World news story: 2018 Newton Prize shortlist announced in Chile

The shortlist for the prestigious USD1.3 million 2018 Newton Prize has been published yesterday, featuring 22 proposals between researchers in the UK and Brazil, Chile, Colombia and Mexico.

Each year the Newton Prize is awarded to projects that demonstrate the best science or innovation; promoting the economic development and social welfare of Newton partner countries. The prize sheds light on the challenges faced by the developing world and how Newton Fund partnerships are helping to solve them. It also incentivises researchers to join the Newton Fund as partners with the UK to address global challenges such as poverty, climate change and public health.

This year 140 Newton funded projects, fellowships or other awards applied for the Newton Prize. Four prizes of up to USD260,000 each will be awarded to winning projects with the eligible Latin American countries. There will also be an additional prize (the Chairman's Award) of USD260,000 for a project with the potential for broader impact with other developing countries.

Shortlisted applications take on numerous sustainable development goals: from improving health and wellbeing to reducing inequalities, building sustainable cities, and contributing to peace and justice. They also Applications for this year's prize were received from a range of institutions, including universities and companies from the UK and abroadspan the Newton Fund's three pillars of work:

- development of people,
- new research
- translating ideas into innovations

Sir Venki Ramakrishnan, Newton Prize Committee Chair and President of the Royal Society and Nobel Laureate, said:

> As the Chair of the judging committee I am thrilled that we have such an exciting and competitive shortlist and I look forward to working with the international judging committee to decide the winners.
>
> One of the aims of the Newton Prize is to highlight the lasting partnerships developed between UK researchers and their colleagues in Newton Fund partner countries to solve global challenges.
>
> Latin America has a wealth of excellent researchers working in collaboration with the UK to tackle issues as diverse as post conflict studies, biodiversity, health and energy through the Newton Fund partnerships in the region. Science and innovation often depends on working in partnership across the globe: sharing

> knowledge and resources to enhance our understanding and make discoveries with the potential to change lives.

Sir Venki leads a distinguished and independent Newton Prize committee with expertise in the development sector, the Latin American region as well as science and innovation. The committee will review the short-listed applications, along with feedback from expert peer reviewers, and choose the winners.

During November the shortlisted projects below will be celebrated at award events taking place in Brazil, Chile, Colombia and Mexico, where the winning project for that country will be announced. These events will be followed by a UK reception in December hosted by Sam Gyimah MP, the Minister for Universities, Science, Research and Innovation to celebrate international and science innovation collaborations. In Chile, the event will be held in the city of Santiago on November 13.

The shortlisted applications in Chile are as follows:

Political violence and human rights violations accountability: circumstances, uses and effects of forced disappearance registration. Lessons from a comparative perspective in the Americas.

Project partners: Vikki Bell, Goldsmiths University of London and Oriana Bernasconi, Alberto Hurtado University.

Low cost genomic selection for improving disease resistance in Brazilian tilapia aquaculture.

Project partners: Ross Houston, The Roslin Institute, University of Edinburgh and Jose Yanez, University of Chile.

Resilient planning of low-carbon power systems.

Project partners: Professor Pierluigi Mancarella, University of Manchester and Rodrigo Moreno, University of Chile.

Technology Development and Implementation for Microgrid Interconnection Systems.

Project partners: Jon Clare, University of Nottingham and Marco Rivera, University of Talca.

Find out more

Read about the 2017 Newton Prize winners: India, Malaysia, Thailand and Vietnam

Read our latest blogs from Newton Prize winning projects

Follow the Newton Fund on Twitter

Contacts

Mark Gardner – Senior Communications Manager

Alvaro Cabrera – Newton Fund Manager Chile

News story: Lord Ahmad reaffirms UK commitment to stamp out anti-semitism

From attacks on Jewish people, businesses and places of worship and the desecration of Jewish cemeteries, anti-semitism one of the world's oldest hatreds is seeing a worrying resurgence.

In an event on 26 September at the UN General Assembly hosted by Audrey Azoulay, Director-General of UNESCO, with an opening speech from António Guterres, United Nations Secretary-General, the Prime Minister's Special Representative for Freedom of Religion and Belief Lord Tariq Ahmad reaffirmed the UK's commitment to education and dialogue to combat the scourge of anti-semitism in all its forms.

The Prime Minister's Special Representative for Freedom of Religion and Belief Lord Tariq Ahmad said:

> I'm proud to reaffirm Britain's commitment to combatting the scourge of anti-semitism.
>
> Even today, the truth about the Holocaust is distorted and sometimes denied.
>
> So it is fitting that this event should fall a week after Yom Kippur, the holiest day in the Jewish calendar and a day of reflection and atonement.
>
> As global leaders we must act responsibly to ensure future generations reflect on the lessons from the Holocaust and recognise our shared humanity.

Seven decades after the Holocaust, society still cannot say that anti-semitism has been eradicated; nor can it claim that genocide is a thing of the past. As recently as last month, the United Nations concluded that the

Burmese military had inflicted genocide against the Rohingya.

The UK government is committed to religious tolerance in the UK and globally. Through the government backed Holocaust Educational Trust and their world-leading Lessons from Auschwitz programme 36,000 students have visited Auschwitz – and then supported this next generation to share their learning with fellow students and to fight antisemitism and all forms of hatred in every community of the land.

The British government is determined that the genocide of six million Jews will never be forgotten. A spectacular and poignant Holocaust Memorial and Learning Centre, will be erected right next to Parliament, reminding all of us of the depths to which humanity can sink, and the importance of robustly opposing all forms of bigotry.

Further information

News story: Multi-million-pound competition to destroy battlefield chemical weapons launched by UK and US

The Defence and Security Accelerator (DASA), part of the Defence Science and Technology Laboratory and UK Ministry of Defence, has launched the 'Don't Blow It!' competition, the first joint UK-US industry competition run by DASA and funded by the MOD and US Department of Defense.

Competitors have been asked to identify innovative concepts or adapt current technologies to access, disable and destroy chemical and biological devices. This includes chemical and biological munitions, improvised explosive devices containing lethal agents or containers of bulk quantities of chemical or biological agents discovered on the battlefield or in other austere and resource-limited environments.

Defence Minister Stuart Andrew said:

> Horrific incidents stretching from Salisbury to Syria this year have shown us that chemical weapons are sadly still very much a reality – but a reality that we are determined to deal with. Destroying these deadly weapons is a complicated process and not doing it properly could mean devastating collateral damage. These are challenges that we share with our allies like the US. Competitions like this help us to tackle them head on with some of the best and brightest minds across both our countries.

Although it is over 100 years since the first large-scale use of chemical weapons, the threat from both chemical and biological weapons persists. This has been demonstrated by the recent rise in the use of such deadly weapons on the battlefield and in targeted attacks.

Much progress has been made to destroy state-declared global stockpiles of chemical weapons through very successful large scale destruction programmes, utilising techniques such as incineration, explosive destruction or neutralisation. However, to meet emerging and future challenges, such as the destruction of smaller caches produced by terrorists in resource-limited or hostile environments such as Iraq or Syria, there needs to be a focus on developing more robust elimination capabilities that are less labour intensive.

The competition has an initial £500,000 to fund multiple proof-of-concept proposals at low Technology Readiness Levels. Based on the outcome of the initial funding phase, an additional £1.5 million of funding could be released.

‘Don’t Blow It!’ will see innovative concepts developed to access, disable and destroy chemical and biological devices. Crown copyright.

The competition is seeking innovative ideas from non-traditional supply sectors and is looking for ‘outside-the-box’ proposals that will:

- Enable rapid and flexible destruction
- Reduce logistical support requirements
- Maximise ease of operation and transportability
- Address a greater breadth of threats

MOD Chief Scientific Advisor, Dr Simon Cholerton said:

> As the use of chemical weapons in Syria and the Novichok attack in Salisbury demonstrate, the risk from chemical weapons still remains and the issue of safely eliminating them from an austere tactical environment remains an enduring technical challenge. I am delighted therefore that we are working with our closest ally to launch a new industry competition to help us develop effective and safe elimination capabilities. Our collaboration is the first time we have launched a truly joint UK-US competition through the UK Ministry of Defence’s Defence and Security Accelerator, which is charged with enabling us to innovate by rapidly transforming the ideas of today into the capabilities of tomorrow.

Assistant Secretary of Defense for Nuclear, Chemical and Biological Defense Programs, US DOD, The Hon. Guy Roberts said:

> The expanding proliferation of chemical weapons use, from state and non-state actors, portends the greatest threat of their use on the battlefield since World War I. My responsibility is to ensure our

> forces are protected from, and can fight through, any such threats. To that end, we must continually innovate our capabilities, and it is especially important to do so in collaboration with those who fight alongside us. This competition does just that. It allows us to jointly invest in research and development with our closest ally as well as seek innovative ideas from a broader set of brilliant minds who I am confident will lead us to creative solutions.

The competition will be launched at an event in London on the afternoon of 26th September. Potential suppliers will be provided with context on the challenge by both UK and US speakers, as well as information on how to apply to the competition by DASA. The submission deadline for proposals is 5 pm GMT (midday EST) on 7 November 2018.

Follow this link for more information on the competition

or contact DASA directly on accelerator@dstl.gov.uk

Detailed guide: Equine viral encephalomyelitis: how to spot and report the disease

Updated: Contact details for reporting a notifiable disease updated.

Equine viral encephalomyelitis is a disease which can be caused by several viruses (known as equine encephalitis viruses). They include, but are not limited to:

- Japanese encephalitis
- Western equine encephalomyelitis virus
- Eastern equine encephalomyelitis virus
- Venezuelan equine encephalomyelitis virus
- West Nile virus

Encephalomyelitis means inflammation of the brain and spinal cord.

Equine viral encephalomyelitis can be fatal, although some animals will recover from the disease.

Equine viral encephalomyelitis is a notifiable animal disease. If you suspect it, you must report it immediately by calling the Defra Rural Services Helpline on 03000 200 301. In Wales, contact 0300 303 8268. In Scotland, contact your local Field Services Office. Failure to do so is an offence.

Animals affected by the disease

Equine viral encephalomyelitis mainly affects members of the equid family, such as:

- horses
- donkeys
- mules
- zebras

Other animals can also be affected, such as:

- cattle, sheep and goats
- pigs
- birds, including poultry
- dogs
- rodents

Humans can also be affected.

How to spot equine viral encephalomyelitis in equid species

Clinical signs can be different depending on which virus the animal has. Some animals will not show any signs at all.

You may spot these signs soon after infection:

- fever for several days
- lack of appetite
- loss of weight and condition
- depression
- stiffness and weakness

You may spot these signs in the later stages of infection:

- behavioural changes – such as circling, head pressing or aimless wandering
- hyperexcitability
- blindness
- lack of coordination and balance
- inability to move
- staggering or standing with an open stance
- seizures

Infections that have similar signs

You may also see similar clinical signs if your animal is infected with one of the following:

- rabies
- tetanus

- African horse sickness
- bacterial meningitis
- toxic poisoning
- leucoencephalomalacia (Fusarium intoxication)

You must report these signs even if you think your animal does not have equine viral encephalomyelitis.

How equine viral encephalomyelitis spreads

The viruses that cause equine viral encephalomyelitis are mainly spread by mosquitoes. Other animals, including wild birds or rodents, can also carry the virus between different areas.

Only some types of mosquito can spread the virus. This means that if an infected horse did enter the UK, the possibility of the disease spreading would be low.

There has never been an outbreak of equine viral encephalomyelitis in the UK.

Risk to humans

Humans can be infected by equine encephalitis viruses if they are bitten by an infected mosquito. Most people have no symptoms.

An infected person or horse cannot pass the virus directly to others.
In rare cases, the virus can be spread during surgical interventions, such as a blood transfusion.

If your animal displays signs of infection and you are worried about your health, contact your GP for advice.

Prevent and control equine viral encephalomyelitis

If you import animals, you must follow the rules to make sure they are free from disease and fit to travel.

You can help prevent the disease by:

- being familiar with the clinical signs of equine viral encephalomyelitis
- practising strict biosecurity on your premises

If the disease is confirmed, the outbreak will be controlled in line with the contingency plan for exotic notifiable diseases.

Find out what happens when a notifiable disease is suspected or confirmed.

Legislation

The main legislation covering the control of equine viral encephalomyelitis, is the Infectious Diseases of Horses Order 1987.

News story: Benefit from a business-academic partnership: apply for funding

Up to £40 million is available this financial year for businesses to collaborate with an academic or research organisation and a graduate on a Knowledge Transfer Partnership.

Translate the latest research into commercial success

Knowledge Transfer Partnerships offer funding and support for a UK business to bring a graduate into their organisation and work on an innovation project.

The idea is that it will enable the business to translate academic thinking into commercial products and services, leading to growth and future development.

Projects can focus on any technology or industry area and last between 1 and 3 years. Businesses should have a specific project in mind when applying.

If a business already has a relationship with a university, college or research and technology organisation, they can choose to work with them. Alternatively, they can contact a Knowledge Transfer Adviser to find a partner and get advice, including support with their application.

Applications should:

- outlines who the participants are
- set out the objectives of the project
- explain what the project is proposing to do
- set deliverables for the graduate

Specialist machinery manufacturer, Cygnet Texkimp and the University of Manchester previously took part in a 2-year Knowledge Transfer Partnership.

Their project brought in PhD graduate and composites academic, Dr Yan Liu, who helped to develop the world's first 3D winder for carbon fibre. This machine is able to create complex and curved composite parts for use in next generation, lightweight, fuel-efficient cars and aeroplanes.

This success saw Yan offered a permanent role with Cygnet Texkimp.

Cygnet Texkimp Knowledge Transfer Partnership

Programme information

- applications for Knowledge Transfer Partnerships are open throughout the year
- the deadline for applications for this round is 31 October 2018. If an application misses a deadline it will automatically be entered into the next round
- projects can last between 1 and 3 years
- any size business or not-for-profit organisation may apply. This will affect the amount of grant you can get and your contribution. Typically:
    - small and medium-sized enterprises contribute around £35,000 per year, or about one-third of the project costs
    - large businesses contribute about £55,000 per year, or half of the project costs