REPLACEMENT NEWS

February 2021- Issue 128

50 1970-2020 YEARS

ANIMAL FREE RESEARCH UK

2020 Year in Review

How we are fighting diseases

Engaging Policy Makers

Next generation of scientists

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UNITED FOR PEOPLE AND ANIMALS

A year ago we were waking up to news of a deadly but distance virus. And who could have predicted the next 12 months? A devastating, costly and surreal pandemic year like no other ended, however, on a positive note with vaccines and an offer of hope around the world.

But as we celebrate science, we must remember the unknown number of animals who have suffered and died in the unprecedented quest for knowledge about the virus and a vaccine. COVID-19 has shown us just how crucial investment in scientific research truly is, but it has also underlined the need to ensure that such research is human relevant.

Our dedicated team have one mission – to create a world where human diseases are cured faster without animal suffering. With your generous support we are working harder than ever to reach our goal.

Outdated animal research is failing humans and animals, yet over 3.3 million animals suffered in Britain's laboratories in 2019 – despite more accurate, faster and cheaper animal free ways of compiling crucial medical research data.

And such technologies are revolutionising medical research. In this issue of Replacement News, you can read about the Animal Free Research UK funded projects into cancer and heart disease where our scientists are pushing the latest animal free technological and research boundaries. Pioneering, ethical research must become the gold standard because it saves lives, money and time.

So we're gearing up in the political arena to ensure human relevant, animal free research gains a prominent place on the political agenda, and ultimately results in concrete changes in the law.

We will continue to fund pioneering animal replacement research techniques and will shine an ever-brighter light on how human-relevant solutions are key to delivering more effective treatments.

We will continue to train a new generation of scientists to develop animal free techniques and so create a step change in research culture.

To you all I say thank you. Because throughout 2021 and beyond, together we shall strive to bring about powerful change and make Britain an inspiring world leader in ethical research that cures diseases and save the lives of humans and animals.

With grateful thanks,

CARLA OWEN
Chief Executive

2020 YEAR IN REVIEW

Without doubt it's been an extraordinary year in every sense of the word. 2020 saw political, social and cultural upheaval across the world.

The events brought new challenges changing the way we live and how we connect with each other. And it has certainly been a tough year for charities.

Yet despite everything, thanks to your support, Animal Free Research UK made and enjoyed some positives during 2020. Below are some of the highlights:

Celebrating our 50th Anniversary

Your ongoing support has helped us make huge progress in science to benefit animals and people over the last half century. And although we were not able to celebrate with you all quite as planned, we marked an incredible milestone of 50 years working together for kinder, better science.

And on our 50th anniversary, we launched our big, bold vision for the future ...

By 2040 we will transform medical research and regulations so that the development of treatments for human diseases can be entirely animal free, and breakthroughs achieved faster.

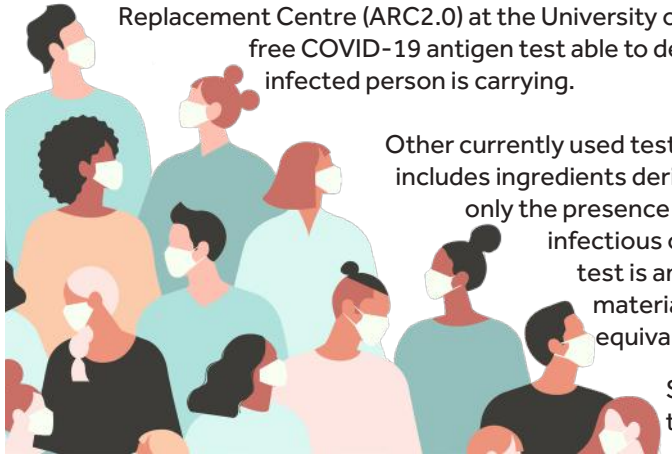
We launched the Rapid Response Grant Programme in partnership with Kirkstall Ltd

Kirkstall

Last May we launched a call for proposals from scientists centered around the use of innovative organ-on-a-chip technology, where we offered cutting edge Quasi Vivo® organ-on-a-chip systems to researchers completely free of charge, to target solutions to the COVID-19 pandemic.

We awarded four grants to scientists in the UK and USA with each project exploring new ideas with an animal free research approach focussing on human-based biology and human relevant technology.

Funding an animal free COVID-19 test



Thanks to you, we funded Prof Lorna Harries and her team at our Animal Replacement Centre (ARC2.0) at the University of Exeter to develop an animal free COVID-19 antigen test able to detect how much active virus an infected person is carrying.

Other currently used tests for the COVID-19 virus includes ingredients derived from animals and detects only the presence of viral particles (which can be infectious or non-infectious). Lorna's new test is animal free as all animal-derived materials are replaced by synthetic equivalents.

Stay tuned for more updates in the coming months.

New All-Party Parliamentary Group for Human Relevant Science

The development of human relevant life sciences in the UK was given a major boost following the formation of a new All-Party Parliamentary Group (APPG) for Human Relevant Science.

The APPG is a discussion forum for policy makers, the human relevant life sciences sector, third sector groups, scientists and stakeholders to promote new approach methodologies in research.

The APPG's statement of purpose is to bring together MPs and Peers of all parties to accelerate the development and uptake of human relevant life sciences in the UK.

The truth of the matter is while the calendar might be turning a new page, much of our reality will still be the same in 2021. Sadly, many of the struggles that we face will continue... personally, professionally, nationally, and globally.

But we at Animal Free Research UK are still here – we won't stop until animals are no longer used in research. And we couldn't continue the work that we do without you.

With your continued support and generosity, you are the lifeblood of Animal Free Research UK, but we still greatly need your help to continue our mission to create a world where human diseases are cured faster without animal suffering. Together we can unite for kinder science.

HOW ANIMAL FREE RESEARCH UK IS FIGHTING DISEASE

Over the last five decades, our charity has played a fundamental role in establishing today's human relevant life sciences sector. We are the UK's leading non-animal medical research charity, and we are consulted internationally for our expertise in animal replacement science.

Here is how we are working to make Britain an inspiring world leader in ethical research that finds cures for diseases and saves the lives of humans and animals.

WE FUND PIONEERING RESEARCH

Since 1970, you have enabled us to give £10 million in grants to fund over 260 pioneering research projects into cancer, Alzheimer's disease, asthma, diabetes, and now COVID-19, preventing an estimated 1.6 million animals from suffering.

Our scientists and laboratories push the latest animal free technological and research boundaries with cutting-edge technologies such as organ-on-a-chip which are best placed to discover treatments for human diseases and save precious time and lives.

Each project we fund is a step along the road to completely replacing animals in medical research. As well as saving millions of animals from laboratories, animal free research will save human lives.

WE FUND ANIMAL REPLACEMENT CENTRES

ARC 1.0

In 2016 we launched the Animal Replacement Centre of Excellence (ARC 1.0). This centre, in collaboration with the Blizard Institute at the Queen Mary University of London , is dedicated to help find animal free research solutions for skin, breast and prostate cancer.

ARC 2.0

ARC 2.0 is a game-changing partnership with the University of Exeter. Work at ARC 2.0 is a win-win for humans, animals and research. It will establish the building blocks to grow the next generation of researchers, their expertise in animal free techniques, all to ultimately deliver the best and most effective treatments.

WE SUPPORT EARLY CAREER SCIENTISTS

Our Summer Student Programme gives early career scientists valuable laboratory experience in animal free medical research. It helps to show them the importance of human-relevant, non-animal science to tackle human diseases.

Our talented students spend their summer in laboratories up and down the country developing animal free research techniques to study a wide range of illnesses. Our Summer Students advance society's understanding of human health and help save animals from being used in these areas of research.

By supporting early career scientists through our Summer Student Programme, we all play a part in creating a future where no animal suffers to find treatments for human diseases, and where medical breakthroughs are discovered through cutting-edge, humane research.

WE DRIVE FORWARD POWERFUL CHANGE

Achieving a world where human diseases are cured faster without animal suffering is going to take transformational change in legislation and regulations.

That's why we are working to ensure the need for human relevant, animal free research gains a prominent place on the political agenda and ultimately results in concrete changes in the law.

We will be engaging with Ministers, MPs and civil servants to build awareness and momentum for change. We will also be strengthening our presence in the scientific research community to overcome the barriers to animal free research.

Replacing poorly performing animal tests with innovative human relevant new approach methodologies will directly help both people and animals.

HOW WE ARE FIGHTING CANCER

ANIMAL REPLACEMENT CENTRE
QUEEN MARY UNIVERSITY OF LONDON

THE FACTS

Skin cancer is one of the most common cancers in the UK with over 15,000 people being diagnosed each year.

Researchers have successfully treated skin cancer in mice, but since mouse skin is very different to human skin, it's little surprise that there is no easy treatment yet for human skin cancer.

THE ANIMALS

In skin cancer research, mice are often injected with chemicals or inflicted with extreme sun burn by radiation to give them skin cancer.

Mice are the most commonly used animal despite the crucial differences between mouse and human skin – including thicker skin, no sweat glands and having different responses to cancer treatments.

OUR SOLUTION

The Animal Replacement Centre of Excellence (ARC 1.0) at Queen Mary University of London, funded with a £1 million investment by Animal Free Research UK, uses cutting-edge science to advance human models for human disease, to study the most common type of skin cancer in the UK, alongside head and neck cancer.

Our expert team are using either human cancer biopsies, purified human cancer cell lines or normal human skin cells donated from cosmetic surgery to investigate the disease, from which they model skin cancer by altering gene expression.

Dr Adrian Biddle, Professor Mike Philpott, Dr Muhammad Rahman & Dr Gehad Youssef

Instead of comparing grown human skin cancer models to induced cancer in mice to see if they behave the same way, they are compared to real human cancer skin samples from hospital patients.

This is animal free, human-relevant research at its best – saving animals from suffering and giving real hope of a cure for humans.

PREVENTING BREAST CANCER
UNIVERSITY OF ABERDEEN

Breast Cancer UK

THE FACTS

Women have a 1 in 8 chance of developing breast cancer. Around 55,000 women are diagnosed with breast cancer every year in the UK. Women with high breast tissue density are 4-5 times more likely to get breast cancer compared with those with low breast tissue density.

Around 370 men are also diagnosed with breast cancer every year.

THE ANIMALS

Traditional breast cancer research often uses genetically modified mice as 'living incubators' to grow breast tissue cells.

Unsurprisingly, when human breast cells are forced to grow inside mice, some are rapidly replaced by the mouse's own cells – making results of these cruel animal experiments difficult to translate into humans.

OUR SOLUTION

Research into the prevention of breast cancer can only be done accurately using human-based studies. That's why, thanks to compassionate people like you, Professor Valerie Speirs at the University of Aberdeen, is leading a three-year study with PhD student Kerri Palmer, that hopes to identify an effective strategy for preventing breast cancer. The project, in collaboration with our friends at Breast Cancer UK, is exploring if hormone disrupting chemicals we find in our environment cause changes to breast tissue density and drive breast cancer development.

Through engagement with pathologists, who concentrate on what tissues look like to diagnose disease, the team are building animal free breast cancer models. These models reflect human disease because the researchers ensure that they look and behave like human breast tissues. Crucially, the research does not use any animals or animal derived materials.

Kerri Palmer PhD & Professor Valerie Speirs

It is being carried out using fibroblasts generated from human breast tissue of consenting patients, with different breast densities. The team are working with clinicians to explore how human breast fibroblasts respond to chemicals in the external environment (e.g. plastic) that disrupt the hormonal balance. With 3D laboratory models they can examine how these chemicals contribute to breast cancer development.

Professor Speirs' research aims to replace two models of breast cancer which currently use animals, by using fully humanised, animal free approaches.

HOW WE ARE FIGHTING HEART DISEASE

STEM CELL MODELS

UNIVERSITY OF NOTTINGHAM

THE FACTS

Heart failure affects 900,000 people in the UK, with a key cause being cardiac fibrosis, which is difficult to treat.

Cardiac fibrosis patients are 18 times more likely to be hospitalised. Currently there are no effective treatments, so there is a pressing need for new ways to research cardiac fibrosis.

THE ANIMALS

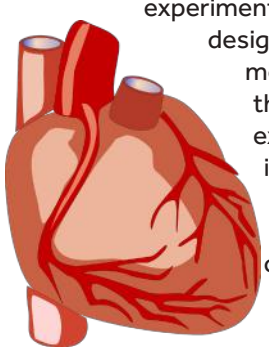
The need for research into cardiac fibrosis is driving a worrying increase in the use of animals in research, particulary larger ones.

The number of animals used was 4,800 in 1998, 40,000 in 2018, and 70,000 mice, rats, rabbits, sheep and pigs are predicted by 2030.

Over 32 years (1998-2030), it is projected cardiac fibrosis research will have likely used 1.1 million animals.

OUR SOLUTION

As there are currently no effective treatments, there is a pressing need for new ways to study cardiac fibrosis. We need to understand more about the interplay between the different cell types of the heart, which is important in cardiac fibrosis but often poorly characterised and ignored experimentally. A well-designed human-based model will overcome the limitations of existing approaches, including the use of animals and associated challenges of species differences.



Some cell-based models do currently exist for cardiac fibrosis. However, these have proven inadequate because they have used cells from animals or cells that are of unknown genetic backgrounds, and are not representative of the heart.

That's why Animal Free Research UK is funding a new three-year project soon to launch at the University of Nottingham which will develop stem cell models to understand heart disease.

The team will create 'mini hearts' using stem cells which can be grown in the lab. This will allow researchers to find the right conditions to mimic how cardiac fibrosis develops, enabling them to test efficiacy of new and existing drugs.

THIEL EMBALMED HUMAN CADAVERS

UNIVERSITY OF DUNDEE

THE FACTS

There are around 7.4 million people living with heart and circulatory diseases in the UK, a condition which causes more than a quarter of all deaths nationally each year.

With life-threatening cardiovascular conditions such as heart attacks and strokes affecting more people, medical devices such as stents offer a less invasive alternative treatment.

THE ANIMALS

Testing new medical devices for heart and circulatory diseases often involves experiments on live animals such as pigs, dogs, rabbits and sheep.

To test one type of stent, it is common for 20-30 animals to be used and these procedures are repeated for each stent size and implantation site.

OUR SOLUTION

At the University of Dundee, Professor Graeme Houston and Helen Donald-Simpson are testing medical devices to treat heart and circulatory conditions using donated human cadavers and a special embalming technique that stops the need for the use of animals.

Named after its inventor, Thiel embalming is a special way of embalming which ensures the cadavers maintain a life-like flexibility. This enables researchers to use a special fluid that simulates blood being pumped around the body to study blood flow and diseases related to this.

Thiel embalming allows the team to test medical devices, such as stents, on the human body and get results that are more comparable to the living body which will help in the development of better treatments for patients suffering with cardiovascular diseases.

The project will also enable staff from the University's School of Medicine and Centre for Anatomy and Human Identification (CAHID) to develop a programme for training senior medics. Heart, stroke, kidney and liver patients are among those who will benefit from clinicians who are trained to use devices that are tested by using Thiel-embalmed bodies.

Cadavers are carefully prepared so procedures can be carried out multiple times by doctors for training purposes or for testing the effectiveness of new devices in treating diseases. This unique feature means that this innovative research could save the lives of an estimated 4,000 animals per year for each type of device tested.

Professor Graeme Houston

Helen Donald-Simpson

SECURING GOVERNMENT SUPPORT FOR ANIMAL FREE RESEARCH

Achieving a world where human diseases are cured faster without animal suffering is going to take transformational change in legislation and regulations governing medical research. That's why Animal Free Research UK is working to ensure our issue gains a prominent place on the political agenda.

MPs' constituents have a powerful voice in putting issues on the political agenda – so you can make a real difference.

> **"Early Day Motion 256 is calling for the Government to accelerate human relevant life sciences in the UK"**

Last November, we asked our supporters to help secure Government support for animal free research and help us propel our mission to the political front line. Early Day Motion 256 is calling for the Government to accelerate human relevant life sciences in the UK. The Government wants to make the UK a global powerhouse for research. But to have real impact, it must provide supportive infrastructure, funding, education and training, and regulations that enable human-relevant research. Early Day Motions (EDMs) can help to raise awareness among decision-makers, the media and public.

Nearly 2,000 of our supporters took the time to contact their MP and ask them to sign EDM 256, for which we are extremely grateful. This important initiative was part of our work with the Alliance for Human Relevant Science, which involves collaborating with other like-minded organisations to bring about much needed political change.

At the time of writing, 85 MPs have now signed the EDM. While the EDM cannot directly bring about a change in the law, it is a powerful tool for showing how many parliamentarians support our call for human relevant science. To have maximum impact and to amplify our voice, we need to secure support from 100 MPs.

So if you have not yet contacted your MP, please do so by visiting:

www.animalfreeresearchuk.org/edm256

Isobel Hutchinson

Head of Public & Regulatory Affairs

ACCELERATING HUMAN RELEVANT LIFE SCIENCES

Support for human relevant research is growing, and a momentous step has been the formation of the All-Party Parliamentary Group (APPG) for Human Relevant Science. This will play a key role in getting cutting-edge research, which is both animal free and human relevant, firmly onto the political agenda.

The APPG held its first meeting in November last year. Politicians from all parties, representatives from the human relevant life sciences sector, third sector groups, scientists and stakeholders focused on gathering evidence about government funding for human relevant science. It featured presentations from leading scientists in the field of animal free research as well as representatives from funding bodies.

The next meeting will be held on 9 February and will focus on the regulation of medical research and how this affects the transition to human relevant methods, with confirmed speaker's toxicologist Dr David R Jones, and Professor Lorna Harries of the University of Exeter.

APPG meetings will continue throughout 2021 and will focus on defining changes required in funding and regulations in order for these methods to be more widely adopted.

At the end of the year the APPG will produce a report about the regulatory and funding changes that are needed to accelerate the transition to human relevant science.

The APPG's statement of purpose is to bring together MPs and Peers of all parties to accelerate the development and uptake of human relevant life sciences in the UK.

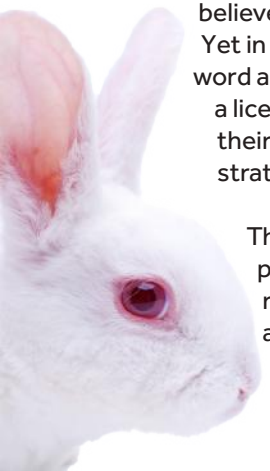
Replacing poorly performing animal tests with innovative human relevant approach methodologies will directly benefit the UK science base and enhance the efficiency and profitability of industries that make vital contributions to the UK economy.

INVESTIGATING HOME OFFICE UK LICENSES FOR ANIMAL USE

Before Christmas, the Home Office released summaries of the licences to experiment on animals that were issued during the first half of 2020.

It showed that the Goverment granted 235 new licences to researchers, allowing them to carry out experiments on over 5.5 million animals – including dogs, horses, rabbits, and guinea pigs, as well as millions of rats and mice who will suffer and die over the next five years.

What disturbs most is the legal obligation to consider alternatives to animal experiments was not taken seriously enough, with it being seen as little more than a tick box exercise. Researchers who apply for a licence to carry out animal experiments must state which non-animal alternatives they have considered and why they believe they cannot be used. Yet in one case, a single word answer was provided by a licence applicant for their alternative methods strategy.



The document also provided a shocking reminder of what animals endure in laboratories. The experiments that were licensed included deliberately inflicting wounds on pigs, and pain experiments on mice and rats such as having their tails dipped into hot water.

There is a serious knowledge gap among the inspectors issuing licenses about the available alternative technologies. So, we are among those calling on the Government to better promote the implementation and adoption of new methodologies into regulatory guidelines and provide training opportunities for scientists. We also advocate for new strategic funding aiming to incentivise and facilitate animal replacement practice in research.

The Government must stop licensing the suffering of millions of animals and instead significantly increase investment in cutting-edge technologies such as organ-on-a-chip which are best placed to discover treatments for human diseases and save precious time and lives.

At Animal Free Research UK we will continue doing everything we can to make this a reality, and to achieve our vision of a world where human diseases are cured faster without animal suffering.

GLOBAL REPLACEMENT NEWS

Lab team develops first-ever living 3D-printed aneurysm

Brain aneurysms can lead to serious medical emergencies, including stroke, brain damage and even death. Existing treatment options are limited and often invasive, and surgical outcomes can vary widely from person to person.

The team at Lawrence Livermore National Laboratory in California has developed the first ever in vitro model of an aneurysm to improve surgical procedures and to help develop personalised treatments.

Unlike previous animal research, LLNL's platform enables scientists to directly measure the fluid dynamics inside the blood vessels and aneurysm while maintaining human relevant research.

Organ-on-a-chip: the potential to fast-track drug development

First in a new blog series from CN Bio, it focuses on the latest news on organ-on-a-chip, and how a partnership between the FDA and organ-on-a-chip developers has the potential to fast-track drug development.

The Center for Drug Evaluation and Research at the Federal Drug Administration partnered with a number of institutes who develop organ-on-a-chip systems in order to test and evaluate them directly in the context of drug development. If successful, this most interesting of collaborations has the potential to reduce the time it takes for a drug to be tested and approved for patient use. In doing so the costs of bringing these new drugs to patients in need will be greatly reduced.

Animal free techniques used in lung cancer research

Dr Dania Movia (who is a member of our Scientific Advisory Panel) and Professor Adriele Prina-Mello at Trinity College Dublin, have developed an animal free model formed by human lung cancer cells and human healthy lung fibroblast.

Their research can replicate the conditions in which lung cancer develops and provides a new human-relevant tool allowing for the efficacy screening of inhaled anti-cancer drugs.

Scientists are looking more and more to sophisticated new approach methodologies such as lung-on-a-chip devices that can advance our understanding of lung cancer, our ability to develop effective treatments, and ultimately offer new hope to patients.

This research could support and guide the screening for efficacy and safety of inhaled anti-cancer drugs in the future, and also help to fast-track drug development.

IMPACT ON CHARITY FUNDING PUTS MEDICAL RESEARCH IN JEOPARDY

The pandemic has exposed what some describe as a "catastrophic funding crisis" for charity-funded medical research.

A recent poll showed 40 per cent of charity-funded early career scientists have considered leaving the profession as a result of funding concerns.

It is clear the funding crisis would be detrimental to many young scientists who entirely depend on charity grants to kick start their careers. We are at risk of losing a generation of bright young scientists which in turn could have a severe impact on several decades-worth of research, including animal free, human relevant projects.

It is imperative, now more than ever, that we continue to support the next generation of scientists if we want to become a science superpower and end the use of animals in research.

Changing the way of research

Animal research is currently viewed as the gold standard by many in the scientific community. Eminent academic careers have been built on the back of using animals. And despite growing evidence that new approach methodologies are cheaper, faster, and more effective, animals are still seen as a default medical research 'tool'. We need to increase the training and educational opportunities available to early careers researchers so that the next generation of researchers see animal free approaches as the highest level of standards achievable in research.

In 2019, there were 3.4 million experiments on animals in Great Britain – a negligible decrease of just 3.4% from 2018. Although we do cautiously welcome the decrease, unfortunately the use of animals is ingrained within the medical research system. With frustration we recognise we will not persuade people who have built their careers using animals to change overnight. Instead, we are working to increase the training and educational opportunities available to early careers researchers so that the next generation of researchers view animal free technologies as the gold standard.

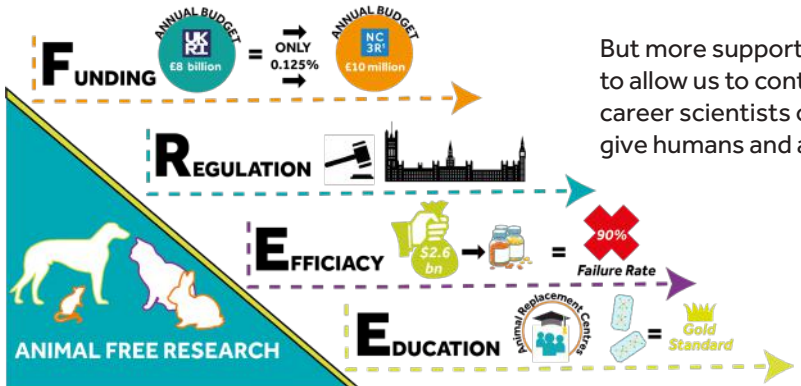
By supporting our ARCs and our scientists of the future, you are helping to prove that animal free research is indeed the most impactful, human relevant standard we must all strive for.

Summer Student Programme

Our Summer Student Programme gives early career scientists valuable laboratory experience in animal free medical research. It helps to show them the importance of human-relevant, non-animal science to tackle human diseases.

Our talented students spend their summer in laboratories across the UK developing animal free research techniques to study a wide range of illnesses. From Alzheimer's disease, to cancer and heart disease, our Summer Students advance society's understanding of human health and help save animals from being used in these areas of research. Former students have found these short projects influence their career decisions and encourage them to pursue an animal free career.

By supporting early career scientists through our Summer Student Programme, we all play a part in creating a future where no animal suffers to find treatments for human diseases, and where medical breakthroughs are discovered through cutting-edge, humane research.



> Many of these studentships fund preliminary pioneering pieces of work. They are going to be the leaders of research in the future, so we need to nurture their careers early on. They need the support of more experienced academics to understand how to navigate their way through academia, to know their research and how to develop their careers.

Professor Mike Philpott

Head of the Animal Replacement Centre (ARC 1.0) at Queen Mary University of London

Thanks to our generous supporters, we started our unique Summer Student Programme in 2012, and expanded the scheme in 2018, by introducing a three day Summer School to give the students additional training.

Your continued support has helped the Summer Student programme grow into a hugely valuable initiative to help researchers kick-start their careers with compassion and provide them with the tools to embark on a successful animal free career.

But more support is still greatly needed to allow us to continue to give early career scientists opportunities, and to give humans and animals a chance.

THE NEXT GENERATION OF SUPERHEROES

Part of our mission at Animal Free Research UK is to inspire and support scientists. We are helping to train a new generation of scientists who are excited to develop animal free techniques and create a step change in the culture of research.

Here are some of our 2019 Summer Students.

Name:
Deyna Jenkins - Sheffield Hallam University

Animals to be replaced:
Mice and rats

Excercise related disease

When your muscles contract, they secrete unique proteins, called myokines. The beneficial effects of exercise are considered to be partly due to myokines. Understanding the pathways involved in the release of myokines from muscle contraction could have huge implications for improving the treatment of diseases such as type 2 diabetes, obesity and heart disease.

Unfortunately, live animals are frequently experimented on to study muscle function and the production of myokine during exercise.

Deyna worked to develop an animal free 3D cell model of human muscle contraction to help replace experiments on mice and rats in exercise related diseases.

Name:
Abigail Wright - Coventry University

Animals to be replaced:
Mice, rats, dogs and monkeys

Parkinson's Disease

The cause of Parkinson's disease is still unknown, so it is often treated by restoring dopamine levels in patients, which can alleviate the symptoms of the disease – but not what causes it. However, people with Parkinson's disease often have increased levels of iron in their brain, which might play a role in causing less dopamine to be produced.

Abigail worked to develop and validate an all-human model of Parkinson's disease to understand the mechanism of the disease and if iron affects it. Her research could allow the disease mechanism of Parkinson's disease to be discovered, potentially leading to the development of treatments that tackle the cause of the disease and helping to replace cruel animal experiments on mice, rats, dogs and monkeys in Parkinson's disease research.

Name:
Dylan McClurg - University of Aberdeen

Animals to be replaced:
Mice

Breast Cancer

The spread of breast cancer to bone occurs in around 70% of patients with advanced breast cancer.

In his summer research project, Dylan worked to develop an animal free model to study how breast cancer can spread to the bone, and help to replace experiments on mice.

Dylan's human-relevant research has the potential to develop into a simple, cost effective way of determining which cancers are likely to spread at a very early stage – when the cancer is more likely to respond to treatment and before it becomes terminal.

Name:
Keerthana Sasitharan - Animal Replacement Centre of Excellence

Animals to be replaced:
Mice

Oral Cancer

Predicting the reoccurrence and spread of oral cancer remains one of the main challenges in treating the half-a-million people who are suffering globally. Research often involves injecting human cancer stem cells into mice, who are then forced to suffer severely as the tumour grows inside them.

Keerthana used artificial intelligence and human tumour samples to predict if oral cancer will spread.

As well as being cheaper than cruel experiments on animals, using human tissue and artificial intelligence driven prediction can potentially speed up the rate at which oral cancer treatments reach patients.

Name:
Fari Osman - University of Hertfordshire

Animals to be replaced:
Hamsters, guinea pigs, rabbits, goats, sheep, horses, mice and rats

HIV

There are estimated to be 37 million people living with HIV worldwide. HIV weakens the body's defence system so that it can't fight off infections.

In his summer project, Faris investigated using an entirely synthetic antibody that can detect the HIV virus immediately, by turning from a solution into a gel. His project could lead to a completely animal free diagnostic test for HIV that is cheaper, faster, more stable and will help to replace experiments on millions of animals worldwide.

The gel detection method does not require any specialist equipment or knowledge to perform, which could make the diagnosis of HIV more accessible for millions of people.

FABULOUS Fundraisers

With the cancellation and postponement of so many traditional events we need to come together more than ever before to raise funds in new and exciting ways.

Whether you're into baking, fitness, socialising or gaming, here are some exciting ideas for how you can support Animal Free Research UK from the comfort of your home.

Host a virtual social event

Invite your friends and family to a virtual dinner party or movie night with everyone donating to attend.

Or why not take part in a virtual bake-off competition – there can never be enough cake!

Use your skills

Run a class and teach your friends something new like yoga or baking.

Use your creativity to write poems, paint or craft something to sell to friends and family to raise money.

Get active

Pick an exercise to do every day for a month – anything from jumping jacks to hopping on your exercise bike – and ask friends and family to sponsor you to keep it up!

Play games

Who doesn't love a quiz so why not arrange one at home to test your general knowledge? It is easy to set up and host – you just need to appoint a Quiz Master and get going!

Have a virtual showdown and challenge your friends and family to a poker night, chess tournament, or bingo over video chat, with a donation per entry and a prize for the winner!

Fundraise with kids

Host an indoor sports day. Who can do the most handstands, keepie uppies, or stay silent for the longest?

Or offer chores for cash – challenge your kids to raise money by completing tasks like cooking, washing up and tidying their rooms, with prizes for meeting their goals!

SUPPORTER CORNER

We have put together some FAQs which will hopefully help with any questions you may have.

How can I make a donation?

There are many ways that you can make a donation! You can donate online via our website, over the phone or send in a cheque with the enclosed donation form and return envelope – see page 2 of the newsletter for all of our contact details.

Am I eligible to claim GiftAid?

If you are a UK taxpayer, we can claim Gift Aid on your behalf which will increase the value of your donation at no extra cost to you. For every pound you give, we will receive an extra 25p!

How is my donation used?

For every £1 you give, 93p will support charitable activities. The remaining 7p will generate new funds for animal free research.

I have some old mobile phones, ink cartridges and other items that I would like to recycle for charity - do you accept these?

Unfortunately we cannot accept these directly, however you can visit websites such as **www.recycle4charity.co.uk** or **www.recyclingforgoodcauses.org** for advice on what to do.

Can I donate my body to Animal Free Research UK?

Animal Free Research UK does not have the facilities to store or distribute donated bodies or tissue, so we are unable to accept direct donations.

Any requests, such as specifying that your body not be donated to an organisation that use animals in testing, will need to be made directly with who you contact, such as your local hospital. Your local hospital as well who will be able to help you with any information.

Here is the link to our website which has some FAQ's, some important steps for you to consider and also contact details/ websites of medical associations in regards to donating your body:

www.animalfreeresearchuk.org/donating-your-body-to-research/

If have any other questions, then you can ask Jess our Supporter Engagement Officer!

EMAIL: hello@animalfreeresearchuk.org

WAYS YOU CAN HELP

There are many ways you can help raise funds for us – and many don't even cost you a penny!

giftaid it

Don't forget to add GiftAid to make your donations go even further! If you are a UK taxpayer, we will receive an extra 25p for every £1 donated!

amazon smile

Did you know one of the easiest ways to support us is by shopping on Amazon Smile – all you need to do is select us as your charity of choice and then Amazon will donate every time you shop! Head over to smile.amazon.co.uk

Make your birthday even more meaningful and set up a Facebook birthday fundraiser. An easy way to ask your Facebook friends to donate to your chosen charity leading up to your birthday as an alternative gift.

easyfundraising feel good shopping

Support us when you shop online! With over 4,000 retailers available, you can turn your everyday online shopping into donations for us by registering for free with EasyFundraising.

TVK THEVEGANKIND **Beauty Box**

Celebrate cruelty free beauty with The Vegan Kind Beauty Box. Every Beauty Box is packed with luscious skin and beauty products. Perfume, moisturiser, eyeliner, lip balm, cleansing oil – if you can name it, you can find it here! There is zero animal testing, and all of the products in their boxes are as eco-friendly as possible. You can even get £5 off your first order!

New for 2021, when you sign up for a subscription box you will automatically get free access to TVK+ and will enjoy exclusive discounts and offers on over 2,500 products at TheVeganKind Supermarket!

And what's more, every month The Vegan Kind makes a donation to Animal Free Research UK, helping us to continue in our fight for a kinder science and to save millions of animals from laboratories.

Visit thevegankind.com/beauty-box to get your discount and order yours now.

MAKE A DIFFERENCE EVERY PAY DAY

Donating with payroll giving is a simple and easy way to give to Animal Free Research UK directly from your pay.

On each payday, an amount of your choice is deducted by your payroll department and sent to Animal Free Research UK. Your donations are taken before tax, meaning that for every £1 you give it will only cost you 80p (60p if you are a higher rate tax payer) – the taxman will pay the rest.

This is an easy, tax-effective way to give to charity – so it costs you less to give more. The system is easy to opt in and out of, giving you full control over your gifts.

Ask if your organisation has a payroll giving system in place and encourage them to sign up to one if they haven't. There are several agencies that administer payroll giving, and we are listed with CAF, Charitable Giving, Charities Trust and Payroll Giving in Action.

PROTECT THE FUTURE

A gift for the Future

What is your legacy going to be?

Gift in Wills are vitally important to us, as Animal Free Research UK receives no government funding. We are only able to carry out our vital work because people like you care about others, care about animals and believe in making the world a better place through kinder science.

A gift in your will helps us consign animal experiments to history. Every project we fund is moving us along to a time where animals are no longer used in medical research.

Large *or* **small,**
leaving a gift in your will can make
a **BIG difference.**

For more information about leaving a gift in your will, please contact:

Email - legacies@animalfreeresearchuk.org

Telephone - +44 (0)20 8054 9711