Welcome by Rob Tulloh, Chair of BCV

Further to our call for volunteers I am delighted to report that thanks to the efforts of Dr Stuart Mundell we now have five new Early Career Researcher (ECR) representatives who will attend the Theme’s Steering Group meetings on a rotational basis over the next few years. These five were instrumental in recruiting abstract applications and attendees to the ECR event we hosted on 15 April 2016 – see article and photos on pages 2 and 3 for further details.

The arrival of the new Pro Vice-Chancellor for Health energised the Theme to review its strategy over the next 2-5 years. Common goals include integration of activities for translation, increased collaboration with genomic studies and technology development (e.g. biosensor and feedback systems). Recent consultations encourage us to provide stronger focus and integration across the University and NHS Trusts, and improved access to existing facilities and expertise. With this in mind BCV aims to run a series of meetings and other networking events to further foster collaborations and open access, support funding applications and encourage cross-fertilisation both internally and externally.

As part of this strategy BCV actively supported the four-year BHF PhD bid headed by Prof Alastair Poole, submitted in April 2016 and entitled Integrative Cardiovascular Science. If successful, the programme would follow a 1+3 structure with students studying a range of research topics and associated techniques with different supervisors, thus allowing for the study of a range of cardiovascular science approaches and technologies.

There will be two meetings this Autumn to display the work undertaken in Bristol Cardiovascular Research which BCV will be helping to facilitate, and further details will be shared once dates and venues have been confirmed.

Finally, please enjoy the contents of this Newsletter – it contains a wealth of news and events relevant to your community.
Listening to the needs of our ECRs is an important part of BCV’s strategy for improving research and collaboration. Thanks to a recent call we are delighted to welcome five new Steering Group representatives who will attend future meetings on a rotational basis: Dr Carl May (RA, Academic Renal Unit), Dr Wioletta Pijacka (Senior RA, PPN), Dr Yan Qiu (Senior RA, Academic Renal Unit), Megan Stevens (RA, PPN) and Dr Ana Tomiak-Baquero (Senior RA, PPN). Their remit is to establish a sub-committee to discuss current issues affecting younger scientists; ensure representation to each of our regular Bristol Cardiovascular meetings; represent the current views of the “younger generation” of research scientists; and help organise events that support the aspirations and research endeavour of non-established researchers.

We extend our thanks to Dr Carmen Coxon, our previous ECR rep, who has now left Bristol to pursue a career at the Structural Genomics Consortium in Oxford.

Please make these new reps feel welcome, and please do contact them with any issues or questions you may have.

**EARLY CAREER RESEARCHERS’ EVENT**

On 15 April 2016 BCV hosted its second dedicated ECR event in the Graduate School of Education. The morning offered a full programme of oral talks by Carmen Coxon (Structural Genomics Consortium), Rob Tulloh (consultant Paediatric Cardiologist), Rhiannon Jenkinson (Wellcome Trust Research Career Re-entry Fellow), Mel Watson (Learning and Development Lead, Laboratory Medicine, UH Bristol), Dave Collett (NHS Blood and Transfusion Clinical Trials Unit), Ed Hudson (Create Marketing Ltd) and Stephen Meader (Programme Manager, MRC), who invited attendees to think about clinical careers, careers in academia and alternative careers.

We also had talks from Nabila Kazmi (Senior RA, SSCM), Karina Di Gregoli (RA, SOCS) and Megan Stevens (Postdoc, PPN) who each had five minutes to present their research. An (insufficient) half-hour allowed a number of judges to look at the outstanding 25 posters displayed from across the University and UH Bristol, giving fantastic insight into the varied work being undertaken by ECRs.

The Theme would like to extend its thanks to all presenters; to Stuart Mundell, Paolo Madeddu and Julian Paton for chairing; and to the many judges who helped in scoring. We awarded three prizes in all—a best oral presentation prize valued at £100, and two poster prizes (originally one but the scores resulted in a tie!) valued at £50 each. Names and photos of the winners can be found on page 3. Thanks are also extended to the Elizabeth Blackwell Institute for Health Research who covered the costs of the event.
EVENTS

Variational Inference in Gaussian Process Models
5 May 2016, 11.00 - 12.00. James Hensman (Lancaster), 0.3 Merchant Venturers Building

Clustering high dimensional mixed data: joint analysis of phenotypic and genotypic data
6 May 2016, 14.15 - 15.15. Claire Gormley (University College Dublin), SM3, School of Mathematics

'Research without Borders', an exhibition of postgraduate research excellence
9 May 2016, 14.30 - 16.00. At-Bristol Science Centre

Dr Adam Perriman (title tbc)
12 May 2016, 13.00 - 14.00. Adam’s research looks into construction and study of novel hybrid biomolecular systems. C42, Biomedical Sciences Building

A breath of fresh air: measuring oxygen in diseased kidneys
16 May 2016, 13.00 - 14.00. Maarten Koeners (UoB), E29 Biomedical Sciences Building

Current Concepts of Therapeutic Hypothermia: workshop
17 May 2016, 9.00 - 17.00. Life Sciences Building

Health Sciences Educational Research
17th May 2016, 13.00 - 17.00. 35 Berkeley Square, Helen Wodehouse Building 2.28

Little Heartbreakers
23 May 2016, 19.30 - 21:30. Paolo Maddeddu & Jason Johnson, Halo, 141 Gloucester Road

The Burden of Kidney Disease in India and South Asia
1 June 2016, 17.00 - 18.00. Georgi Abraham (PIMS Pondicherry, Madras Medical Mission, Chennai), Lecture Theatre A/B, Dorothy Hodgkin Building

How to Prepare a Good Research Bid: Medical Faculties
9 June 2016, 10.00 - 14.30. Pam Johnston, The Hawthorns

BBSRC CEO open presentation
22 June 2016, 10.45 - 11.45. Melanie Welham, Pugsley LT, Queen’s Bldg

Academia Europaea Annual Conference 2016

Maarten Koeners,
BHF Intermediate Research Fellow,
School of Physiology,
Pharmacology and Neuroscience

Georgi Abraham,
Prof. of Medicine,
Pondicherry Institute of Medical Sciences, Ponducherry & Consultant - Nephrologist, Madras Medical Mission, Chennai
Grant for risk of bleeding after dual antiplatelet therapy

An NIHR award of £432,000 will study the effect of antiplatelet drugs on bleeding risk (the ADAPTT study). Antiplatelet drugs such as aspirin, clopidogrel (Plavix), prasugrel (Effient) and ticagrelor (Brilinta), are used to avoid heart disease and stroke by preventing the formation of blood clots in arteries. Antiplatelet drugs are given to all people who have diseased arteries, have had a heart attack, had a coronary stent put in or had heart surgery. A combination of aspirin and another antiplatelet drug is normally given – this is called dual antiplatelet therapy (DAPT).

Antiplatelet therapies increase the risk of bleeding. About 1 in 100 people on aspirin and 2 in 100 people on DAPT have a major bleeding event that needs admission to hospital. However, many more people experience minor bleeding, such as bleeding in the stomach or bowel, and nuisance bleeding, such as nosebleeds, bleeding from gums, and excessive bruising. These minor bleeding events cause discomfort and anxiety, take up consultations with GPs and may cause patients to stop taking their tablets as prescribed.

The researchers, led by Dr Maria Pufulete, Research Fellow in Health Services Research in the School of Clinical Sciences, will use a large GP database of routinely collected data and a database of describing patients’ attendances and admissions to hospital to determine how many people experience bleeding after being prescribed different DAPT regimens. Information from the ADAPTT study will help hospital doctors to choose drugs that are more appropriate for individual patients’ specific needs, which will reduce the risk of bleeding and increase adherence to treatment.
Recent GW4 Funding Successes

A GW4 Initiator grant was awarded to Raimondo Ascione (Bristol), Chris Marshall (Cardiff), Tony Perry (Bath) and John Terry (Exeter) for the Pre-clinical Translational Biomedical Research Network in Jan 2016. The network includes the Translational Biomedical Research Centre (TBRC), the Positron Emission Tomography Imaging Centre (PETIC) and the Cardiff University Brain Research Imaging Centre (CUBRIC) facilities.

An initiator award has also gone to James Bilzon (Bath), Jo Bowtell (Exeter), Russ Jago (Bristol) and Len Nokes (Cardiff) for GW4 Centre for Sport & Exercise Medicine.

Elizabeth Blackwell Health Challenge

The Elizabeth Blackwell Institute for Health Research introduced a Research for Health Challenge to encourage healthcare practitioners and UoB researchers to work together to develop innovative thinking around clinical problems. The scheme involved consultation with healthcare workers, managers & commissioners to collect information about problems they encounter in their practice that could potentially be solved via innovative research at UoB.

Some of the challenges and solutions for 2015/2016 include:

**Challenge:** Wesley Hayes, Develop an objective tool to determine fluid overload in children receiving dialysis

**Solution:** Alin Achim (Engineering), B-Line Quantification in Lung Ultrasound Images for Fluid Overload Determination in Children Receiving Dialysis

**Challenge:** Wesley Hayes, Develop a method to measure kidney transplant perfusion in real-time

**Solution:** John Day (Physics), Feasibility study of spectroscopic methods for real-time measurement of kidney perfusion

**Challenge:** Charlotte Bradbury, Predicting patient responses to immunosuppressive treatment in autoimmune thrombocytopenia

**Solution:** Andrew Mumford (Cellular & Molecular Medicine), Peripheral blood markers of steroid resistance in autoimmune thrombocytopenia

Full details on how to apply for the scheme can be found on the Research for Health Challenge website. If you have any questions on the scheme contact Lisa Wheatley.
Izabella Smolicz, (Health Sciences BSc student) attended the National Student Association of Medical Research Conference at the University of Birmingham on 30 January 2016. It was her first National Conference that she had presented at and it was an excellent experience. The work presented summarised the INSPIRE Vacation Studentship project which she undertook for three months in Summer 2015. The title of her research was *microRNA-675 in vascular smooth muscle cell calcification*. This research opportunity introduced her to a range of lab techniques and allowed her to develop skills she is finding invaluable during her Intercalation research project, from forming protocols to improving the way she critically appraise research papers.

Izabella extended her thanks to everyone in the Emanueli group for their help and support during this experience. She was delighted to be awarded the First Prize for her oral presentation (Basic and Clinical Sciences category) at the conference.

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**First Prize at NSAMR for BSc student**

Izabella Smolicz, (Health Sciences BSc student) attended the National Student Association of Medical Research Conference at the University of Birmingham on 30 January 2016. It was her first National Conference that she had presented at and it was an excellent experience. The work presented summarised the INSPIRE Vacation Studentship project which she undertook for three months in Summer 2015. The title of her research was *microRNA-675 in vascular smooth muscle cell calcification*. This research opportunity introduced her to a range of lab techniques and allowed her to develop skills she is finding invaluable during her Intercalation research project, from forming protocols to improving the way she critically appraise research papers.

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**Three-minute Thesis semi-finalists**

The Bristol Doctoral College, in conjunction with the Bristol Students’ Union Postgraduate Network, is hosting Bristol’s third-annual Three Minute Thesis (3MT) competition. This is an opportunity for postgraduate research students across the University to present their research in three minutes in language appropriate to a lay audience.

A few of the postgraduate research students that made it to the semi-finals include: Amy Burchell (Clinical Research Fellow and Medicine PhD under Profs Julian Paton and Andreas Baumbach) for her project *Disrupting kidney nerves to treat high blood pressure – can we predict who will respond?* and Pouya Sadeghi Pour (Cardiology MSc, supervisors Profs Costanza Emanueli and Massimo Caputo) for *Human skin cell can be used to regenerate damaged hearts*. They presented their research on 27 April 2016. Eight finalists will go on to present

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The winner of Bristol’s competition will compete in an online national semi-final competition this summer. 3MT is an opportunity to enhance the profile of postgraduate research being undertaken at Bristol; it is not designed to trivialise or ‘dumb down’ research, but encourages researchers to consolidate their ideas and crystallise their research discoveries.
**British Heart Foundation Recent Awards**

- **Prof Jules Hancox**, project grant, £263,540: *Potassium channel linked short QT syndrome: a mechanical as well as electrical disorder?* 1 Mar ‘16 for three years.

- **Prof Gianni Angelini**, project grant, £188,980: Engineered bioscaffolds for optimal valve replacement awarded. 25 Jul ‘16 for two years.

- **Dr Becky Foster**, project grant, £213,937: *A new vascular therapeutic potential for early intervention in diabetic vascular dysfunction*. 1 Nov ‘15 for three years.

- **Prof Alastair Poole** (PI) with Co-applicants Ingeborg Hers, Paolo Madeddu & Paul Riley (Oxford), project grant, £1,537,451: *Platelet secretion: Control mechanisms and role in thrombosis, cardiac damage and repair*. 1 Mar ‘16 for five years. This success follows on an Elizabeth Blackwell Institute for Health Research Translational Proof of Concept award which was funded in 2015: PI: Alastair Poole, Co-Investigators: Ejaife Agbani, Ingeborg Hers and Andrew Mumford. £30,000: *Assessing the potential of acetazolamide as an antithrombotic*. Amount awarded £30,000, 1 May ‘16 - 1 Sep ‘17.

- **Prof Alastair Poole**, project grant, £99,320: *How does synaptotagmin-like protein 4 (SLP4) control platelet secretion, function and thrombosis?* 1 Mar ‘16 - 1 Sep ‘17

- **Dr Mark Bond**, project grant, £192,737: *The Hippo pathway: A mechanism underlying the vascular protective effects of cAMP*. 1 May ‘16 for three years.

- **Prof Alastair Poole** (PI) with Co-applicants Ingeborg Hers, Paolo Madeddu & Paul Riley (Oxford), project grant, £263,540: *Potassium channel linked short QT syndrome: a mechanical as well as electrical disorder?* 1 Mar ‘16 for three years.

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**British Heart Foundation News**

Prof Alastair Poole has been appointed as a member of the British Heart Foundation’s **Project Grants Committee** until 2019.

Eminent Leicester researcher Professor Sir Nilesh Samani has been announced as the next **BHF Medical Director**. He will succeed Prof Peter Weissberg who retires in October 2016 after twelve years.

Professor Samani is currently BHF Professor of Cardiology at the University of Leicester, Head of the Department of Cardiovascular Sciences at the University, Director of the NIHR Biomedical Research Unit and a consultant cardiologist at Glenfield Hospital in Leicester. In 2015 he was knighted for services to medicine and medical research.

Feb 5 ‘16 was **Wear It. Beat It Day**. Dr Anja Teschemacher & Prof Sergey Kasparov tangoed for their colleagues in support. Folk in the Biomedical Sciences Bldg wore red and collected £143 in donations.
Recent Funding Successes

Prof Julian Paton, £181,671 from Afferent Pharmaceuticals (USA) for use in pre-clinical studies.

Dr Gavin Welsh, £129,834 from Kidney Research UK John Feehally Stoneygate Research (Project) Award for INF2 mutations in Kidney disease. 1 Sep ’16 for two years.

From the same fund, Dr Simon Satchell, £234,739 for MMP-mediated SDC4 loss from the endothelial glycocalyx as a therapeutic target in diabetic nephropathy.

Prof Julian Paton, £234,739 from Innovate UK; a spin out company, Ceryx Medical Limited, has been formed. This funds the pre-clinical testing of a prototype physiological pacemaker in large animals.

The EBI awarded Dr Andrew Mumford £24,797.00 for Steroid resistance in ITP, 4 Jan ‘16 for one year.

Hypertension: have we missed something?

An article published online by Medical News Today on 11 February 2016 highlights the Centers for Disease Control and Prevention aim to prevent a million heart attacks and strokes in the USA by 2017.

Hypertension affects some 70 million Americans, quadrupling the chance of dying from a stroke and tripling the chance of dying from heart disease. Prescription medicines have limited effect in lowering high blood pressure; some patients fail to see the benefit, some suffer from unwanted side effects, and some refuse or discontinue treatment. Secondary hypertension that results from a medical condition such as obstructive sleep apnea, adrenal gland tumors or thyroid problems, can result from medications such as hormone treatments, painkillers or recreational drugs. It usually starts suddenly and causes higher blood pressure than primary hypertension.

Over 90% of people with suffer from the latter; it progresses gradually, increases with age and is affected by hereditary factors. Lifestyle factors also contribute to the disease. Treatment mainly focuses on lifestyle factors or dysfunction of the cardiovascular system. However some research, such as that conducted by Prof Julian Paton and colleagues, study the relationship between high BP and the brain, and particularly the nerves in the brainstem. Neurogenic hypertension is related to excessive and abnormally high sympathetic activity.

Images from top to bottom: Gavin Welsh, Andrew Mumford, Simon Satchell, Julian Paton
Potential New Way of Treating Diabetes

Dr Sebastian Oltean (pictured left) has been awarded £268,000 from the British Heart Foundation to explore why diabetes causes alternative splicing to go wrong in the kidneys and make the disease worse.

Alternative splicing (the process which turns sections of DNA into proteins) malfunctions in diabetics, causing abnormal proteins to be produced which can accelerate the complications of diabetes, including diabetic nephropathy which results in kidneys losing proteins in the urine.

Seb will seek to better understand the mechanisms that go wrong will test ways of switching the production of damaging proteins back to beneficial ones. This knowledge could point the way to a completely new approach of treating diabetes.

Nearly 3.5 million adults in the UK have been diagnosed with diabetes and an estimated half a million more are living with undiagnosed type 2. Diabetics are at higher risk of heart, circulatory and kidney disease, so providing a new target for the development of treatments which stop this process happening would benefit a significant number of people.

Alzheimer’s and High Blood Pressure Research

Around 16 million people in the UK suffer from hypertension; it can strain blood vessels and increase the risk of heart attack and stroke. There is also evidence that it can, particularly in midlife, raise the risk of vascular dementia and Alzheimer’s disease. However, the mechanism by which high BP influences Alzheimer’s disease is largely unknown.

Previous studies have shown that people with high BP tend to have a greater build-up of amyloid protein in the brain, possibly as a result of too much of the protein being made, too little being broken down or a fault in how it’s cleared out via the blood vessels.

Prof Seth Love and his team have been awarded £388k by Alzheimer’s Research UK for a 3-year study, which will allow them to study brain tissue from people with high BP and Alzheimer’s. They will study the brain’s biochemistry & structure, measure whether high BP had affected blood flow, blood vessel damage, and levels of amyloid. They will use these experiments to build a bigger picture of what damage high BP causes in the brain and how this could drive Alzheimer’s.
The gene that causes alpha1-antitrypsin deficiency (AATD) causes a rare respiratory disease which can lead to severely reduced lung capacity due to emphysema. It is found in about 1 in 2,000 people, and occurs when an individual inherits a defective gene copy from both parents.

Prof Ian Day, one of the lead authors, and colleagues studied the AATD gene in relation to human health conditions in around 20,000 participants. They found healthy carriers possess about 10% enhanced respiratory capacity; they are also, on average, bigger and taller. Evolution appears to have positively selected the deficiency gene; it is mainly found in north Europe, as have gene variants for larger height and size generally. These observations in carriers identify pathway effects that may be of relevance in the fields of physical fitness, and in therapeutic approaches to modify lung function or short stature.

The project suggests some treatment involving the alpha1-antitrypsin pathway might be able to make important modification of height in growth disorders. The AATD variant exerts a height effect of 1.5cm. A drug treatment targeting this pathway might be able to get a much greater effect.


ELIZABETH BLACKWELL FUNDING OPPORTUNITIES

**EBI Workshops Funding**
Support for interdisciplinary workshops in health research at a new or emerging interface between two or more disciplines. Applications are reviewed on a rolling basis.

**EBI Catalyst Fund**
Pump priming awards can support the most promising and ambitious ideas across the widest interdisciplinary boundaries. These projects will be identified largely through the running of workshops to explore new possibilities and identify the big questions. Applications are reviewed on a rolling basis.

**Returning Carers Scheme**
UoB has introduced a Returning Carers’ Scheme (RCS) to support academic staff across all faculties in re-establishing their independent research careers on return from extended leave (16 weeks or more) for reasons connected to caring - such as maternity leave, adoption
leave, additional paternity leave, or leave to care for a dependant.

The deadline for applications is 30 April and 31 October each year.

**EBI Postgraduate Extension Fellowships**

Designed to support a small number of postgraduate researchers currently enrolled on one of the University of Bristol Wellcome Trust-funded 4 year PhD programmes (‘Dynamic Cell Biology’, ‘Neural Dynamics’ and ‘Molecular, Genetic and Lifecourse Epidemiology’).

Deadline for applications is 27 June 2016

**EBI Proximity to Discovery Industry Engagement Fund**

MRC have awarded UoB £155,000 for short-term two-way people exchanges between industry and academia which align to MRC strategic priorities in population health, cardiovascular research, infection and immunity, neuroscience and cancer. MRC see these secondments as a key way of exchanging skills and knowledge and developing longer term working relationships.

Deadline for applications is 2 June 2016

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**FUNDING OPPORTUNITIES**

A calendar of potential funding opportunities for cardiovascular sciences has been set up via Research Professional (RP). Subscribing to a calendar will place the entries in your own calendar, which will update automatically according to pre-specified search criteria. Staff and students have FREE access to Research Professional online from all computers on the University network. You can create your own personalised funding opportunity e-mail alerts by registering with RP. Find out all about it on the RED website.
British Heart Foundation
Strategic appointment grants

Closing Date: none  
Award amount: £3M

Aim to help universities recruit a high-calibre overseas scientist for a BHF chair. Full applications will not be considered without prior approval to submit. The award is intended to cover the professor’s salary and that of their immediate support staff as well as a programme of research for five years.

British Heart Foundation
Immediate postdoctoral basic science research fellowship

Closing Date: none  
Award amount: unspecified

Enable newly qualified postdoctoral researchers to make an early start in developing their independent cardiovascular research careers. Candidates should be in the final year of their PhD studies or have no more than one year of postdoctoral research experience from the date of their PhD viva. The fellowship should not be held in the institution where the PhD was carried out. The fellowship is awarded for a duration of three years with the possibility of a one-year extension. The award may include the applicant’s salary, research consumables and small items of equipment. The foundation encourages fellows to spend up to 18 months overseas or at a second UK institution. The award may also include travel costs, subsistence and contributions to healthcare insurance.

British Heart Foundation
Intermediate basic science research fellowships

Closing Date: none  
Award amount: unspecified

Enable postdoctoral researchers in the field of cardiovascular research to become research leaders in established research institutions in the UK. Applicants must have at least three to six years of postdoctoral experience with a track record of high-impact research papers. Residency requirements to not apply. Fellowships normally last five years, with a two-year extension possible. Part of the award may be spent overseas. Funding may be used to cover the salary of the applicant, the salary of a technician or a research assistant, research consumables and essential equipment. For overseas visits, funding may be available for return travel for the fellow and immediate family, subsistence, a healthcare contribution and a £3,000 housing contribution.

British Heart Foundation
Strategic capital grants

Closing Date: none  
Award amount: unspecified
Support major research institutions with large capital needs for their cardiovascular research strategy. Applications will not be considered without prior approval to submit. It is unlikely that more than one such award will be made to any institution in a five-year period.

**British Heart Foundation**  
**Advanced training awards**

**Closing Date:** none  
**Award amount:** £30,000

Enable researchers to retrain and gain additional expertise in an established research institution in the UK. Researchers must be moving into a different field of science, for example from cell biology to bioinformatics or entering cardiovascular science from a different discipline. Applications may include basic or applied clinical research relevant to the cardiovascular system. Collaborative research between clinicians and basic scientists is encouraged.

**British Heart Foundation**  
**Clinical research training fellowships**

**Closing Date:** none  
**Award amount:** £10,000

Enable medically qualified graduates to undertake research training in established research institutions in the UK. The primary supervisor must devote at least 10 per cent of their time to supervising the student, and a second supervisor should also be identified. Students should have completed foundation year 2, but should not yet have obtained their certificate of completion of training. Fellowships may last two or three years to allow for the completion of either a PhD or an MD or equivalent.

**British Heart Foundation**  
**Translational awards**

**Closing Date:** none  
**Award amount:** £250,000

This award will help to bridge the funding gap between promising innovations and the clinic with the aim of accelerating advances in cardiovascular science for patient benefit. Proposed technologies may include therapeutics; devices; diagnostics; imaging technologies; algorithms and computer modelling.

**British Heart Foundation**  
**Clinical research leave fellowships**

**Closing Date:** none  
**Award amount:** unspecified

Enable NHS staff to undertake dedicated PAs in research in a recognised UK centre of excellence in cardiovascular medicine. Clinical studies may also be supported. NHS consultants with recent research records may apply. Awards may be for up to one year full time or up to three
years part time. They include reimbursement of reasonable costs to cover relinquished PAs, and research consumables.

**British Heart Foundation**

*Project grants*

Closing Date: none  
Award amount: £299,999

Support short-term research projects lasting up to three years. Grants may cover salaries, research consumables and equipment.

**British Heart Foundation**

*Career re-entry research fellowships*

Closing Date: none  
Award amount: unspecified

Enable postdoctoral researchers to re-establish their careers in cardiovascular science in an established UK research institution following a break. Successful postdoctoral researchers who have taken a career break of one year or more are eligible to apply. Fellowships normally last for four years with the possibility of a one-year extension. Awards may include salaries, research consumables and equipment.

**British Heart Foundation**

*Non-clinical PhD studentships*

Closing Date: none  
Award amount: £30,000

Enable graduates to acquire foundation training in cardiovascular research in order to proceed to a PhD degree at a university in the UK. Each application must be made by an established investigator who will act as the supervisor for a named or unnamed student. The supervisor must devote at least 10 per cent of their time to supervising, and a second supervisor should also be identified. Students should have a 1st class or high upper 2nd class BSc degree, or MSc with merit or distinction. Residency requirements do not apply. Studentships are awarded for three years and may include a stipend, tuition fees and research consumables.

**British Heart Foundation**

*Senior basic science research fellowships*

Closing Date: none  
Award amount: unspecified

Enable a senior researcher to undertake basic or clinical research relevant to the cardiovascular system at an established research institution in the UK. Applicants should be individuals who are expected to reach readership or chair-level within five years. They should usually have at least six to 10 years of successful postdoctoral work with an established track record of research leadership. Residency requirements to not apply.
The fellowship period is five years, with an option to spend part of the award overseas. Funding may be used to cover the salary of the applicant, the salary of a technician or a research assistant, research consumables, essential equipment and travel to present or attend scientific conferences. For overseas visits, funding may be available for return travel for the fellow and immediate family, subsistence, a healthcare contribution and a £3,000 housing contribution.

**British Heart Foundation**

**Senior clinical research fellowships**

Closing Date: none  
Award amount: unspecified

Provide a career opportunity in an established research institution in the UK for outstanding individuals who are expected to reach readership or chair level within 10 years in the field of cardiovascular research. Applicants should have three to six years of postdoctoral experience and have obtained their certificate of completion of training. They may have previously held a clinical lectureship or intermediate fellowship.

The fellowship period is five years, with an option to spend part of the award overseas. Funding may be used to cover the salary of the applicant, the salary of a technician or a research assistant, research consumables, essential equipment and travel to present or attend scientific conferences. For overseas visits, funding may be available for return travel for the fellow and immediate family, subsistence, a healthcare contribution and a £3,000 housing contribution.

**British Heart Foundation**

**Travel fellowships**

Closing Date: none  
Award amount: unspecified

Enable postdoctoral researchers to visit laboratories abroad either for a short period to acquire specialist knowledge or expertise, or for a longer period to carry out a research project that cannot be done in the UK. Applicants should be individuals with three or more years of postdoctoral experience. They should hold a post in the UK and a guaranteed post to return to after the fellowship.

Fellowship periods range between one month and one year. Funding may be used to cover return travel for fellows and their immediate family, subsistence, replacement salary, a healthcare contribution and a £3,000 housing contribution.

**British Heart Foundation**

**Clinical study grants**

Closing Date: none  
Award amount: >£300,000

Support clinical trials and other clinical studies costing more than £300,000 or lasting longer than three years. The PI must be a senior researcher with a strong track record of grant sup-
port and an internationally recognised research profile. Any multicentre interventional clinical trial should be managed by a registered clinical trials unit, and should include a member of the clinical trials unit as a co-applicant or principal investigator. Grants are available for a maximum duration of five years and may cover staff salaries, research consumables and essential research equipment.

**British Heart Foundation**

**Infrastructure grants**

Closing Date: none  
Award amount: £1M

Aim to contribute towards the cost of providing essential infrastructure to support cardiovascular science in any academic institution. Funding can be used to support building refurbishment or to buy major pieces of equipment to support the activities of several cardiovascular scientists. Senior cardiovascular scientists may apply. Grants are worth up to £1 million, but cost-sharing is required. A significant proportion of the required funds, usually half, must be available locally.

**British Heart Foundation**

**Personal chairs**

Closing Date: none  
Award amount: £450,000

Support individuals with outstanding cardiovascular research achievements and leadership qualities. The professors are expected to bring research leadership at an internationally competitive level and a commitment to training future cardiovascular scientists. They must support and enhance the overall cardiovascular research strategy of the university and the added value to the BHF of making the award and they must devote the majority of their time to the direction of research with limited administrative, clinical or teaching duties.

Senior research leaders in clinical or basic cardiovascular science with an established international reputation, substantial output of high impact research papers and a long-term track record of attracting significant peer-reviewed research grant income as principal investigator are invited to apply. Applicants are normally less than 55 years old at the time of appointment. Professorships are awarded in partnership with universities that can demonstrate a strong commitment to cardiovascular research. An outline case should first be made by the Head of School or Faculty to the BHF Medical Director.

**Vascular Anaesthesia Society of Great Britain and Ireland**

**Departmental awards**

Closing Date: none  
Award amount: £10,000

Support research and audit projects in the field of vascular anaesthesia undertaken by anaesthetic trainees. The purpose is to advance both the care of patients undergoing vascular procedures and the training and development of the vascular anaesthetics of the future. The lead applicant must be a member of the VASGBI and hold a substantive consultant or equivalent. The research project must be undertaken by trainees and fellows not holding a substantive or locum consultant post.
**British Society of Echocardiography**

**Travel bursaries**

Closing Date: none  
Award amount: 75% of incurred costs

Enable members to attend echo meetings. Each applicant must be a current BSE member working in a public hospital in the UK or Ireland. Priority is given to physiologists over medics. No more than one award will be given to a single institution in the travel bursary year.

**National Institute of Neurological Disorders and Stroke**

**Small vessel vascular contributions to cognitive impairment and dementia biomarkers development projects (UH2/UH3)**

Closing Date: 10-May-16  
Award amount: US$3,750,000

Supports research that evaluates and further develops candidate predictive, diagnostic, target engagement and progression candidate biomarkers of small vessel cerebrovascular disease in human vascular contributions to cognitive impairment and dementia and vascular or Alzheimer’s mixed dementias. Biomarkers development projects that will study biomarkers as individual projects and concurrently establish the interactive consortium and then work together as a consortium to perform collaborative cross-project multidisciplinary studies to further evaluate and develop the most promising biomarker candidates to the point of being ready for large scale multisite clinical validation studies including towards FDA qualification of small vessel VCID biomarkers for phase two and phase three clinical trials. This FOA is only for studies related to human biomarkers.

**British Council**

**BIRAX regenerative medicine initiative**

Closing Date: 12-May-16  
Award amount: £400,000

Enables scientists in both the UK and Israel to carry out collaborative research which furthers advances in the field of regenerative medicine. The scheme funds research that: explores the use of stem cell technology and tissue engineering in the context of fundamental disease processes; discovers new mechanisms that might be targeted to develop novel therapeutic applications of regenerative medicine; advances understanding of stem cell biology, using lessons learnt from developing tissues and organs, or the mechanisms underlying cell fate and the principles of cellular pluripotency for the development of stem cell-based therapies; advances cell and gene therapies.

**European Society of Cardiology**

**Research prize in acute cardiovascular care**

Closing Date: 13-May-16  
Award amount: €3,000 + free reg to 2016 congress
Recognises unpublished research in the area of acute cardiovascular care applied to the development of novel therapeutic, diagnostic and logistical strategies to improve patient care and long-term outcomes. There are three categories for submission:

- clinical outcomes
- quality of care
- translational

All scientists or clinicians who are members of the Acute Cardiovascular Care Association may apply.

**European Society of Cardiology**

**Outstanding achievement award**

Closing Date: 15-May-16  
Award amount: €3,000

Recognises outstanding achievements by basic cardiology researchers in the early stages of their careers. Applicants must be members of an ESC working group and should typically be less than 45 years old. They must have established themselves recently as independent investigators having proven productivity over several years.

**Department of Health**

**Health technology assessment programme: commissioned calls**

Closing Date: 19-May-16  
Award amount: unlimited

Expressions of interest for primary research in two stages, under the commissioned funding stream of its health technology assessment programme. Proposals are sought on the following topics:

- carboprost versus oxytocin as the first line treatment of primary postpartum haemorrhage
- unscheduled bleeding in women using long acting reversible contraception

**Medical Research Council**

**Research grants – population and systems medicine**

Closing date: 25-May-16  
Award amount: £1M

Suitable for focused research projects that may be short- or long-term in nature. In addition, they can be used to support method development and continuation of research facilities and may involve more than one research group or institution.

Any UK-based researcher who can demonstrate that they will direct the proposed research and be actively engaged in carrying it through is eligible to apply. The minimum academic qualification required is a graduate degree, although usually a PhD is required. Less experienced researchers should apply in collaboration with a more senior colleague. Applications can include industry partners.
Medical Research Council
Programme grants – population and systems medicine

Closing date: 25-May-16  Award amount: unspecified

Provide large and long-term renewable funding. A programme is defined as a coordinated and coherent group of related projects that may be developed to address an interrelated set of questions across a broad scientific area. The expectation is that not all questions will necessarily be answered within the tenure of the award. Parts of the programme may be continuations of current activity, but other elements should be innovative and ambitious.

European Society of Cardiology
ESC First Contact Initiative

Deadline: 25-May-16  Award amount: €2,500

Support the establishment of research links from young scientists from European institutions to hosting institutions in a foreign country within or outside Europe. Applications will be considered in two areas:

- to establish more permanent contacts, leading to a fellowship or a research affiliate position for the development of a research project in the area of basic cardiovascular sciences
- to learn new skills that will be beneficial to the researcher in their future career

Applicants should be no older than 35 years and must be active in the area of cardiovascular sciences. Candidates must be members of either an ESC national society or a group included in the Council for Basic Cardiovascular Science. Five grants are available.

Royal Society of Medicine
Venous pump-priming grant

Closing date: 25-May-16  Award amount: unspecified

Supports research that benefits the phlebology and endovenous fields. Trainee specialists under 40 years of age at the time of application may apply.

Vascular Anaesthesia Society of Great Britain and Ireland
Departmental awards

Closing Date: 27-May-16  Award amount: £10,000

Support research and audit projects in the field of vascular anaesthesia undertaken by anaesthetic trainees. The purpose of these awards is to advance both the care of patients undergoing vascular procedures and the training and development of the vascular anaesthetics of the future. The award is open to all anaesthetic trainees in the UK and Ireland not holding a substan-
tive or locum consultant post. Applicants must be working in or affiliated with a department providing vascular anaesthetic services.

**British Society for Cardiovascular Research**  
**Bernard and Joan Marshall research prizes**

Closing date: 31-May-16  
Award amount: £4,000

Recognise outstanding research in any area of cardiovascular biology or medicine. Two prizes are available:
- the Bernard and Joan Marshall young investigator prize, worth £2,500, for nominees training for a higher degree or those who have received their higher degree in the past three years
- the Bernard and Joan Marshall research excellence prize, £4,000, for nominees who have received their higher degree no more than 15 years ago

Nominations are welcomed from BSCR members in academia and the pharmaceutical industry.

**European Society for Vascular Surgery**  
**Research grants**

Closing Date: 31-May-16  
Award amount: unspecified

Enable young European vascular surgeons to conduct research projects. Applicants must be European, trainee members or full members of the society and no more than 40 years of age.

**Heart Research UK**  
**Translational research project grants**

Closing date: 01-Jun-16  
Award amount: £150,000

Aim to support research which can improve the health and treatment of patients with cardiovascular disease by advancing current practice or enabling innovative discoveries to be efficiently transferred into practical tools to prevent, diagnose and treat human disease.

**National Institute on Aging**  
**Diabetes and cardiovascular disease in older adults**

Closing date: 05-Jun-16  
Award amount: unspecified

Encourages basic, clinical and epidemiological outcomes research on the impact of age on the development of, diagnosis and management of diabetes and CVD complications in older persons or animal models. Research supported by this initiative is expected to elucidate the role of ageing mechanisms that underlie the increased vulnerability of older adults to DM and its CVD complications and to provide evidence-based guidance to improve more appropriate diagnostic
criteria, risk stratification and intervention recommendations to prevent the onset, or improve short- and long-term outcomes, of DM and CVD in older persons.

**GW4**

**Building Communities Initiator Funds and Accelerator Funds**

Closing date: 06-Jun-16

The Building Communities programme is designed to build new, high-quality GW4 research communities or help existing collaborations to build on their work and secure long term sustainable funding.

**European Society of Cardiology**

**Great grant for thrombosis researchers**

Closing Date: 15-Jun-16  Award amount: €12,000

Enables young scientists, aged 35 years or under, to gain training in basic research techniques in the field of atherothrombosis at well-known high quality research laboratories.

**European Research Council**

**Starting Grants**

Internal closing date: 12-Jul-16  Award amount: €1.5M

Intended to enable exceptional researchers between 2 and 7 years from PhD completion to become independent research leaders and strengthen their own research team or programme. All research fields are supported.

Proposals will be handled though the University's major bids process.

**British Council**

**Newton Fund**

Closing date: 27-Jun-16  Award amount: unspecified

An opportunity to initiate or develop international collaborations through official development assistance (ODA) funds. The Fund aims to promote the economic development and welfare of either the partner countries or, through working with the partner country, to address the problems of low-income and vulnerable populations.

- Travel Grants for early-career researchers
- Workshops for early-career researchers led by Leading Researchers
- Institutional Links that support collaboration between groups led by Leading Researchers or Established Researchers

Participating countries include: Brazil, Colombia, Egypt, India, Indonesia, Kazakhstan, Mexico, Philippines, Turkey, South Africa, Thailand
**European Society of Cardiology**

**European fellowships in heart failure**

Closing date: 30-Jun-16 (forecast)  
Award amount: €60,000

Aim to provide early career researchers with high quality experience that will enhance their future career and provide added value to their home institution or country. Applicants must be below 35 years of age and have provisional acceptance from the proposed training institution, but not be based there already. Clinical applicants must have completed a major part of specialist cardiological training but not yet have obtained a permanent or consultant post. Basic scientists applicants must have completed their PhD.

**European Society of Cardiology**

**Proctor Programme**

Closing date: 29-Jul-16  
Award amount: €8,200

Enables cardiologists to learn specific techniques and procedures in the fields of arrhythmias and cardiac pacing and to further the career of former EHRA fellows on their return to their home country. Applicants must be members of EHRA and be citizens or permanent residents of a regular ESC member country.

**European Society of Cardiology**

**Young thrombosis researchers exchange grant**

Closing Date: 30-Jul-16  
Award amount: 12 months’ salary

Enables young investigators to perform basic or clinical research on thrombosis at a host institution in another society member country or affiliated country. Applicants must be members of the Young Thrombosis Researchers Group who are aged 35 or less and citizens of an ESC member or affiliated country. Applicants must not have yet attained a permanent academic or clinical position. Proposals for 10-month projects are considered for applications involving host institutions in Scandinavia, the Benelux countries, Switzerland or the UK.

**European Hematology Association**

**Research grants**

Closing Date: 01-Aug-16  
Award amount: €160,000

Support any aspect of the study of haematology in its broadest sense, including molecular biology and biochemistry, virology, immunology, cell biology, epidemiology and diagnostic and therapeutic strategies. The following awards are available:

- clinical fellowships – applicants must be medical doctors who have research experience and a medial PhD, or medical doctors who have obtained their medical degree less than 12 months prior to the application
• non-clinical advanced fellowships – applicants must be non-medical scientists within eight years of receiving their PhD, or medical doctors who have obtained their medical degree less than 12 months prior to the application
• non-clinical junior fellowships – applicants must be non-medical scientists within four years of receiving their PhD

Applicants must be members or guests of the society at the time of application.

**European Association for Cardio-Thoracic Surgery**

**Techno-college innovation award**

Closing Date: 16-Aug-16  
Award amount: €5,000

Recognises technological breakthroughs in all areas related to thoracic and cardiovascular research, particularly for new surgical methods or devices. Innovations can be in the form of patents, inventions, new products, ideas or services. Surgeons, engineers, innovators, researchers and scientists in the field of thoracic and cardiovascular surgery may apply.

**Bayer**

**Grants4Targets—novel targets for drug development**

Closing date: 31-Aug-16  
Award amount: €125,000

Aims to encourage research on novel targets and disease-related biomarkers in the fields of oncology, gynaecology, cardiology, haematology and ophthalmology. The following different types of grants, depending on the specifics of the target and its development phase will be awarded:

• support grants worth between €5,000 and €10,000 to advance research on targets that are at a very early stage of discovery
• focus grants worth between €10,000 and €125,000 for more mature ideas, such as addressing specific aspects of a target as a first step towards transferring it to the drug discovery process.

**NIHR CLAHRC West**

**Training bursary scheme**

Closing date: 01-Feb, 01-Jun, 01-Sep annual  
Award amount: £600

Gives staff from the local NHS, health and social care sector the opportunity to attend high quality research and evaluation training at half the price. Bursaries are available for 50 per cent of the course fees; the applicant or their employer is expected to fund the remaining 50 per cent. The bursary aims to promote wider engagement and improve skills in research and evidence in the CLAHRC West patch, particularly for those who have not previously had opportunities for this type of training.
You can apply for bursary support towards any course relevant to research and evaluation in health and social care. This includes study days, workshops and short courses (including individual modules) but not MSc or PhD tuition fees.

Medical Research Council
Clinical research training fellowship

Closing Date: 08-Sep-16 
Award amount: salary, research expenses, travel costs

Enables clinically qualified, active professionals to undertake specialised or further research training in the biomedical sciences within the UK. Applications from basic studies to translational and developmental clinical research are welcome. The fellowship supports clinicians to undertake a higher research degree, while medically qualified applicants with a PhD can undertake early postdoctoral training enabling them to be competitive at the clinician scientist fellowship level.

Veterinarians may apply if they have equivalent qualifications. Postdoctoral applicants may apply if they are clinically qualified individuals who received their PhD five or more years ago and have not been active in academic research since. Fellowships are for a period of two to three years, or four years for patient-oriented clinical research.

European Society of Cardiology
Arrhythmias and cardiac pacing training fellowships

Launching: Sept 2016 
Award amount: €25,000

Promote the development of academic medicine in the field of arrhythmias and cardiac pacing with emphasis on implantable cardioverter defibrillators and cardiac resynchronisation therapy, and aim to help young candidates to attain clinical competence and acquire high quality experience in electrophysiology practice.

Candidates can be both individuals and centres. Individuals must be no more than 40 years old and have completed their cardiology training but not yet have obtained a consultant or equivalent permanent status. All applicants must be EHRA members and be citizens or permanent residents of a regular ESC member country or an ESC affiliated national society. The fellowships should be undertaken outside the applicant’s home country.

European Society of Cardiology
Clinical electrophysiology training fellowships with emphasis on catheter ablation

Launching: Sept 2016 
Award amount: €25,000

Aim to promote the development of academic medicine in the field of clinical electrophysiology by providing physicians with an opportunity for clinical training in the field of arrhythmias and cardiac pacing with emphasis on catheter ablation. One-year training fellowships are offered to
physicians with more extensive experience in electrophysiology and will deal with advanced mapping diagnosis and ablation of complex substrates, amongst other topics.

Candidates can be both individuals and centres. Individuals must have completed parts of their cardiology training but not have obtained a permanent, senior staff or consultant post. They should preferably be less than 40 years of age. All applicants must be EHRA members and be citizens or permanent residents of a regular ESC member country.

**European Atherosclerosis Society**

**Anitschkow prize**

Closing date: 25-Sep-16 (forecast)  
Award amount: €10,000

Recognises outstanding research in the field of atherosclerosis and linked metabolic disturbances. All candidates must be nominated by a member of the society. The candidate is required to be an active researcher with an excellent track record of publications in the atherosclerosis area.

**Heart Research UK**

**Novel and emerging technology grant**

Closing date: 01-Oct-16  
Award amount: £250,000

Supports research on novel and emerging technologies and new applications of existing technologies to diagnose, treat and prevent heart disease and related conditions. The grant may support approaches including tissue and bioengineering, development and evaluation of new diagnostic and therapeutic devices, bioimaging, nanotechnology, biomaterials, genomic and proteomic approaches, computational biology and bioinformatics. Emerging technologies or strategies in the management of risk factors, the evaluation of invasive cardiology procedures, the evaluation of new surgical approaches to cardiovascular disease, strategies aimed at improving the efficacy of ventricular assist and other devices, and the outcome of resuscitation after cardiac arrest may also be supported.

**Dowager Countess Eleanor Peel Trust**

**Peel and Rothwell Jackson postgraduate travelling fellowships**

Closing Date: 04 Nov 16  
Award amount: £30,000

Enable researchers to spend up to one year at a centre of international excellence for the purpose of research, advanced study or the acquisition of a new clinical skill unlikely to be available in the UK. Candidates should be qualified and registered to practise in medicine, nursing or another health profession.

**Fulbright Commission**

**British Heart Foundation scholar award**

Closing Date: 06-Nov-16  
Award amount: unspecified
Enables a UK academic or professional to pursue laboratory-based research into the biomedical or clinical aspects of cardiovascular disease at any accredited higher education institution in the US. Research projects must not involve direct clinical contact with patients.

Support includes travel expenses for one round trip economy flight and a salary grant towards institutional fees, accommodation and general maintenance costs while in the US. A number of benefits, sickness and accident benefit coverage and visa sponsorship are also included as well as reasonable healthcare insurance.

**Great Britain Sasakawa Foundation**

**Butterfield awards**

Closing Date: 15 Dec 16  
Award amount: £15,000

Aim to encourage and facilitate exploratory exchanges and collaborations between qualified professionals in Japan and the UK, as well as investigation of scientific, clinical, social and economic aspects of medicine in which Japanese and British scientists, practitioners and policy makers may learn from each other. Applicants are normally expected to have an existing research record, but consideration will also be given to practitioners managers, carers or others in health-related fields. Preference will be given to those who have not previously been involved in a UK-Japan collaborations, and applications from early-stage researchers are particularly welcome. Areas currently of interest include: health management; public health; health education; genetic aspects of ageing; palliative care; stem cell technology; patient and carer involvement; drug testing; cancer; voluntary sector development; architecture and design for healthcare.

Substantial funds are also available for support of conferences and publications bringing together UK and Japanese expertise.

**European Society of Hypertension**

**Talal Zein research grant in hypertension**

Closing Date: 31 Jan 17  
Award amount: €30,000

Supports a young researcher’s work in the field of hypertension and cardiovascular prevention. Eligible applicants are PhDs or MDs who are under the age of 45.
Cigarette smoke but not electronic cigarette aerosol activates a stress response in human coronary artery endothelial cells in culture


It is generally acknowledged that e-cigarettes are unlikely to be as harmful as conventional cigarettes, but there is little data that quantifies their relative harms. We investigated the biological response to e-cigarette aerosol exposure (versus conventional cigarette smoke exposure) at the cellular level, by exposing human coronary artery endothelial cells (HCAEC) to aqueous filtered extracts of e-cigarette aerosol or cigarette smoke and looking at gene expression changes consistent with a stress response. This included genes controlled by the oxidant-stress sensing transcription factor NFR2 (NFE2L2), and cytochrome P450 family members.

Cigarette smoke extract (CSE) was created using mainstream smoke from a single cigarette drawn through 10 ml of endothelial cell growth media MV2. Electronic cigarette aerosol extract (eCAE) was created using the same apparatus, using a constant power output of 10.8 w (4.2 V) and 18 mg/ml nicotine solution. eCAE was generated using 5 cycles of 5 s heat with at least 10 s in between each puff to allow the coil to cool, air being drawn through the device at 70 ml/minute.

HCAEC responded to the noxious components in CSE, resulting in activation of NRF2 and upregulation of cytochrome p450. However, eCAE did not induce NRF2 nuclear localisation, upregulation of NRF2-activated genes, or the upregulation of cytochrome p450.

The use of e-cigarettes as a substitute for conventional cigarettes is likely to reduce immediate tobacco-related harm, at least with respect to cardiovascular harms.

Image caption: Cellular localisation of NRF2 as assessed by immunocytochemistry 2 hours after a single treatment. CSE induced a shift in localisation to a predominantly nuclear localisation, co-localising Cigarettes, E-Cigarettes and Stress Response 14 with the nuclear blue dapi staining (bottom row of panel B). Error bars represent the SEM.
RECENT PUBLICATIONS


Baldassarre LA, Raman SV, Min JK et al. (2016). Noninvasive Imaging to Evaluate Women With Stable Ischemic Heart Disease. JACC: Cardiovascular Imaging. 9(4), pp421-435

Image caption: Invasive Angiogram With Nonobstructive CAD. Analysis using QCA. (Left) Coronary computed tomography angiography (CTA) evidence of high-risk plaque including positive remodeling, spotty calcification, and low-attenuation plaque; Hounsfield units (HU) <30. (Right) The invasive angiography reveals mild CAD, whereas coronary CTA identifies high-risk plaque features in the same patient with mild CAD. CAD = coronary artery disease; QCA = quantitative coronary angiography.


Kazmi N & Gaunt TR (2016). Diagnosis of Coronary Heart Diseases using Gene Expression Profiling: Stable Coronary Artery Disease, Cardiac Ischemia with and without Myocardial Necrosis. PLoS ONE. 11(3), e0149475


*Image caption:* Stenotic atherosclerotic plaques would be expected to experience significantly elevated shear stress on the upstream face of the plaque, modifying endothelial behaviour. Similarly, on the downstream surface of the plaque, the endothelium would be expected to experience disturbed flow, promoting higher rates of apoptosis. Image is a longitudinal section of a human coronary artery, with elastin van Gieson stain.


*Image caption:* Cytospin from an individual erythroid colony stained with May Grünwald/Giemsa showing a megakaryocyte (M) with multiple nuclei and surrounding erythroblasts (E).

CONTACTS

Bristol CardioVascular is run by a Steering Group:

Chair: Robert Tulloh
Consultant Paediatric Cardiologist and
Honorary Professor of Clinical Sciences

- Dr Chiara Bucciarelli-Ducci Imaging
- Prof Massimo Caputo Congenital Heart Surgery
- Professor Costanza Emanuelli Cardiovascular Regeneration
- Professor Sarah George Cardiovascular Signalling
- Dr Emma Hart Autonomic Regulation & Dysfunction
- Dr Andrews James Cardiac Biology
- Dr Thomas Johnson Cardiology
- Dr Carl May Early Career Representative
- Dr Stuart Mundell Vascular Biology and atherothrombosis
- Prof Ruth Newbury-Ecob Clinical Genetics
- Dr Wioletta Pijacka Early Career Representative
- Dr Yan Qiu Early Career Representative
- Dr Simon Satchell Renal, Diabetic & Hypertensive Disease
- Megan Stevens Early Career Representative
- Professor Saadeh Suleiman Cardiac Biology
- Dr Nicholas Timpson Population Health and Epidemiology
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