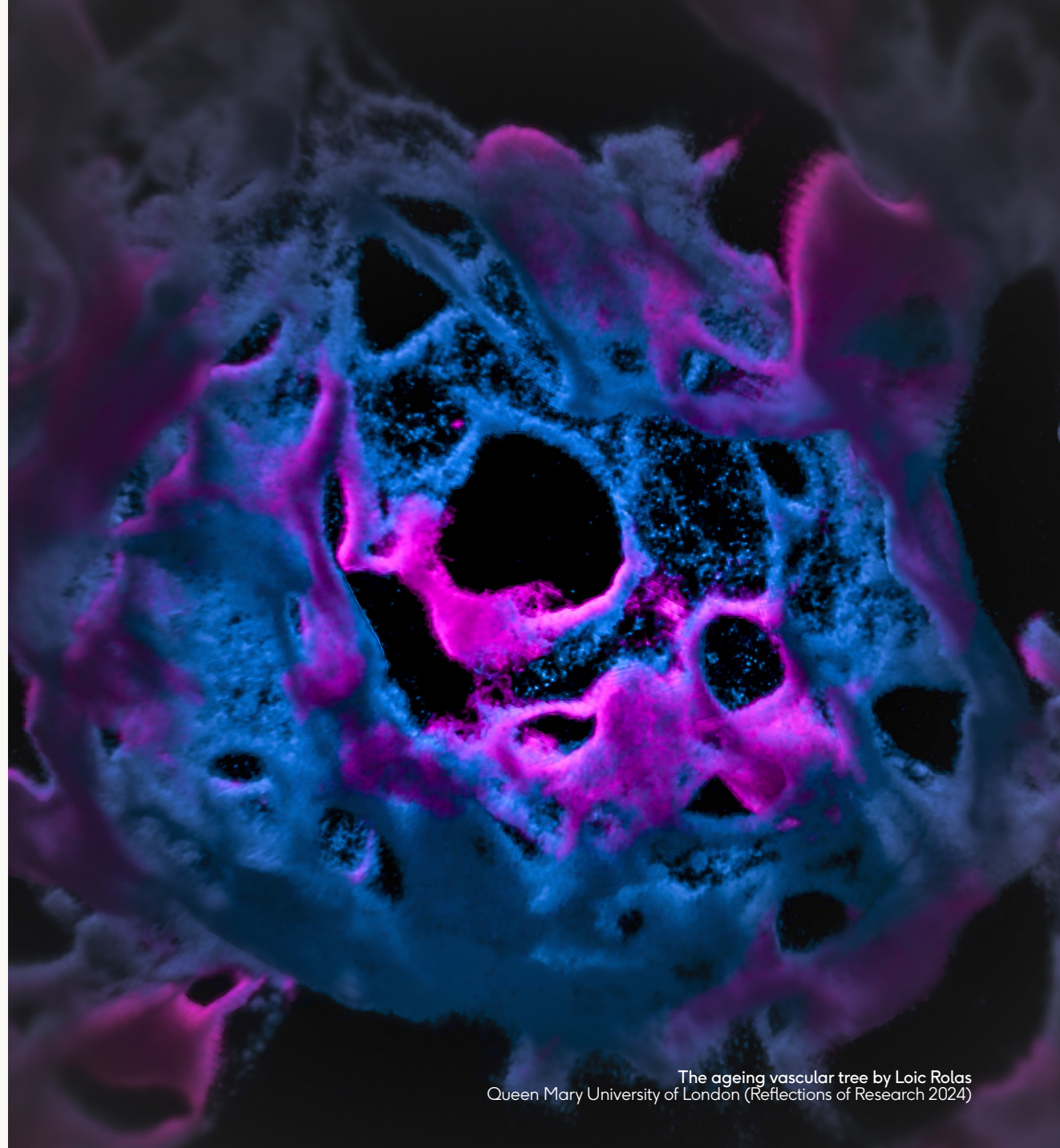




Our strategic approach to research funding

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Chief Scientific and Medical Officer, and
Professor James Leiper, Director
of Research
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The ageing vascular tree by Loic Rolas
Queen Mary University of London (Reflections of Research 2024)

Foreword

**Professor Bryan Williams,
Chief Scientific and Medical
Officer, and Professor
James Leiper, Director
of Research**



Professor Bryan Williams,
Chief Scientific and Medical Officer

We have made incredible progress in tackling cardiovascular diseases, thanks to the hard work of our brilliant research community. However, cardiovascular diseases remain the world's biggest killer, claiming a life every three minutes in the UK alone.

We are currently facing immense challenges: a crisis in clinical academic medicine, squeezed university finances, a health system under unprecedented pressure, alongside increasing research costs. We are also faced with dramatic demographic shifts leading to an ageing population, living longer but with more complex diseases. Healthcare needs to radically change to meet this challenge, with new ways of delivering more effective disease prevention, earlier diagnosis and more curative interventions. As with all improvements in health that have gone before, this can only come from research and innovation and their implementation.

We are on the cusp of what we believe is a revolutionary era of science and technology. Emerging research areas, including AI, data science, supercomputing, advanced therapies including gene editing techniques and RNA therapies, bioengineering, technology, and robotics offer huge opportunities for lifesaving advances in the years ahead. But we must embrace these new scientific disciplines in

cardiovascular science and diversify our science base if we are to tackle the fundamental challenges in cardiovascular research and medicine, and make significant strides towards delivering our mission.

At British Heart Foundation, we want to stop cardiovascular diseases developing where we can, save lives and improve healthy life expectancy, and support those affected by cardiovascular diseases. To achieve this, we must be bolder and even more ambitious, unleashing the power of this new era of science and technology.

To deliver on this mission, we must ensure our funding schemes nurture the future of cardiovascular science and medicine by attracting, training and retaining the very best minds and future leaders from these new scientific disciplines. To do this we have revised our support schemes for early career and future research leaders, aligning with the new national template for research careers, providing longer-term, flexible and secure support. Whilst also supporting established research leaders with our programme grants and new BHF Professorship scheme.



Professor James Leiper,
Director of Research

We also recognise that tackling the big unresolved challenges of our time requires partnership. We can lead but we cannot do this alone. We need scientifically diverse and inclusive teams working across boundaries with common purpose, building thematic networks of research excellence. This extends to partnerships beyond the discovery engines of our world-class universities, embracing the ingenuity and scale of industry, the NHS, wider life sciences sector and where necessary global partners. A commitment to stronger partnership with patients and the public to inform and co-create our research mission. As well as strategic partnerships with other funders to better leverage our research investment to achieve the levels of funding needed to make a difference.

To this end, we are excited to unveil a series of transformative changes in our grant schemes. These changes are beyond incremental and are designed to support the most innovative ideas, providing the necessary resources to translate vital research into patient benefits. Our commitment to funding excellent research remains unwavering, and we are determined to ensure that the best researchers and the best ideas are supported appropriately to deliver maximum impact.

The changes outlined below are only the beginning. Over the next five years, we will

continue to refine our programmes and schemes in line with our new strategy and with the agility needed to respond to new developments and opportunities as they emerge.

By working together, we can drive impact through our revised and expanded translational and clinical award schemes, while continuing to invest in the very best discovery science. Our stronger focus on collaboration and partnership will help us scale up our ambition and grow our research investment to deliver real impact by supporting the translation of world-leading discovery science into practice-changing medicine and life-changing patient benefit.

Thank you for joining us on this journey. Many cardiovascular diseases are preventable and, for those that are not, the outlook for patients can be greatly improved. Together, through investment in and delivery of, world leading research and innovation we believe we can create a future where cardiovascular disease is no longer the world's biggest killer.

Our strategy

Funding groundbreaking research is at the core of BHF's organisational strategy.

Our vision is a world in which everyone has a **healthier heart for longer**. We will get closer to realising this vision by focusing on three ambitious goals:

1. We will **stop heart disease before it starts** by revolutionising how we prevent it.
2. We will **save more lives from heart disease** by discovering groundbreaking treatments and cures.
3. We will **support everyone with heart disease to live longer, healthier lives** by ensuring they get the information, care and support they need.

To achieve these goals, we need to grow the scale, scientific breadth and impact of UK cardiovascular research. Doing so will mean being far bolder in our approach and ensuring we can grasp an era of immense scientific opportunity to make the breakthroughs millions of people desperately need.

Further information can be found on the [Our Strategy](#) page of the BHF website.



Our research funding schemes – guiding principles

The changes to our research funding are all about being bolder and more ambitious to unleash the power of science and technology. We have modified our funding schemes based on three guiding principles:

Diversify the science base:

- embracing new scientific disciplines and building research capacity
- driving impact through translational and clinical awards, while continuing to invest in the best discovery science
- modernising our personal awards to attract, support and retain the best talent in cardiovascular research

Partner on specific challenges:

- building networks of excellence that extend beyond traditional higher education institutions (HEIs), embracing industry and other partners
- supporting our strategic goals through focused funding initiatives in partnership with other organisations and national infrastructures

Leverage additional skills, technologies and funding:

- growing our research investment by leveraging investments from our partners, including industry
- accelerating the translation of research discoveries into patient benefit

We will be bolder and more ambitious to unleash the power of science and technology



**Diversify
the science
base**



**Partner
on specific
challenges**



**Leverage
additional skills,
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funding**

Research leadership

We have redesigned our leadership structure to effectively deliver our ambition.

Professor Bryan Williams – Chief Scientific and Medical Officer (CSMO): leads the vision, strategy and activities to deliver BHF's mission.

Professor James Leiper – Director of Research: leads on the research funding schemes and has overarching management of the Research Team.

Doctor Silvia Pedroni – Director of Operations/Chief of Staff: provides oversight of the directorate and external activity relevant to the CSMO and represents the CSMO in key internal and external meetings.

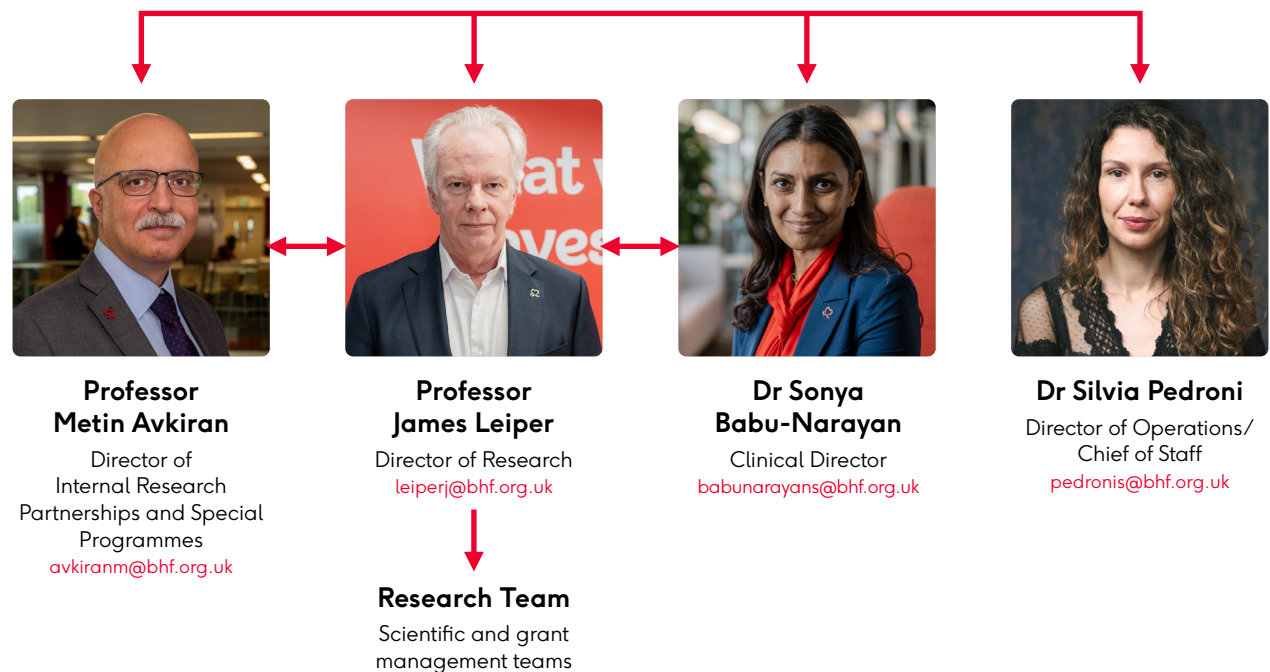
Professor Metin Avkiran – Director of International Research Partnerships & Special Programmes: provides leadership of the established International Cardiovascular Research Partnership Awards scheme, Big Beat Challenge award (CureHeart), and leads the implementation of new special programmes in collaboration with the Director of Research.

Doctor Sonya Babu-Narayan – Clinical Director: provides clinical research leadership working closely with the CSMO, Director of Research and Research Team.



Professor Bryan Williams

Chief Scientific and Medical Officer
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Research funding schemes

We are committed to funding research excellence from discovery science through early translation, clinical science and trials, to implementation for patient benefit. Embedded across our research strategy is our commitment to foster an inclusive cardiovascular research culture and community, and encourage inclusivity in the way BHF supports and funds cardiovascular research.



A window into the heart of artificial intelligence by Dr Michelle Williams University of Edinburgh (Reflections of Research 2023)

To support the best science, we have changed our funding schemes to more effectively support bold and ambitious ideas. We have rationalised our offers and created a cohesive provision to support the translation of research discoveries to clinical impact.

In many cases we have lifted or removed the funding caps or increased award amounts, so that the level of funding doesn't limit ambition, and in recognition of the increased costs associated with the delivery of research.

Although we broadly categorise research as discovery science and clinical science, we emphasise that we are interested in all categories of research from the most basic fundamental research through to clinical implementation, and from any relevant research discipline, as long as the research is of the highest quality and with clear relevance to our mission.

Moreover, when we refer to discovery or clinical scientists, we refer to scientists from all disciplines. In the clinical environment this includes nurses, pharmacists, technicians and other allied health professionals.

Finally, we will ensure that there are no barriers to success for any person to receive a research award from BHF, the sole determinants of success being the talent of the applicant(s), and quality and relevance of the proposal. With this in mind, we will continue to deliver BHF's research EDI strategy, Igniting Change, with an initial focus on tackling sex inequalities in cardiovascular research and cardiology.

We will implement changes to our schemes over time and continuously refine our offer. Up-to-date details for our schemes and eligibility criteria can be found on the [What We Fund](#) page of the BHF website.

Key Highlights

- **Cardiovascular Grand Challenges:** a new annual funding competition to stimulate the science community, nationally and internationally, to combine forces to propose innovative solutions in areas of strategic importance. We will award up to £10 million over five years to support the most compelling proposal that seizes a timely opportunity to address a significant unmet need.

“ We have lifted or removed the funding caps, or increased award amounts, so that the level of funding doesn't limit ambition.”

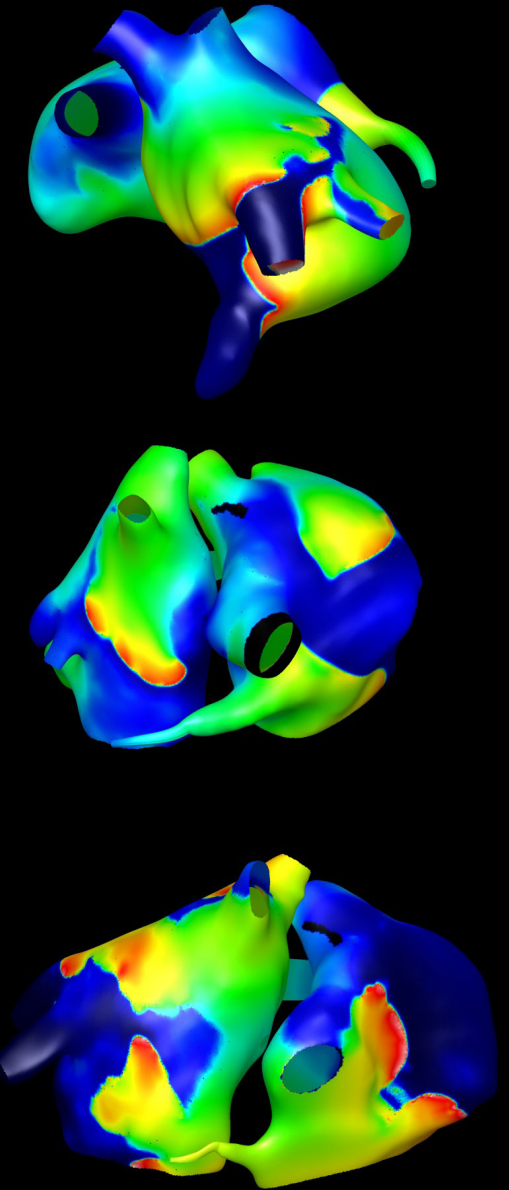
Professor Bryan Williams

Moreover, we expect significant awards at this level to leverage additional substantial investment from partners in the research endeavour.

- **Project Grants:** support research to test a specific hypothesis. We have increased the maximum awardable amount for this scheme to £500,000 and in exceptional circumstances we will support projects for up to four years.
- **Programme Grants:** fund programmes of research that comprise multiple related aims for a duration of five years. We want to support the most ambitious and innovative ideas and recognise that these will require increased research budgets.
- **Translational awards:** we are committed to ensuring advancements in discovery science are pulled through into evaluation in patients and for this purpose we have made substantial changes to this scheme. We have launched a new translational pump-priming award to enable researchers to answer a key question, validate data and provide sufficient evidence to derisk subsequent larger scale investment to accelerate development of their innovation to the next stage on the translational pathway. We have also refreshed the translational award scheme. In this revised scheme, we want to see novel discovery science and innovative technologies pulled through into early phase human trials as a critical first step towards

clinical application. Projects funded through this revised scheme can start and finish at any point along the translational pathway from initial development, through pre-clinical studies to early phase clinical trials (up to and including phase II). To enable this, we have removed the maximum cap on these awards to encourage more ambitious applications with a focus on potential for subsequent clinical impact and value for money.

- **Clinical Study Grants:** this scheme supports larger clinical trials, usually later phase (phase III/IV) and large observational studies of specific patient groups.
- **Healthcare Innovation Fund:** this scheme aims to test and evaluate the implementation of innovative approaches to the delivery of improved services for people with cardiovascular disease. More information can be found on the [Healthcare Innovation Fund](#) page of the BHF website.



Atrial digital twins by Dr Caroline Roney
King's College London (Reflections of Research 2021)

Research capacity building and leadership schemes



We want to nurture and support future leaders in cardiovascular research and, to this end, we have refreshed, simplified and rationalised our fellowship offer to attract, retain and support the best minds in cardiovascular research. Ultimately, our focus is on growing the strength, breadth and diversity of the UK's cardiovascular research workforce, enabling it to power the discoveries of the future.

Our new provision is aligned with the review commissioned by the Office for Strategic Coordination of Health Research (OSCHR) to reverse the decline in academic health research. Our offer provides both discovery and clinical scientists with opportunities and support at every stage of their careers, with the resources and security to develop as leaders in cardiovascular research. We also recognise the importance of flexibility during research careers when needed. We have used these principles in reviewing and changing our schemes.

Research training

- **Three-year PhD:** we are committed to support training in cardiovascular research for discovery scientists. We will continue to fund non-clinical PhD studentships for named individuals throughout the year, recognising that not everyone is ready to start this training at the same time. We will continue to fund named non-medical healthcare professional PhD studentships, usually over a three-year period.
- **Four-year PhD Programme:** we have refreshed this scheme to promote interdisciplinarity with a clear thematic focus across institutions. We want to stimulate training across scientific disciplines for new generations of researchers to enable them to tackle established and emerging challenges in cardiovascular research.



Our new BHF personal research awards schemes align with the phases of the new national scheme for discovery and clinical scientists (Adapted from *Clinical researchers in the United Kingdom: Reversing the decline to improve population health and promote economic growth* by UKRI)

- **MB-PhD and Clinical Research Training Fellowships:** with these two schemes offering PhD level training opportunities at different stages of clinical training, supporting individuals aspiring to become clinical academics in cardiovascular research.

Post-higher degree training fellowships

Our new fellowships proposition will support discovery and clinical scientists. The schemes have been designed to address the challenges that occur in the respective career paths and recognising the need for flexibility and stability for each individual.

- **Early Career Fellowships:** these new schemes aim to support researchers following successful completion of PhD studies and represent the first step towards scientific independence.
- **Future Leader Fellowships:** these fellowships will allow researchers to consolidate the transition to independence and have been extended to seven years of support to embed flexibility and security. The new scheme will

provide much needed flexibility during this stage of career development guaranteeing longer term stability.

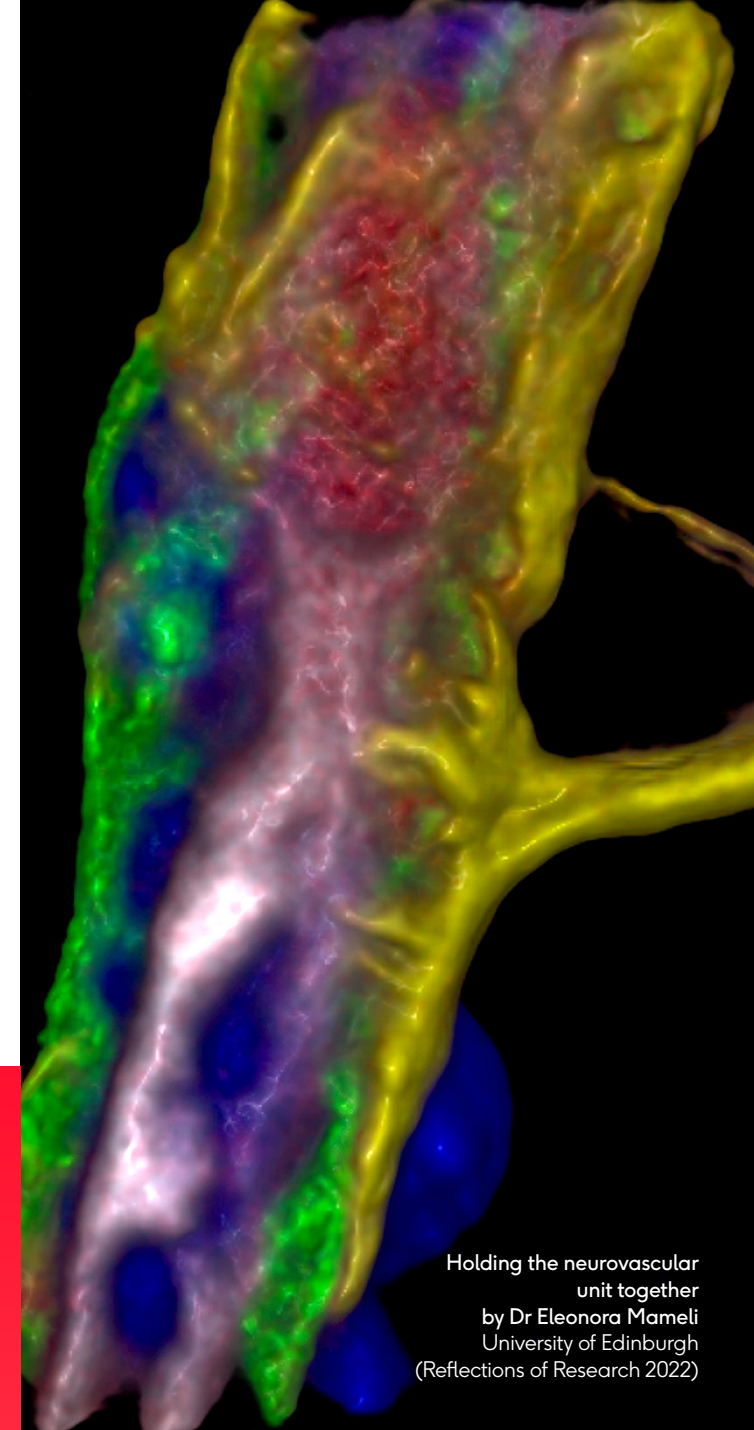
- **Senior Fellowship:** this scheme allows the most talented and independent researchers to expand their research portfolio towards programmatic grants. We expect universities to provide long-term stability for individuals at this stage of their career. To facilitate the transition to fully funded university positions whilst ensuring protected time for research, we will pay 50% of the applicant salary. This scheme will be limited to five years.

Senior Leadership

- **BHF Research Professorship:** we have refreshed the support for cardiovascular discovery and clinical scientists at the professorial level. This scheme is the pinnacle of BHF personal awards and aims to support exceptional individuals to provide strategic leadership in cardiovascular research across the UK. Awardees will act as BHF spokespersons in their area of expertise.

“ We are committed to funding the best and brightest discovery and clinical scientists throughout the various stages of their career.”

Professor Bryan Williams



Holding the neurovascular unit together
by Dr Eleonora Mameli
University of Edinburgh
(Reflections of Research 2022)

Research infrastructure



Nationwide Collaborations

We want to connect the best minds across the country, creating research synergies and partnerships to accelerate discovery, technological advancement, translation and clinical impact in cardiovascular research. For this purpose, we will create thematic Research Excellence Networks that embrace the finest talent working with common purpose across England, Scotland, Wales and Northern Ireland. These networks will bring together research institutions and other key partners, around common themes and promote the sharing of resources and expertise to address big but tractable research questions.

International Collaborations

We are committed to continue and grow our international partnerships to tackle fundamental research questions that require scale and global excellence. Providing the opportunity to work collaboratively with international cardiovascular researcher leaders to exploit world-leading science to tackle important research and clinical questions:

- **Global Cardiovascular Research Funders Forum (GCRFF)**
Multinational Clinical Trials Initiative: aims to help researchers in different countries to collaborate on pivotal multinational clinical trials that might not be feasible in a single country or with support from a single funder.
- **International Cardiovascular Research Partnership Awards:** together with our European Partners, we want to support mid-career investigators to establish international networks. The scope of the scheme covers innovative research in cardiovascular disease, with strong encouragement for multidisciplinary approaches.

Acknowledgements

This new strategic approach to our research funding has been informed by independent external stakeholder consultation led by Academic Health Solutions and Archus.

Particular thanks go to the BHF Board of Trustees and Executive Group for their support and feedback throughout this process.

The views of our patient and public engagement advisory group were extremely important, and we are grateful to them for giving up their time to help us.

The development and implementation of our research funding approach was supported by invaluable input from Professor Metin Avkiran – Director of International Partnerships and Special Programmes, Dr Sonya Babu-Narayan – Clinical Director, and Dr Silvia Pedroni – Director of Operations.

We are especially grateful to the Senior Research Advisors, Research Advisors and all the Grant Management Team for their hard work enabling groundbreaking research to be funded, and for their participation and support in developing our new approach to research funding.

Thank you for reading this document. Please go to the **Our Research Strategy** page of the BHF website or contact research@bhf.org.uk for more information.