

The Chair of Cardiovascular Medicine
Held by: **Professor Z Mallat** MD PhD

Major interest: Cellular and molecular control of immune processes in atherosclerosis and vascular inflammation.

University of Cambridge

The Chair of Cardiopulmonary Medicine
Held by: **Professor N Morrell** MD MRCP FRCP

Major interest: Molecular and genetic mechanisms of pulmonary arterial hypertension.

Cardiff University

The Sir Thomas Lewis Chair of Cardiovascular Science
Held by: **Professor A J Williams** BA PhD

Major interest: Molecular biology of calcium flux through the ryanodine receptor in cardiac myocytes and its disturbance in arrhythmia.

University of Edinburgh

The Duke of Edinburgh Chair of Cardiology
Held by: **Professor K A A Fox** BSc MBChB FRCP FESC FMedSci

Major interests: Clinical trials to determine best treatments for patients with acute coronary syndrome; novel non-invasive imaging techniques to detect coronary vascular disease.

University of Edinburgh

The Chair of Cardiology
Held by: **Professor D E Newby** BA BSc PhD BM DM FMedSci

Major interest: Experimental cardiovascular medicine, including studies of air pollution as a risk factor for cardiovascular disease.

University of Glasgow

The Chair of Cardiovascular Medicine
Held by: **Professor A F Dominiczak OBE** MD FRCP FAHA FRSE FMedSci

Major interest: Genetic analysis to understand molecular mechanisms leading to hypertension.

University of Leeds

The Chair of Cardiology
Held by: **Professor S G Ball** MA MB BChir PhD FRCP

Major interests: Genetics of coronary heart disease; cardiac MRI.

University of Leicester

The Chair of Cardiology
Held by: **Professor N J Samani** BSc MD FRCP FACC FMedSci

Major interests: Genetics of hypertension and coronary heart disease; cell ageing mechanisms and premature cardiovascular disease.

University of London
Imperial College (Hammersmith)

The Sir John McMichael Chair of Cardiovascular Medicine
Held by: **Professor D O Haskard** DM FRCP FMedSci

Major interest: Cellular and molecular control of inflammatory and immune processes in atherosclerosis.

University of London
Imperial College (Hammersmith)

The Simon Marks Chair of Regenerative Cardiology
Held by: **Professor M D Schneider** MD FMedSci

Major interests: Molecular control of cardiac myocyte growth and death; strategies for regenerative cardiac medicine.

University of London
King's College London

The Chair of Molecular Cardiology
Held by: **Professor M Gautel** MD PhD

Major interest: Cell and molecular biology of the contractile proteins in heart muscle.

University of London
King's College London

The Chair of Cardiology
Held by: **Professor A M Shah** MD FRCP FESC FMedSci

Major interest: The cell and molecular biology of production of reactive oxygen species (by NADPH oxidase) in the cardiovascular system and their roles in atherosclerosis, cardiac hypertrophy and heart failure.

University of London
King's College London

The John Parker Chair of Cardiovascular Sciences
Held by: **Professor Q Xu** MBBS MD PhD

Major interest: The cell and molecular biology of stem cells and their importance in modulating atherosclerosis and restenosis.

University of London
St George's

The Prudential Chair of Clinical Cardiology
Held by: **Professor A J Camm** BSc QHP MD FRCP FESC FACC FAHA FCGC FMedSci C.St.J

Major interest: Mechanisms and treatment of atrial fibrillation.

University of London
University College London

The Chair of Cardiovascular Genetics
Held by: **Professor S E Humphries** BSc PhD MRCP(Hon) FRCPath FMedSci

Major interests: Genetics of hyperlipidaemias; interactions between genes and environmental factors in the development of cardiovascular disease.

University of London
University College London

The Chair of Psychology
Held by: **Professor A P A Steptoe** MA DPhil DSc FBPsS AcSS FMedSci

Major interest: Psychological stress and cardiovascular disease.

University of London
University College London
(Institute of Child Health)

The Vandervell Chair of Congenital Heart Disease
Held by: **Professor J E Deanfield** BA BChir MB FRCP FMedSci

Major interest: Evaluating the risk factors for atherosclerosis and quantifying the progression of vascular disease in children and young adults.

University of Manchester

The Chair of Cardiac Physiology
Held by: **Professor D A Eisner** MA DPhil FMedSci

Major interest: Cell and molecular physiology of the role of calcium in control of heart rhythm.

University of Newcastle

The Chair of Cardiology
Held by: **Professor B D Keavney** BSc BM BCh MRCP DM FRCP

Major interest: Genetics of coronary heart disease.

University of Oxford

The Chair of Cardiovascular Medicine
Held by: **Professor S Bhattacharya** MBBS MD MRCP MSc FMedSci

Major interest: Developmental biology of the heart.

University of Oxford

The Chair of Medicine and Epidemiology
Held by: **Professor R E Collins** MSc MBBS LMSSA FMedSci FRCP

Major interests: Meta-analysis and large-scale trials in cardiovascular disease; large-scale epidemiological studies of risk factors and biomarkers.

University of Oxford

The Field Marshal Earl Alexander Chair of Cardiovascular Medicine
Held by: **Professor H C Watkins** MD PhD FRCP FMedSci

Major interests: Genetics and underlying molecular mechanisms in hypertrophic cardiomyopathy; genetics of coronary artery disease.

University of Southampton

The Chair of Cardiovascular Science
Held by: **Professor M A Hanson** MA DPhil CertEd FRCOG

Major interest: Molecular mechanisms for developmental and neonatal origins of adult cardiovascular disease.

Awards made during the year 1 April 2009 – 31 March 2010

Fellowships

Non-clinical Fellowships

Senior Basic Science Research Fellowships

FS/10/001/27959	**Dr C Emanueli** PhD	University of Bristol	Neurotrophins for vascular (re)generation: a translational research programme aimed at improving therapeutic options for ischaemic disease patients. *5 years*	£564,864
FS/09/028/27602	**Dr C H George** BSc PhD	Cardiff University	Targeted stabilisation of ryanodine receptors as a therapeutic strategy for cardiac disease. *5 years*	£538,273
FS/09/029/27902	**Dr S E Ozanne** BSc PhD	University of Cambridge	Molecular mechanisms by which poor early growth links coronary artery disease, insulin resistance and type 2 diabetes. *5 years*	£470,304

Intermediate Basic Science Research Fellowships

FS/09/030/27812	**Dr J Alastruey-Arimon** BEng MSE PhD	Imperial College London	Modelling pulse wave propagation in arteries and veins: application to cardiovascular disease and its treatment. *4 years*	£273,862
FS/09/045/28038	**Dr F Ali** BSc MSc MPhil PhD	Imperial College London	Role of nuclear receptor PPARβ and its coregulators in vascular endothelial cytoprotection. *4 years*	£275,071
FS/09/026/27398	**Dr N Mody** BSc PhD	University of Aberdeen	Molecular mechanisms regulating diet-induced obesity, progression to morbid obesity and severe insulin resistance. *4 years*	£273,393
FS/09/046/28043	**Dr D Oceandy** MD PhD	University of Manchester	The role of RASSF1A (Ras Association Domain Family Protein 1A) and Mst2 (Mammalian Sterile20-like 2) signalling network in myocardial hypertrophy. *4 years*	£434,475
FS/10/004/28165	**Dr I I Salles** BSc MSc PhD	Imperial College London	The role of BAMBI in platelet function and thrombus formation. *2 years*	£183,383
FS/10/003/28163	**Dr A Samuelsson** BSc MSc PhD	King's College London	Developmental origins of hypertension in offspring of obese rodents. *4 years*	£387,979
FS/10/002/28078	**Dr D J Tyler** PhD	University of Oxford	Development of cardiac hyperpolarised magnetic resonance imaging. *4 years*	£484,861
FS/09/044/28007	**Dr Q Xiao** BSc MD PhD	Queen Mary, London	A study of matrix metalloproteinase-8 in stem/progenitor cell mobilisation and recruitment to atherosclerotic lesions. *4 years*	£271,143

4-year PhD Studentships

In 2009 a new round of this scheme began, with seven institutions being awarded four students per year for four years.

The original scheme (King's College London, University of Edinburgh and University of Oxford) will admit no further students and will come to an end in 2013.

FS/09/055/28034	**Dr C E Austin** BSc PhD	University of Manchester	1st intake 2009/2010 4-year PhD Studentship scheme: Ms Carmine Circelli; Mr Christopher Cobb; Ms Gillian Quigley; Ms Yiwen Dong. *4 years*	£500,296
FS/09/056/28153	**Prof M Avkiran** BSc PhD DSc	King's College London	1st intake 2009/2010 4-year PhD Studentship scheme: Ms Lauren Porter; Mr Iain Sawyer; Mr Daniel Brayson; Mr Salil Srivastava. *4 years*	£540,168
FS/09/053/28033	**Dr M Bailey** BSc PhD	University of Edinburgh	1st intake 2009/2010 4-year PhD Studentship scheme: Ms Elizabeth Skinner; Ms Anna Stefanska; Mr Christopher White; Ms Kathryn Wilson. *4 years*	£500,412
FS/09/050/28036	**Prof M R Bennett** BSc MBChB MA PhD FRCP FAHA FMedSci	University of Cambridge	1st intake 2009/2010 4-year PhD Studentship scheme: Mr Daniel Freitag; Ms Heather Blackmore; Mr Liam Hurst; Ms Fiona Dochery. *4 years*	£535,608
FS/09/052/28032	**Prof A F Dominiczak OBE** MD FRCP FAHA FRSE FMedSci	University of Glasgow	1st intake 2009/2010 4-year PhD Studentship scheme: Ms Lesley Anderson; Ms Audrey Wright; Ms Jennifer Lappin; Ms Hollie Robinson. *4 years*	£500,584
FS/09/054/28035	**Dr D R Greaves** BSc PhD	University of Oxford	1st intake 2009/2010 4-year PhD Studentship scheme: Ms Emma Bolton; Ms Rebecca Bayliss; Mr Filip Ostrowski; Mr Duncan Bloor-Young. *4 years*	£543,684
FS/09/051/28037	**Prof P J Scambler** MRCPath	University College London	1st intake 2009/2010 4-year PhD Studentship scheme: Mr Thomas Briston; Ms Rachel Dongworth; Ms Sophie Bostock; Ms Sara Howard. *4 years*	£537,348

3-year PhD Studentships

FS/10/006/27960	**Miss N Amini** BSc MSc	Imperial College London	Does high shear stress suppress endothelial cell apoptosis at atheroprotected regions by inducing MAP kinase phosphatase-1? *3 years*	£101,398
FS/09/057/27957	**Mr M Argenton** BSc	King's College London	Mechanisms of renal ageing in a rodent model of developmental programming arising from early catch-up growth. *3 years*	£101,848
FS/09/036/27823	**Miss E F Bode** BVSc	University of Manchester	Defining the mechanisms of dysfunctional excitation contraction coupling in the aged failing heart: understanding changes to intracellular calcium homeostasis. *3 years*	£95,465
FS/09/023/27460	**Mr A Brentnall** BSc MSc	University of York	Structure and function of N1 domain from *Staphylococcus aureus* FnBOA – a domain implicated in MRSA biofilm formation. *3 years*	£92,245

FS/09/035/27805	**Miss R Brockman** BSc MSc	University of Bristol	The contribution of active play to the total physical activity of primary school children. *3 years*	£77,853
FS/09/031/27599	**Mr M Butler** BSc	University of Bristol	Regulation of purinergic receptor surface expression by reversible and irreversible P2Y12 receptor antagonists. *3 years*	£95,136
FS/09/038/27878	**Ms E D Christofidou** BSc MSc	University of Bristol	Role of thrombospondin-1 in arterial wall extracellular matrix: investigation of novel mechanisms to regulate smooth muscle cell phenotype. *3 years*	£95,381
FS/10/007/28077	**Miss J Dada** BSc	Cardiff University	Red blood cell-induced vasorelaxation – a role for oxygen? *3 years*	£92,263
FS/09/033/27742	**Miss H A Davies** BSc	University of Liverpool	Modulation of protein aggregation as a therapeutic strategy for cardiovascular amyloidoses. *3 years*	£95,876
FS/10/010/28169	**Ms H Duckles** BSc	University of Leeds	The vascular smooth muscle T-type $Ca2^{+}$ channel: an anti-proliferative target for haeme oxygenase-1. *3 years*	£96,591
FS/09/022/27354	**Miss M Finsterbusch** BSc MSc	Queen Mary, London	Role and regulation of expression of TNF-alpha receptors in inflammation. *3 years*	£112,570
FS/09/021/27353	**Ms N Gibb** BSc	University of Aberdeen	The endogenous Wnt inhibitor FrzA/sFRP1 promotes myocardium differentiation during heart organogenesis. *3 years*	£95,446
FS/09/020/27184	**Mr P Holloway** BSc	Imperial College London	Evaluation of the role of the melanocortin receptor system in ischaemia-reperfusion induced leukocyte endothelium interaction in the brain microcirculation. *3 years*	£108,056
FS/10/008/28146	**Mr D Houniet** BSc MSc	University of Newcastle	Analysis and interpretation of next-generation sequencing data in cardiovascular malformation. *3 years*	£52,093
FS/09/032/27603	**Mr J Kourtesis** BSc MSc	University of Bristol	Ultra-structural characterisation of exocytotic vesicles and their neuropeptide content in the central noradrenergic system. *3 years*	£89,985
FS/09/037/27827	**Ms T Mughal** BSc MSc	King's College London	Transforming growth factor β1 mediated redox signalling in human adventitial fibroblasts. *3 years*	£99,748
FS/09/049/27874	**Ms L Poole** BSc MSc	University College London	Neuroendocrine and inflammatory factors in adjustment and recovery after cardiac surgery. *3 years*	£94,896

FS/09/034/ 27756	**Miss H Schachtner** BSc	University of Glasgow	The role of podosomes and lamellipodia in megakaryocyte function. *3 years*	£95,186
FS/09/058/ 27987	**Miss H Whittington** BSc	University College London	Studies investigating the cardioprotective role of the mitochondrial pro-survival kinase PINK1. *3 years*	£92,668
FS/09/024/ 24014	**Mr R Wilkinson** BSc	Imperial College London	Investigation of the disease mechanism in the ACTC E361G transgenic mouse model of familial dilated cardiomyopathy. *3 years*	£106,336
FS/10/009/ 28166	**Student to be appointed**	Queen Mary, London	Galectin-3: a positive regulator of leukocyte recruitment in the inflamed microcirculation. *3 years*	£102,268
FS/09/059/ 27972	**Student to be appointed**	University of Leicester	The molecular basis of action of P2X1 receptor antagonists. *3 years*	£90,056

Advanced Training Award

FS/10/005/ 28147	**Dr P I Welsh** BSc PhD	University of Glasgow	NT-proBNP as a predictor of vascular events in WOSCOPS: using modern epidemiological techniques to test clinical utility of a biomarker. *2 years*	£92,566

Travel Fellowships

FS/09/047/ 27882	**Dr P Kojodjojo** MRCP MBBS PhD	Imperial College London	The role of myocardial scarring in determining ventricular arrhythmias in dilated cardiomyopathy. *1 year*	£63,439
FS/10/016/ 28162	**Dr S Padmanabhan** MBBS MD PhD	University of Glasgow	Genetic dissection of hypertension – SNPs, sequence, pathways to clinical translation. *1 year*	£95,090
FS/09/048/ 28011	**Dr Z I Whinnett** BM BS MRCP PhD BMedSci	Imperial College London	Assessment of the feasibility of a new method for haemodynamic guided lead placement during implantation of cardiac resynchronisation devices. *1 year*	£56,792

Clinical Fellowships

Intermediate Clinical Research Fellowships

FS/09/039/ 27788	**Dr C J G Ghevaert** MD MRCP MRCPath	University of Birmingham	Investigating the role of the Jak2 V617F mutation in a mouse model of essential thrombocythaemia and its link to thrombosis. *4 years*	£600,128
FS/10/011/ 27881	**Dr S Sen-Chowdhry** MA MBBS MRCP MD	University College London	The complexity behind Mendelian disease: investigation into genetic and environmental influences in arrhythmogenic cardiomyopathy. *5 years*	£511,086

MBPhD Studentships

FS/09/025/ 27468	**Mr M E Ibrahim** BA	Imperial College London	How does prolonged mechanical unloading affect calcium-induced calcium release in cardiomyocytes? *3 years*	£101,059
FS/09/060/ 28039	**Ms U A Mukherjee** BSc	University College London	An investigation of the potential mechanisms underlying hypoxia inducible factor mediated cardioprotection. *3 years*	£95,443

Clinical Research Training Fellowships

FS/10/015/ 28104	**Dr S Bull** MA MBBS	University of Oxford	A randomised controlled trial of the angiotensin converting enzyme inhibitor ramipril in asymptomatic aortic stenosis. *2 years*	£98,970
FS/09/027/ 27871	**Dr B Davison** BSc MBChB MRCP	University of Newcastle	The role of endoglin in heart repair. *2 years*	£152,909
FS/09/063/ 28026	**Dr J Dungu** MBBS BSc MRCP	St George's, London	Investigating the diagnosis, prevalence and safety of beta-blocker therapy in transthyretin cardiac amyloid in the British Afro-Caribbean heart failure population. *2 years*	£122,076
FS/09/040/ 27138	**Dr H Narayan** BSc MRCP BM	University of Leicester	The uroguanylin system in heart failure. *2 years*	£113,697
FS/09/042/ 27860	**Dr A Opel** BSc MBBS MRCP	University College London	The role of heterotrimeric G-proteins and regulators of G-protein signalling in determining predisposition to supraventricular arrhythmia. *3 years*	£211,926
FS/09/061/ 27864	**Dr A Patel** BSc MBBS MRCS	King's College London	The angiogenic monocyte in critical limb ischaemia. *3 years*	£184,547

FS/09/041/ 27772	**Dr C M Plymen** BSc MBBS MRCP	University College London	Investigation into the haemodynamic effects of right ventricular pacing resynchronisation therapy in adults with congenital heart disease undergoing surgical pulmonary valve replacement. *2 years*	£125,401
FS/09/043/ 28040	**Dr L C Price** MBChB BSc	Imperial College London	Inflammatory pathways in the pathogenesis of pulmonary vascular remodelling in PAH: the role of glucocorticoids and NFkβ signalling. *2 years*	£140,483
FS/10/014/ 28079	**Dr A J Robertson** BSc MBChB MRCP	University of Dundee	Allopurinol as a possible oxygen sparing agent during exercise in peripheral arterial disease. *2 years*	£149,993
FS/10/012/ 28047	**Mr P Saha** BSc MBBS MRCS	King's College London	Monocyte and macrophage heterogeneity in venous thrombosis. *3 years*	£207,769
FS/09/062/ 27958	**Dr H Shabeeh** BSc MBBS MRCP	King's College London	Role of neuronal nitric oxide synthase (nNOS) in the regulation of microvascular blood flow and muscle energetics during exercise. *3 years*	£189,937
FS/10/013/ 28073	**Dr M R Thomas** MA MBBS MRCP FRCPath	University College London	The role of antibodies in acquired thrombotic thrombocytopenic purpura (TTP). *3 years*	£204,778

Personal Chair

CH/10/001/ 27642	**Prof Z Mallat** MD PhD	University of Cambridge	BHF Chair of Cardiovascular Medicine. *5 years*	£1,306,607

Infrastructure Grant

IG/09/003/ 27646	**Dr S Plein** MRCP	University of Leeds	Funds towards the purchase and installation of a new 3T cardiac magnetic resonance scanner	£500,000

Programme Grants

RG/09/005/ 27915	**Prof A H Baker** BSc PhD	University of Glasgow	Integrating virology and vascular biology: development and evaluation of the next generation systems for genetic manipulation of the vessel wall. *5 years*	£1,036,054
RG/10/004/ 28240	**Prof J E Deanfield** BA BChir MB FRCP FMedSci	University College London	The impact of adiposity on risk profiles and the emerging arterial phenotype in the young. *5 years*	£759,950
RG/09/011/ 28094	**Prof J M Gibbins** BSc PhD	University of Reading	RENEWAL: The physiological importance and integration of receptor-mediated inhibitory mechanisms in platelets. *5 years*	£937,084
RG/09/010/ 28087	**Prof M T Kearney** MB ChB MRCP DM	University of Leeds	Endothelial cell insulin sensitivity, nitric oxide bioavailability and atherosclerosis. *5 years*	£830,856
RG/10/001/ 27643	**Prof Z Mallat** MD PhD	University of Cambridge	Immune modulation in atherosclerosis. *5 years*	£1,000,471
RG/10/002/ 28187	**Prof S Neubauer** MD FRCP	University of Oxford	The role of energy metabolism in ischaemia and heart failure – therapeutic potential of modulating myocardial ATP homeostasis. *3 years*	£998,723
RG/09/006/ 27918	**Prof A C Newby** MA PhD	University of Bristol	RENEWAL: Vulnerable atherosclerotic plaques, foam cell phenotypes and extracellular proteinases. *5 years*	£714,569
RG/09/012/ 28096	**Dr W H Ouwehand** MD PhD	University of Cambridge	Premature cardiovascular disease and platelet quantitative traits: identification and functional characterisation of novel high-penetrance mutations and rare alleles. *5 years*	£1,042,372
RG/09/008/ 27923	**Prof C M Shanahan** BSc PhD	King's College London	RENEWAL: The role of vascular smooth muscle cells in the development and progression of vascular disease. *2 years*	£494,742
RG/09/007/ 27917	**Prof S P Watson** BSc PhD FMedSci	University of Birmingham	Mapping and functional investigation of genetic mutations in patients with mild platelet bleeding disorders. *5 years*	£1,365,733
RG/10/003/ 28214	**Dr D J Werring** BSc MBBS MRCP PhD	University College London	Joint Stroke Association/BHF Programme Grant – Microbleeds and genetic risk factors to predict the risk of intracranial haemorrhage in patients treated with anticoagulation following cardioembolic stroke due to atrial fibrillation. *5 years*	£751,774
RG/09/009/ 28069	**Prof A J Williams** BA PhD	Cardiff University	The pore of the cardiac calcium-release channel: its role in normal cardiac function and disease. *5 years*	£838,060
RG/09/004/ 27647	**Prof Q Xu** MBBS MD PhD	King's College London	RENEWAL: Stem cells and arteriosclerosis: from differentiation to experimental therapy. *5 years*	£1,124,537

Special Project Grants

SP/09/004/ 28106	**Prof R E Collins** MSc MBBS LMSSA FMedSci FRCP	Medical Research Council	UK Biobank enhancements. *1 year*	£1,000,000
SP/09/003/ 28107	**Prof J E Deanfield** BA BChir MB FRCP FMedSci	University College London	The impact of adiposity on risk profiles and the emerging arterial phenotype in the young. *6 months*	£115,604
SP/10/002/ 28189	**Dr D P Francis** MRCP MD	Imperial College London	Clinical outcome study (using exercise capacity) to assess equivalence of non-invasive haemodynamic optimisation to echo optimisation of CRT devices. *3 years*	£791,177
SP/10/001/ 28194	**Prof A H Gershlick** MBBS FRCP	University of Leicester	Complete versus lesion-only primary PCI pilot (CVLPRI-t). *2 years*	£250,530
SP/09/007/ 27920	**Prof S E Harding** BSc PhD	Imperial College London	Investigation of the safety and feasibility of SERCA gene transfer in the human failing heart using an adeno-associated viral vector. *2 years 10 months*	£298,237
SP/09/006/ 25108	**Dr M J Mullen** MD MRCP MBBS	Imperial College London	A prospective, randomised, placebo-controlled, double-blind, multi-centre study of the effects of Losartan on aortic dilation in Marfan syndrome. *6 years*	£1,363,881
SP/10/003/ 28287	**Prof M D Schneider** MD FMedSci	Imperial College London	MRC/BHF Strategic Development Grant in Translational Regenerative Medicine. *3 years*	£500,000
SP/10/004/ 28288	**Academy of Medical Sciences**		Academy of Medical Sciences Clinical Lecturer Starter Grants	£450,000
SP/09/005/ 28105	**National Prevention Research Initiative**	Medical Research Council	National Prevention Research Initiative – Phase III. *5 years*	£1,000,000

Project Grants
Listed alphabetically by Institute

PG/09/038/27320	**Dr J T B Crawley** BSc PhD	Imperial College London	Function of the ADAMTS13 disintegrin-like and cysteine-rich domains. *3 years*	£166,721
PG/09/040/27413	**Dr M Emerson** BSc PhD	Imperial College London	Regulation of platelet function *in vivo* by endothelial products in health and during nitric oxide deficiency. *1 year*	£69,131
PG/09/088/28058	**Dr P C Evans** MSc PhD	Imperial College London	Transcriptome-profiling in arteries to identify shear-responsive regulators of endothelial activation and apoptosis. *2 years*	£189,168
PG/09/085/27949	**Prof A J T George** PhD MRCP	Imperial College London	Modification of dendritic cells to prevent graft rejection by the indirect pathway of allorecognition. *3 years*	£231,762
PG/10/009/28188	**Prof D O Haskard** DM FRCP FMedSci	Imperial College London	Role of PARP-14 in regulating vascular endothelial cell inflammatory gene expression. *3 years*	£236,690
PG/09/090/28065	**Prof R Krams** MD PhD	Imperial College London	Molecular imaging of vulnerable plaque formation by targeting chemokines. *2 years*	£108,385
PG/09/105/28138	**Prof D A Lane** BA PhD	Imperial College London	The activated protein C cofactor function of the anticoagulant protein, protein S. *3 years*	£188,001
PG/09/078/27985	**Prof J A Mitchell** BSc PhD	Imperial College London	Toll-like receptor development in human cardiovascular stem cells. *2 years*	£147,752
PG/09/098/28120	**Dr S S H Moosavi** BSc PhD	Imperial College London	Inhaled frusemide for dyspnoea relief in advanced heart failure. *2 years*	£114,991
PG/09/084/27993	**Dr N Pathan** MRCP PhD	Imperial College London	Investigating the inflammatory and metabolic actions of tight glycaemic control following surgery for congenital heart disease. *2 years*	£134,206
PG/09/074/27961	**Prof D J Pennell** FESC FACC	Imperial College London	Genetic modifiers of cardiac iron loading in thalassaemia major. *2 years*	£191,140
PG/09/058/27673	**Dr S K Prasad** MD MRCP	Imperial College London	Myocardial fibrosis in hypertrophic cardiomyopathy: potential as a risk factor and novel therapeutic target. *3 years*	£194,982
PG/09/096/28114	**Dr A M Randi** MD PhD	Imperial College London	The transcription factor Erg regulates endothelial cell migration and angiogenesis. *3 years*	£251,096
PG/09/100/28123	**Dr S M Rankin** BSc PhD	Imperial College London	Role of chemokines in the recruitment of endothelial progenitor cells *in vivo*. *2 years*	£118,476
PG/09/049/27719	**Prof N J Severs** PhD DSc	Imperial College London	Caveolins: their expression and interaction with connexins in the heart. *3 years*	£185,765

PG/09/041/ 27515	**Dr C L Shovlin** MRCP PhD	Imperial College London	Characterisation of the gene for hereditary haemorrhagic telangiectasia type 3 (HHT3) and splice variant regulation. *1 year*	£67,762
PG/09/045/ 27570	**Dr B J Wojciak-Stothard** MSc PhD	Imperial College London	The role of ADMA in the regulation of pulmonary endothelial cell-to-cell communication and endothelial permeability. *3 years*	£183,010
PG/09/061/ 27841	**Prof R M Botnar** PhD	King's College London	MRI of inflammation and extracellular matrix formation in atherosclerosis and vascular injury. *2 years*	£161,666
PG/09/080/ 28014	**Dr S Jurcevic** MD PhD	King's College London	Use of CD25-specific antibody in selective combination therapy to treat pre-sensitised cardiac transplant recipients. *2 years*	£151,044
PG/09/073/ 27953	**Dr M Nandi** BSc PhD	King's College London	The role of GTP cyclohydrolase 1 feedback regulatory protein in the regulation of tetrahydrobiopterin synthesis *in vivo*. *3 years*	£254,086
PG/09/093/ 28080	**Prof Y Chernajovsky** BSc MSc PhD	Queen Mary, London	Development of EPO latent peptides for protection of the infarcted heart. *2 years*	£103,477
PG/09/060/ 27739	**Prof M Perretti** MSc PhD	Queen Mary, London	The annexin A1 pathway in neutrophils of patients with large vessel vasculitis. *3 years*	£201,962
PG/09/102/ 28133	**Dr D J Grieve** BSc PhD	Queen's University, Belfast	Mechanisms underlying the protective role of glucagon-like peptide-1 in cardiac remodelling after myocardial infarction. *3 years*	£215,708
PG/09/101/ 28127	**Dr D M McDonald** MMedSci PhD	Queen's University, Belfast	Characterisation of enzymes that control eNOS palmitoylation during retinal angiogenesis. *1 year*	£71,717
PG/09/063/ 27877	**Prof A V Zholos** BSc PhD DSc	Queen's University, Belfast	The role of TRPM8 cold receptor in endothelial signalling and thermal behaviour of blood vessels. *2 years*	£120,104
PG/10/001/ 28098	**Dr G W Cockerill** BSc PhD	St George's, London	Rosiglitazone inhibits aortic aneurysm growth and rupture – understanding the mechanism of action. *3 years*	£227,634
PG/09/104/ 28136	**Dr I A Greenwood** BSc PhD	St George's, London	Molecular definition of the role of Kv7 channels in the cerebral circulation. *2 years*	£173,624
PG/10/005/ 28175	**Dr S M Davidson** BSc PhD	University College London	Investigating the role of NAADP signalling in ischaemia-reperfusion injury. *3 years*	£231,431
PG/09/070/ 27912	**Prof J S Owen** BSc PhD	University College London	Verification that oligonucleotide-mediated editing of the ApoE gene is feasible, including gene targeting of bone marrow stem (lineage-negative) cells. *2 years*	£146,372
PG/09/043/ 27565	**Prof P R Riley** BSc PhD	University College London	Investigating an epistatic relationship between Prox1 and Nkx2.5 in the cardiac conduction system. *3 years*	£253,875

PG/09/065/ 27893	**Prof P J Scambler** MRCPath	University College London	The role of HIC2 in cardiovascular morphogenesis. *3 years*	£192,708
PG/09/106/ 28142	**Prof D M Yellon** PhD DSc	University College London	The individual roles of different Akt isoforms in mediating cardioprotection. *3 years*	£216,460
PG/09/048/ 27675	**Dr M Delibegovic** PhD	University of Aberdeen	Role of adipocyte- and macrophage-PTP1B in body mass regulation and insulin sensitivity. *1 year*	£99,027
PG/09/069/ 27905	**Dr G E Rainger** BSc PhD	University of Birmingham	Mechanisms by which foam cells drive inflammatory leukocyte recruitment and by which omega-3-polyunsaturated fatty acids moderate this process. *2 years*	£111,881
PG/09/068/ 27903	**Dr S J George** BSc PhD	University of Bristol	Regulation of vascular smooth muscle cell proliferation and intimal thickening by the Wnt pathway. *2 years*	£117,962
PG/10/017/ 28239	**Prof J C Hancox** BSc PhD	University of Bristol	Molecular basis of ranolazine inhibition of the hERG potassium channel. *2 years*	£119,416
PG/10/015/ 28232	**Dr C L Jackson** BSc PhD	University of Bristol	Mouse model of plaque rupture: factors involved in fibrous cap stability. *3 years*	£86,150
PG/09/046/ 27631	**Dr A F James** BSc DPhil	University of Bristol	The role of ATP-sensitive K^+ channels in atrial tachyarrhythmias associated with β-adrenergic stress: a 'proof of concept' study using isolated rat hearts. *1 year 6 months*	£89,991
PG/09/099/ 28122	**Prof P Madeddu** MD	University of Bristol	Bone marrow dysfunction alters vascular homeostasis in diabetes. *3 years*	£200,242
PG/09/086/ 28048	**Prof P Madeddu** MD	University of Bristol	Targeting Pim-1 kinase for mechanistic treatment of diabetic cardiomyopathy. *2 years*	£131,456
PG/10/014/ 28224	**Dr H Mellor** BSc PhD	University of Bristol	Mechanisms of neovascularisation: the role of FMNL3 in blood vessel outgrowth. *3 years*	£168,310
PG/09/091/ 28074	**Dr S J Mundell** BSc PhD	University of Bristol	Regulation of platelet purinergic receptor function by NHERF proteins. *3 years*	£172,577
PG/10/008/ 28186	**Prof J M Tavare** BSc PhD	University of Bristol	Dysfunction of insulin signalling in type 2 diabetes and cardiovascular disease: a molecular and genetic pathway approach. *3 years*	£258,834
PG/09/064/ 27886	**Dr A G Teschemacher** MSc PhD	University of Bristol	Brainstem catecholaminergic transmission in control of sympathetic outflow and neurogenic hypertension: evaluation through selective optogenetic control. *3 years*	£224,676
PG/09/071/ 27938	**Prof M R Bennett** BSc MBChB MA PhD FRCP FAHA FMedSci	University of Cambridge	Role of mesenchymal stem cell-derived smooth muscle cells in vascular disease. *2 years*	£145,039

PG/09/050/ 27734	**Dr A P Davenport** BSc PhD	University of Cambridge	Function of vascular CCR5 receptors in vasoconstriction and intimal hyperplasia identified using novel selective antagonists in human and experimental atherosclerosis. *2 years*	£152,380
PG/10/003/ 27937	**Dr R S Foo** MD MRCP	University of Cambridge	The role of Dnmt3b in pathogenesis of dilated cardiomyopathy. *3 years*	£208,671
PG/10/011/ 28199	**Dr S M Jung** MS PhD	University of Cambridge	Dimeric GPVI: characteristics as the activating collagen receptor and relationship to integrin α2β1 and GPIb/ vWf in platelet adhesion to collagen. *3 years*	£251,801
PG/09/077/ 27964	**Prof A Moffett** MA MRCP MRCPath	University of Cambridge	Immunogenetics of killer cell immunoglobulin-like receptors (KIR) and HLA-C in pre-eclampsia. *3 years*	£168,524
PG/09/089/ 28063	**Dr K M O'Shaughnessy** BM BCh DPhil MRCP FRCP	University of Cambridge	The role of SPAK in regulating the function of the thiazide-sensitive co-transporter (NCCT) in the kidney. *3 years*	£172,646
PG/10/002/ 28143	**Mr G J Pettigrew** MBChB FRCS MD	University of Cambridge	T and B lymphocyte collaboration in humoral alloimmunity. *3 years*	£212,247
PG/09/072/ 27945	**Prof R J Read** BSc PhD	University of Cambridge	How protein Z-dependent protease inhibitor controls blood coagulation on the platelet membrane. *2 years*	£102,856
PG/09/083/ 27667	**Dr J H F Rudd** PhD MRCP MB BCh	University of Cambridge	The role of arterial inflammation, neovascularisation and wall stress in the expansion of abdominal aortic aneurysm. *3 years*	£162,351
PG/10/007/ 28184	**Dr S Sinha** MB BCh MRCP PhD	University of Cambridge	Regulation of smooth muscle cell development and disease by myocardin. *3 years*	£192,747
PG/10/006/ 28180	**Prof P J Kemp** BSc DPhil	Cardiff University	Impact of erythropoietin on hypoxic cardiorespiratory adaptation: role and mechanism. *1 year 6 months*	£77,675
PG/09/044/ 27568	**Dr A Harper** BSc PhD	University of Dundee	Modulation of parasympathetic regulation of cardiac function in intracardiac ganglia by receptors: neurotransmitters and neuropeptides. *2 years*	£87,352
PG/09/059/ 27851	**Dr K Sakamoto** PhD	University of Dundee	A novel genetic approach to investigate the mechanism by which mutations in AMPK cause glycogen storage disease and Wolff-Parkinson-White syndrome. *3 years*	£168,075
PG/09/047/ 27674	**Prof I Dransfield** BSc PhD	University of Edinburgh	Investigation of the mechanisms underlying pro-inflammatory monocyte-platelet interactions. *2 years*	£116,806
PG/10/012/ 28201	**Dr P R Hoskins** BA MSc PhD	University of Edinburgh	Development and standardisation of techniques for measurement of blood velocity, volumetric flow and wall shear stress in arteries in small-animal ultrasound scanning. *3 years*	£159,102

PG/09/097/ 28118	**Prof D Melzer** MSc MB BCh MFPHM/FFPH	University of Exeter	Chemical exposure and risk of cardiovascular disease in adults: the CARDIS study. *2 years*	£119,169
PG/09/092/ 28075	**Prof E Davies** BSc PhD	University of Glasgow	Regulation of aldosterone synthase (CYP11B2) and IIβ-hydroxylase (CYP11B1) gene expression in essential hypertension by novel microRNAs. *3 years*	£174,925
PG/09/107/ 28154	**Dr O Kemi** BSc MSc PhD	University of Glasgow	Cardiac CaMK in heart failure and exercise training. *3 years*	£192,903
PG/09/055/ 27839	**Dr J F X Ainscough** BSc PhD	University of Leeds	Regulation of cardiac fibrosis through cardiomyocyte specific AT1 receptor dependent mechanisms: an inducible transgenic approach. *3 years*	£199,141
PG/09/051/ 27828	**Dr S C Calaghan** BSc PhD	University of Leeds	Statins directly affect cardiac myocyte function through cholesterol-dependent and independent mechanisms. *3 years*	£185,063
PG/09/042/ 27518	**Prof M T Kearney** MB ChB MRCP DM	University of Leeds	The insulin like growth factor-1 receptor, insulin sensitivity and nitric oxide bioavailability. *3 years*	£208,209
PG/09/054/ 27838	**Dr S Ponnambalam** BSc PhD	University of Leeds	Targeting LOX-1 scavenger receptor in vascular cells using viral gene therapy. *3 years*	£183,676
PG/09/094/ 28093	**Prof M P Mahaut-Smith** BSc PhD MA	University of Leicester	Role of K^+ channels in platelet and megakaryocyte function. *1 year*	£72,783
PG/09/039/ 27323	**Dr G A Ng** MRCP PhD	University of Leicester	An investigation into the mechanisms underlying non-excitatory electrical stimulation on cardiac mechanical performance. *2 years*	£108,477
PG/09/053/ 27836	**Dr C M Stover** MD PhD	University of Leicester	Properdin: key in development and prevention of atherosclerotic plaque formation in mice? *2 years*	£99,843
PG/10/013/ 28221	**Dr T V Burdyga** BSc PhD DSc	University of Liverpool	Postcapillary venule pericytes and endothelial cells: effects of agonists and inflammatory mediators on ultrastructure, calcium signalling and function. *2 years*	£124,914
PG/10/004/ 28174	**Dr D A Middleton** DPhil BSc	University of Liverpool	A combined structural and functional investigation of phospholamban mutants associated with dilated cardiomyopathy. *2 years*	£156,705
PG/09/062/ 27872	**Dr A W Trafford** BVS PhD	University of Manchester	Remodelling of the t-tubule system in heart failure: identifying consequences for intracellular calcium regulation and a role for amphiphysin II. *3 years*	£236,092
PG/09/052/ 27833	**Dr X Wang** MB BCh MMD PhD	University of Manchester	The signalling regulation of ventricular arrhythmias and cardiac gap junctions in mice with a cardiac-specific deletion of MKK4. *3 years*	£184,714

PG/09/057/ 27519	**Dr M Wareing** BSC PhD	University of Manchester	Altered omental adipokine secretion: a cause of vascular endothelial dysfunction in maternal obesity? *3 years*	£171,535
PG/09/075/ 27962	**Prof M J Taggart** BSc PhD	University of Newcastle	The novel regulation of blood vessel contractility by protein acetylation: the role of HDAC8. *3 years*	£172,499
PG/09/056/ 27846	**Dr G C Churchill** PhD	University of Oxford	A drug discovery based translational investigation of cADPR function in the heart. *3 years*	£192,992
PG/09/076/ 27963	**Dr D R Greaves** BSc PhD	University of Oxford	Characterisation of a novel lipoprotein avid human blood monocyte population. *2 years*	£127,735
PG/09/082/ 28020	**Prof R K Patient** BSc PhD	University of Oxford	Building the genetic regulatory circuitry underpinning cardiomyocyte and endothelial programmes during embryonic development and cardiac regeneration. *2 years*	£185,385
PG/09/066/ 27898	**Dr T A Quinn** PhD	University of Oxford	Influence of myocardial strain on cardiac heart rhythm: differential assessment of the individual importance of global versus regional mechanical effects in the whole heart. *2 years*	£104,548
PG/10/016/ 28233	**Dr D S Leake** BSc PhD	University of Reading	Atherogenic effects of the lysosomal oxidation of low density lipoprotein. *3 years*	£202,285
PG/10/010/ 28197	**Dr J Chamberlain** BSc PhD	University of Sheffield	An endothelial progenitor cell (EPC) strategy to promote healing after stenting in the mouse. *3 years*	£235,280
PG/09/087/ 28051	**Dr T J A Chico** MRCP	University of Sheffield	Examining the role of Wiskott-Aldrich Syndrome protein and its interacting protein in collateral vessel development. *1 year 6 months*	£74,980
PG/09/067/ 27901	**Dr V C Ridger** BSc PhD	University of Sheffield	Regulation of monocyte-endothelial cell interactions by neutrophil-derived microparticles. *2 years*	£110,137
PG/09/095/ 28108	**Prof R M Wadsworth** BPharm PhD DSc	University of Strathclyde	Importance of mast cells in vein graft survival and failure. *2 years*	£110,968
PG/09/081/ 28015	**Dr S Shafi** BSc PhD	University of Surrey	The autoimmune response to heat shock protein 27 and its role in atherogenesis. *2 years*	£157,522
PG/09/103/ 28135	**Prof V A Zammit** MSc DPhil DSc	University of Warwick	A 'proof-of-concept' study to test the hypothesis that in cardiomyocytes ACC-2 association with mitochondria is reversible and controlled by factors that affect cardiac fatty acid oxidation. *1 year*	£58,298
PG/09/079/ 28008	**Dr J R Potts** BSc PhD	University of York	Exploiting bacterial proteins in the development of new therapeutics for the reduction of pathological vascular remodelling. *3 years*	£174,708

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