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One in three deaths worldwide is caused by cardiovascular disease.

FUNDING

Massive grant will go to one heart-research team

British Heart Foundation award is one of the largest single cash pots in medical research.

BY MATTHEW WARREN

A lucky group of researchers will soon walk away with £30 million (US\$39 million) to study the heart and circulatory system — one of the largest single grants for medical research in the world. The British Heart Foundation (BHF) launched the award on 25 August, and it is open to anyone studying heart and circulatory diseases in academia or industry anywhere in the world.

“It’s an absolutely fantastic idea,” says

cardiologist Tim Chico of the University of Sheffield, UK. Cardiovascular disease is responsible for one in three deaths worldwide, and the BHF hopes that providing such a large chunk of money to a single team will accelerate breakthroughs in the fight against the disease. “I think to solve a major problem requires investment at least of this scale,” Chico adds.

Criteria for the award, which is named the Big Beat Challenge, will be published when the application period opens in late 2018.

The grant marks “a very different, radical way of doing things”, says Nilesh Samani, medical director of the charity, which spends more than £100 million a year on cardiovascular-disease research, in grants of up to £3 million. The £30-million award will come on top of the foundation’s usual research investment. Samani says that the aim of the new grant is to fund a big idea that could directly improve the lives of many people.

The BHF has designed its grant to motivate researchers to work across disciplines and ▶

► national boundaries. Cardiovascular problems are often associated with other disorders — for example, kidney and lung diseases — so an approach that cuts across disciplines is important, says cardiac pharmacologist Sian Harding of Imperial College London. “The disease itself doesn’t have boundaries,” she adds. Samani says that applications could also include researchers outside medicine and biology: for example, artificial-intelligence researchers could help to develop tools that predict the risk of cardiovascular disorders.

GLOBAL COLLABORATION

It is also encouraging that the foundation is emphasizing international collaboration and the global burden of cardiovascular diseases, says Amitava Banerjee, a cardiologist and data scientist at University College London. “If we really are talking about global need, then we need to get global data — we can’t be doing studies only in London and Oxford,” he says.

However, Banerjee is concerned that, for all the talk of innovation and transformative research, a grant of this size is likely to go to a team led by well-established, senior scientists who might not be the best source of exciting

ideas. He says that medicine needs to move away from this form of “eminence-based” research, and instead take cues from other industries, in which novel and radical ideas often come from people at a much earlier stage of their career. The BHF says that all applications will need to include diverse teams and no matter who the applicants are, they must be prepared to take a “high-risk, high-reward” approach.

The grant carries with it a substantial amount of money — but it is not without precedent, even in the field of cardiovascular research. In 2015, Google Life Sciences (now Verily) and the American Heart Association announced a \$50-million award for research into preventing coronary heart disease. Pharmaceutical company AstraZeneca later climbed on board as well, adding an extra \$25 million to the pot.

The winner of that grant was Calum MacRae, a cardiologist at Brigham and Women’s Hospital in Boston, Massachusetts,

who is looking for early markers of coronary heart disease. Compared with smaller pots of funding, large grants can force researchers to think about problems in completely different ways, MacRae says. The grant has enabled his team to work at a faster pace and more collaboratively than might have been possible with more traditional forms of support, he says. “Diversity in funding is as important as diversity in ideas.”

Another UK-based charity, Cancer Research UK (CRUK), also awards “Grand Challenge” grants of up to £20 million to address specific problems. Last year, four teams received funding for projects such as creating virtual-reality maps of tumours and finding ways of preventing unnecessary breast-cancer treatment. Ten teams have been shortlisted for a second round of funding.

The BHF consulted MacRae and CRUK when planning their new award, says Samani. But they decided not to restrict the scope, and instead give researchers leeway to pitch any project related to heart and circulatory disease. “We really trust the research community to come up with the best ideas,” he says. “I’m not aware of any other major grant of this scale which is that open.” ■

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POLITICS

Trump science-adviser pick hedges on climate change

Meteorologist Kelvin Droegemeier offered few clues to his views on the topic to US lawmakers.

BY SARA REARDON

Kelvin Droegemeier — President Donald Trump’s nominee for science adviser — revealed little about his stance on climate change during his nomination hearing before a US Senate committee on 23 August. Some experts attribute his elusiveness to deftly manoeuvring a politically sensitive topic, rather than doubts about the science.

The researcher, a meteorologist whom Trump nominated to lead the White House Office of Science and Technology Policy (OSTP) on 31 July, told committee members that science should be conducted without political interference or influence. “I am absolutely firm on the point,” Droegemeier said.

But he equivocated on whether views that are in the minority, such as doubts about the human role in climate change, should be included in policymaking decisions. “Science never provides immutable evidence about anything,” he said. “I think science is the loser



Climate change is likely to exacerbate extreme weather.

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