

# UK's most promising scientists backed by over £100 million government investment to bring pioneering ideas to market

- 101 of the UK's most promising future science leaders are being backed by a £109 million government investment to help turn novel science innovations into a reality
- from Edinburgh to Exeter, the successful projects include developing virtual labs to identify cancerous tumours more quickly, making food crops resistant to viruses and using AI technology to help reduce traffic congestion
- investment is part of the government's bold ambition to build back better through innovative science and research, establishing the UK as global science superpower

Over 100 of the UK's up-and-coming science and research leaders will benefit from a £109 million cash boost to convert their innovative ideas to transformational products and services, the government announced today (Thursday 15 October).

Tackling some of the world's greatest challenges, including climate change and terminal disease, each scientist and researcher will receive a share of £109 million to develop their 'blue sky' solutions to global issues such as food supply, cancer diagnosis and dementia treatment.

The investment will enable the UK's most promising scientists and researchers from across the UK to fund vital equipment and researcher wages, helping to drive forward their studies and projects at speed.

Announcing the successful fellows at today's Future Leaders Conference, Science Minister Amanda Solloway said:

We are committed to building back better through research and innovation, and supporting our science superstars in every corner of the UK.

By backing these inspirational Future Leaders Fellows, we will ensure that their brilliant ideas can be transferred straight from the lab into vital everyday products and services that will help to change all our lives for the better.

Among the next generation of UK science leaders being backed today is Dr Yoselin Benitez-Alfonso at the University of Leeds, who is working to make UK crops resistant to viruses and the effects of climate change such as depleted

soils with little water or nutrients. This will help to ensure the UK's food supply remains strong during severe weather events in the future.

Another project, led by Dr Simon Mitchell at the University of Sussex, will develop personalised medicine to treat the most common form of non-Hodgkin lymphoma, a cancer that affects the immune system. By studying computer simulated cancer patients using virtual reality technology, he aims to predict the possible progression of the disease and identify the most effective forms of treatment, helping to save lives.

## **Other projects announced today**

### **University of Huddersfield**

Dr Mauro Vallati aims to create an Artificial Intelligence-driven, autonomous traffic management system that will be able to use vast quantities of data to reduce traffic congestion – while monitoring the environmental impact of travel, such as vehicle emissions. The system will be designed to effectively manage congestion in specific areas by altering existing traffic light sequences and to communicate with vehicles to suggest that they drop speed, change routes to avoid congested areas or switch to electric power.

### **Advance Furnace Technology**

Dr Zoe Tolkien is developing new, advanced semiconductors with reduced energy loss and greater lifespan which are critical to a range of new clean technologies, from electric cars to solar and wind power generators.

### **University of Nottingham**

Dr George Gordon aims to develop advanced endoscopes – long, thin tubes capable of capturing images through optical fibres that will help to identify cancers that occur deep within the body and can be difficult to detect and treat, such as pancreatic and ovarian cancer.

### **University of Glasgow**

Dr Joanna Birch aims to reduce the unwanted side-effects that radiotherapy can often have on cancer cells that remain after treatment, which can lead to treatment resistance or recurrence. She will develop new therapeutic treatments aimed at 3 cancers – glioblastoma, colorectal cancer and pancreatic cancer.

### **University of Sheffield**

Dr Jennifer MacRitchie will lead a study that looks to combine technology and easy to use musical instruments to help improve the mental, physical and emotional wellbeing of those with dementia. She will seek to develop new ways for older people with dementia to create and engage with music.

## University of Oxford

Dr Tobias Hermann aims to ensure that future spacecraft are able to re-enter the earth's atmosphere safely despite being exposed to extreme heat, which is currently a barrier to future space travel.

UK Research and Innovation Chief Executive, Professor Dame Ottoline Leyser, said:

Future Leaders Fellowships provide researchers and innovators with freedom and support to drive forward transformative new ideas and the opportunity to learn from peers right across the country.

The fellows announced today illustrate how the UK continues to support and attract talented researchers and innovators across every discipline to our universities and businesses, with the potential to deliver change that can be felt across society and the economy.

The government has committed over £900 million to its Future Leader Fellowship initiative over 3 years, which is being delivered through UK Research and Innovation (UKRI).

The work of the fellows will be central to the government's ambition for the UK to cement its status as a world leading science superpower, set out in its ambitious [research and development \(R&D\) roadmap](#) in July this year.

The funding committed to the fellows forms part of the government's commitment to increase public spending in R&D by £22 billion by 2024 to 2025, putting the UK on track to reach 2.4% of GDP being spent on R&D across the UK economy by 2027.

## Notes to editors

The Future Leaders Fellowships scheme, which is run by UK Research and Innovation, will recognise up to 550 individuals with a total investment of £900 million committed over 3 years.

The scheme helps universities and businesses in the UK recruit, develop and retain the world's best researchers and innovators, regardless of their background. They can apply for up to £1.5 million to support the research and innovation leaders of the future, keeping the UK at the cutting edge of innovation. Each fellowship will last 4 to 7 years. Awardees will each receive between £400,000 and £1.5 million over an initial 4 years.

Round 6 of the Future Leaders Fellowships is currently [open to applications](#).