REPLACEMENT NEWS

February 2018: Issue 118

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Summer Studentships
Professor Pilkington
Genetically modified animals
Project updates

ANIMAL FREE RESEARCH UK

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Welcome!

This year we want to tell more people about what we're doing – how we're making history and saving animals.

Most of the general public don't know that every drug they use has to be tested on two species of animals. It has, unfortunately, become accepted and normalised that nearly 4 million animals are used in medical research every year in the UK.

Our work is challenging this. Every one of **you** who supports us is challenging the *status quo*. Like us, you believe that we can replace animals in medical research - that dogs, cats, horses, mice and rats shouldn't die in laboratories.

You see a brighter, more scientific future. A future where we use human-relevant models in medical research and where we can treat cancers more effectively by using cell biology.

We are the future. The future is happening right now, funded by you. In this magazine, you'll read how we're supporting new generations of scientists to develop animal free research techniques (page 6) and find out what makes Professor Pilkington tick. We also continue our series on The ARC – our £1 million commitment to an animal free research centre of excellence.

In 2018, we'll be shouting about our work louder than ever. Join us, support us and we can keep making history.

Animal Free Research UK

The ARC

Skin left over from cosmetic surgery is replacing animals in skin cancer research.

Going under the knife for a face-lift can erase more than just a few laughter lines; it can also erase the need to use animal models of skin cancer.

Waiting in the wings of cosmetic surgery are scientists, such as the researchers of The Animal Replacement Centre (The ARC), who are ready to take unwanted skin samples back to their lab.

They transform donated human skin into human models of skin cancer, by peeling back its top layers and growing different human cells onto the surface.

We spoke to innovative postdoctoral researchers, Dr Gehad Youssef and Dr Muhammad Rahman, to discover more about the people behind the research.

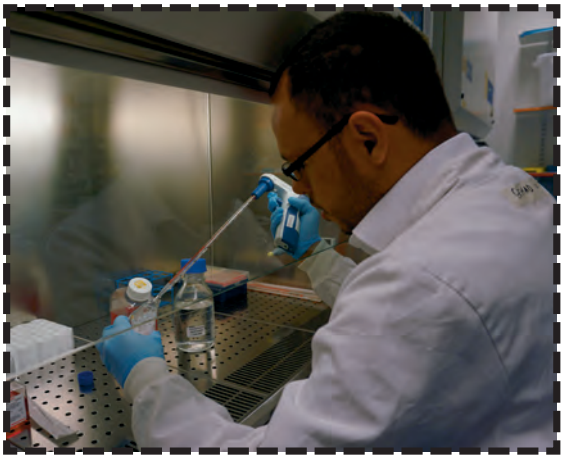
Gehad's best friend at school, Tarik, had an offer to study medicine at university. However, Tarik suffered from cancer and sadly passed away before he could fulfil his potential.

"I was very upset by that, so I really wanted to understand what was driving the cancer," said Gehad.

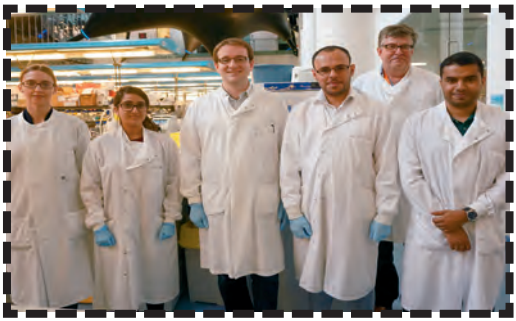
Gehad asked his biology teacher what career path he could take to make a difference. His response was the start of Gehad's journey to help people like Tarik: from a genetics degree, to a PhD studying a genetic skin condition in an animal free model and, finally, to The Animal Replacement Centre.

"Animal free [research] is not only the morally correct thing to do; it's also the scientifically sound thing to do."

Dr Gehad Youssef



Dr Gehad Youssef in the lab



Dr Muhammad Rahman, right, with his colleagues at The ARC

"My true passion is for research in the lab: doing the dirty work, getting results and moving knowledge forward."
Dr Muhammad Rahman

But it took a challenge from his ethics lecturer during his master's degree to shake up his original opinion on animal testing.

"Like many other scientists, I thought, as it was the consensus opinion, that it was a no-brainer that we needed to increase animal models. I went into that course very gung-ho."

He was then challenged to write his dissertation on the animal ethics movement: *"It challenged my preconceptions. I was then convinced that we should reduce our reliance on animal experimentation."*

He took this on board during his PhD, where he used a human skin model instead of animal models to study a genetic skin condition. He made great insights about the disease and published his findings in a leading dermatology journal. *"The experience really opened my mind that you can do great, very effective science, without animals."*

Gehad is now a passionate advocate for the use of non-animal models in research, alongside his colleague, Dr Muhammad Rahman. Muhammad wants to break down the barriers preventing animal free scientists from disseminating their research.

He says: *"It is quite disheartening when a journal referee asks if you have you done this in a mouse, when actually you have provided all of the relevant data [that you need to publish a research paper] without an animal model. Our work should be deemed credible even if we don't use mice."*

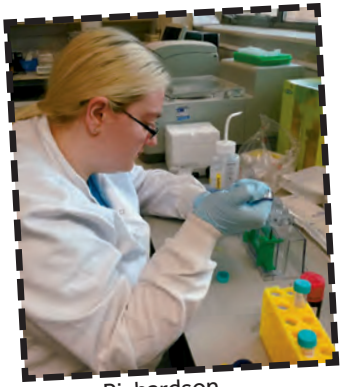
Gehad and Muhammad both agree that scientists should be open-minded about moving forward with new, better models of skin cancer which have more human-relevance than animal models.

"Just as a tumour keeps on changing, we need fresh minds to come in with fresh ideas," says Muhammad.

For animal free skin cancer research, Gehad and Muhammad are those fresh minds.

Summer Studentships

We funded some brilliant Summer Studentships last year to enable early career scientists gain valuable laboratory experience. Here are some highlights.



Lauren Richardson

Pinning down the proteins of Parkinson's disease

Lauren Richardson, at Nottingham Trent University, used an advanced human-cell model to identify a 'biological fingerprint' of Parkinson's disease, which could be used to test the potential of new treatments.

Lauren mimicked the Parkinson's disease process in a human-cell model to assess the biological factors (proteins) that are linked to the death of brain cells in a patient with Parkinson's disease. Her work identified that you can directly replace the use of animal derived biomaterials traditionally used for this purpose with animal free materials.

The results of her work could help identify individuals at risk of Parkinson's disease, be used to monitor disease progression and see how the disease responds to new treatments, all without using animals.

70% of summer students said the studentship had a huge impact on improving their knowledge of animal free research science and 80% said it would improve their career options

"The Summer Studentship scheme gave me a taste for research and greatly improved my confidence! I was able to learn and improve a range of skills, and it was nice to feel that the work I was doing was supporting a good cause."

Our Summer Studentship programme is run entirely due to your generosity. The average cost of a Summer Studentship is **£1,940.** If you are interested in sponsoring a student this year, please do get in touch.

Switching to human stem cells

Rachel Henderson

Leukaemia is a cancer of white blood cells and arises due to a genetic change in the normal stem cells that produce blood cells in the bone marrow. Studying the leukaemic stem cells that are produced is challenging as these cells are rare and difficult to isolate.

Mice are usually used to generate the cells needed for leukaemia research; however, human cells can be used instead by reprogramming them in the lab to a basic stem cell state.

Rachel Henderson, at the University of Glasgow, has developed a way to grow and support the use of these human cells to replace animal products and models in leukaemia research.

100% of last year's students rated our scheme excellent (90%) or very good (10%)

> *"Working with non-animal approaches to leukaemia research was rewarding, highly motivating and gives me hope for the future in creating many more human methods rather than using animals in research."*

Breath of fresh air

Joy Girgis

Joy Girgis, at the University of Hertfordshire, has developed a model to better understand the interactions between lung cells and how they respond to therapies.

The novel model mimicked the environment of lower airways by incorporating different types of human lung cells. The model may result in better screening of new inhaled drugs, appearance of new drugs to the market and overall better treatment of airway diseases in people.

Furthermore, this model for pre-clinical testing would save approximately 210 rodents from pain and suffering per experiment (when conducted with three replicates).

> *"I have become far more aware of how non-animal approaches can be used and are technically feasible. This studentship will help in my final year project and will open so many doors for me in research in the future."*

Meet our scientist

We are funding Professor Geoff Pilkington at the University of Portsmouth to develop better ways of treating patients with brain tumours.

Professor Geoff Pilkington

What are you trying to achieve with your research?

1) Get drugs, which may hold the potential to either cure brain tumours or slow down their progress, into the brain.

Many drugs can access the entire body but not the brain. This is due to specially designed blood vessels in the brain that protect it from potentially harmful substances.

We have developed cutting-edge 3D models, using human cells and proteins, to try to get drugs across this 'blood-brain barrier' without using live animals.

2) Test drug effectiveness by combining human brain cells (normal and tumour) into a 3D model.

Many drugs that 'work', when tested on tumour cells grown alone in dishes and then tested in poor animal models, frequently do not work in the clinic on patients.

We are engineering a model that better reflects the real situation within the brain when patients are treated. This will hopefully speed up pre-clinical work, without the perceived need to use animal models.

Why is your research necessary?

Our work on brain tumours is essential because the brain controls the rest of the body and any tumour or cancer within the brain will adversely affect the patient in many ways.

Brain tumours are much more common than is perceived and research in this field is notoriously poorly funded.

Many brain tumours carry a dreadful prognosis and we have not been able to substantially change the dismal outcome for these patients for 50 years.

Lab equipment for working on the blood-brain barrier at different oxygen levels

What is the biggest achievement of your research so far?

We have engineered the most sophisticated *in vitro* blood-brain barrier reported to date. It is comprised wholly of human cells and proteins, thus reflecting the biological features of the *in situ* human brain far more accurately than other animal and *in vitro* models.

Since the publication of our latest paper on the blood-brain barrier model, we have been inundated with communications from other scientists all over the world who wish to use our models in their own studies on different diseases in the brain.

What motivates you?

I became passionate about doing something scientific that may help patients suffering from devastating diseases. Sadly, eight years into my brain tumour research career, my mother was diagnosed with a malignant brain tumour in 1979. She survived for only 16 months. This period showed me the 'other side of the counter' and enabled me to empathise with patients and carers alike, as well as being a dedicated brain tumour researcher.

Meet our scientist (continued)

Professor Pilkington with our patron, Peter Egan

Why are you conducting animal free research?

Early in my career, I worked in laboratories where live animal studies were 'the norm'; *in vitro* work was rare and scorned by many. However, I had major concerns about being able to replicate the precise biology of the human brain and its diseases in rat and mouse models.

Once I had established my own research group, I began growing cells from brain tumour patient biopsies and studying their biology using new cellular and molecular techniques. I believe that this investment in time has helped in bringing these studies to the forefront - achieving both the replacement of animals in science, as well as gaining a sounder representation of the diseases we seek to treat.

Do you encounter any barriers because you don't use animals?

Yes, this is a major problem. *In vitro* work is often expensive and painstaking but I feel that the cost will reduce with the more research that is carried out.

It is also very difficult to get our solely *in vitro* research findings published in top journals, as they regularly state that we need to 'validate' our *in vitro* findings through animal models. In fact, we have been asked by a number of research groups to help them 'validate' their animal model studies with our *in vitro* studies!

Do you find that the replacement of animal use in biomedical research is becoming more accepted in the scientific community?

Yes, actually, at last, I do. The level of sophistication of the *in vitro* systems now available to us has given the scientific sector the enthusiasm and impetus to concentrate on these non-animal approaches. I believe we are getting ever nearer to gaining acceptance of such technologies in pre-clinical testing.

Professor Pilkington, bottom, second left, appearing on BBC2's Eggheads in 2017

Did you always want to be a scientist?

No. I really enjoyed biology at school and had a wonderfully eccentric teacher, who first instilled in me a fascination for the life sciences, but I didn't really know what to do as a career. It was only when I got a job as a technician in a medical research laboratory that I knew I really wanted my own laboratory, so set my sights on gaining the qualifications necessary to achieve this goal.

What advice would you give someone who wants to go into animal free research?

Spend some time in my labs, to gain an experience of what it's really like to work in a laboratory of non-animal medical research. We try to host as many A-level and undergraduate students as we can realistically support each year.

What do you like to do in your spare time?

Playing cricket (keeping wicket and batting), watching rugby union, taking the dog for a walk on the beach or in the woods, chugging around the Solent on my little boat, drinking real ales and good red wine, and visiting the Greek islands (I think I've been to around 40 different ones to date).

If you weren't doing research, what would you be doing instead?

In my dreams, being a double England international at both rugby and cricket. In reality, I'd probably be a journalist of some type.

Genetically modified animals

The use of 'genetically modified' animals in research appears to be on the rise, sadly. We look at some of the reasons.

What is genetic modification?

Genetic modification (GM) of an animal is the process by which the DNA of the animal is changed in a way that naturally would not occur. This could be by adding, changing or removing certain DNA sequences, with the aim of modifying a specific characteristic that can then be studied in the laboratory.

Scientists hope that these changes will allow them to better understand how diseases start and progress. GM also allows scientists to study human genes in animals, by allowing them to replace the animal version of a gene with the human version to see what effect that has in the animal.

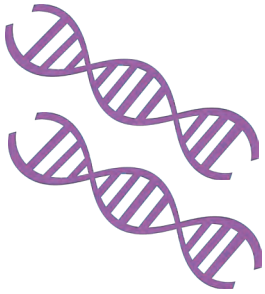
What is DNA?

DNA is the genetic material of an organism and carries all of the instructions that allow an animal to grow, develop, survive and reproduce. Modifying DNA therefore, may allow those changes to be passed on to their offspring and future generations.

Why use genetically modified animals in research?

The number of GM animals used in scientific research, for breeding alone, has, in the last 10 years, gone up from 1.4 million animals (in 2007) to 2.5 million animals in 2016. This 74% increase highlights the on-going belief by others that GM animals can be used to develop better models for human disease. We do not agree.

The potential of genetic modification when applied to human therapies is very promising. However, the results gained from using GM animals to study human diseases do not seem to translate into humans. In many cases, the use of GM is to 'humanise' the animal to make them more 'human-like'. This is an attempt to make animal research more relevant to the human disease being studies.



In Great Britain, the top five animals that are being genetically modified are mice, fish, rats, amphibians and birds. Mice and fish alone make up 99% of all GM animal use.

These animals have traditionally been genetically modified as they are easy to breed and support. Scientists have been modifying their DNA for a very long time and so understand the processes that are required to genetically modify them.

How does GM work?

Scientists have invented many ways to modify the DNA of living organisms, but the underlying principle behind all of them is either the insertion of extra 'foreign' DNA; the deletion of DNA that would normally be found in an organism; or the substitution of 'normal' DNA with 'foreign' DNA.

These insertions, deletions or substitutions all rely on using molecular scissors that cut DNA and allow the required changes to take place. One of the latest molecular scissor techniques that has been developed is known as CRISPR-Cas9.

CRISPR-Cas9: The targeted molecular scissor

Rather than being a 'shotgun' approach to DNA editing, CRISPR-Cas9 uses a targeting system, which allows for much more control over the modifications that can take place. The technique itself has the potential to reverse genetic conditions in humans, such as cystic fibrosis or haemophilia, but such therapies would be highly controversial and are still in very early stages of development.

Mice and fish make up 99% of all GM animal use

Human-based methods to replace GM animals

We are working tirelessly to ensure that the use of GM animals is reduced. We can replace these 'humanised' animal studies with human-relevant, human-based methods that are directly related to the human diseases that are being studied, rather than using animals that are modified to try to make them more human.

To read about our Summer Studentship project, which used CRISPR-Cas9 in human cell culture to further our understanding of schizophrenia without using mice, visit: https://goo.gl/Pb6yD9.

Current projects

This diverse range of animal free research projects we are funding is only possible because of kind, compassionate people like you. Thank you.

Queen Mary University of London The Animal Replacement Centre of Excellence - Cancer

Queen's University Belfast - Chronic pain

University of Dundee - Medical training and cardiovascular device testing

University of Exeter - Diabetes

University of Glasgow - Leukaemia

University of Leeds - Quantum dots

University of Nottingham - Chronic kidney disease

Aston University - Magnetoencephalography

University of Birmingham - Edentulousness

Starting soon

University of Portsmouth - Brain tumours

University of Portsmouth - Systematic review of *in vitro* brain tumour research

University of Leeds - Breast cancer

New project: systematic review of brain tumour research

Dr Karen Pilkington will investigate whether human *in vitro* methods can be used to replace certain animal-based studies in brain tumour research.

How will this research help validate animal free research methods?

We need a large amount of evidence to prove that human *in vitro* methods can be used to replace the use of animals in research.

We can put together a clear body of evidence by finding all of the *in vitro* studies that have been conducted in one research area, sorting them by relevance, assessing their quality and then, if appropriate, combining their results. The process of doing this is called a systematic review. **Systematic reviews provide stronger evidence than single studies alone.**

In vitro literally means 'in glass'. Research that is *in vitro* means investigations take place in an artificial environment, i.e. in the laboratory, as opposed to research which takes place inside a living organism, referred to as *in vivo*.

Dr Pilkington and her team will start by collating all of the published human *in vitro* brain tumour research. They will sort the studies by the type of brain tumour, technique used and the types of question they could be used to answer.

They will then determine the quality of the research using a set of criteria. These criteria will be established by interviewing leading and emerging researchers, journal editors, grant awarding bodies and analysing other systematic review papers.

Finally, they will make recommendations on how the studies could be combined in a series of systematic reviews to answer specific questions about brain tumours.

What is the impact of this research?

The results of their rigorous and comprehensive review will reveal the whole picture of current human *in vitro* brain tumour research knowledge. The results can then be used to assess the potential of human *in vitro* research studies to replace *in vivo* (animal) studies.

It will also identify any gaps in the knowledge for future scientific investigation and help inform non-specialists about human *in vitro* brain tumour research.

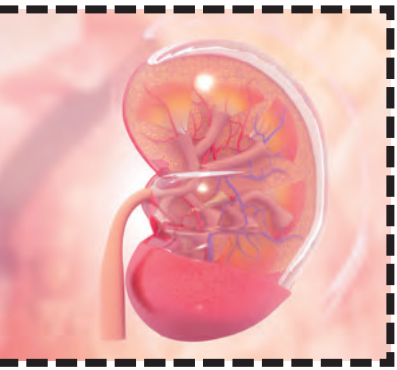
Furthermore, the results of this project will pave the way for providing strong evidence that human *in vitro* methods can replace animal research in other scientific areas.

Project update: filtering out kidney research that uses animals

Animal Free Research UK funding has enabled the development of an animal free method to study changes in the structure and function of the kidney.

Why did we fund this human-relevant, animal free research?

Chronic kidney disease is a condition in which the kidneys are damaged (in function or structure) and cannot filter blood effectively. 1 in 8 adults in the UK are affected by the condition, which can cause waste to accumulate in the body that can lead to additional health problems.



Dr Susan Francis and her team, based at the University of Nottingham, are the first to develop and optimise a multi-factor kidney Magnetic Resonance Imaging (MRI) protocol. This novel method can provide detailed information about kidney structure and quantifiable measures of blood flow to the kidney, kidney function and oxygenation within the kidney.

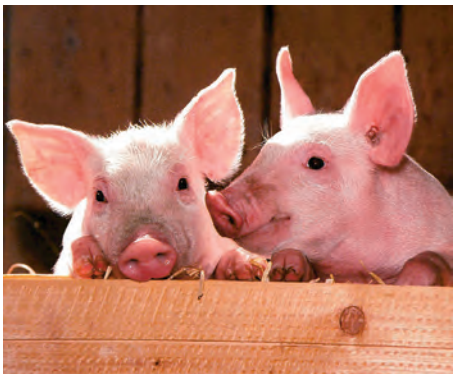
Critically, they have also assessed the repeatability and reproducibility of all these novel MRI scans in both healthy subjects and chronic kidney disease patients.

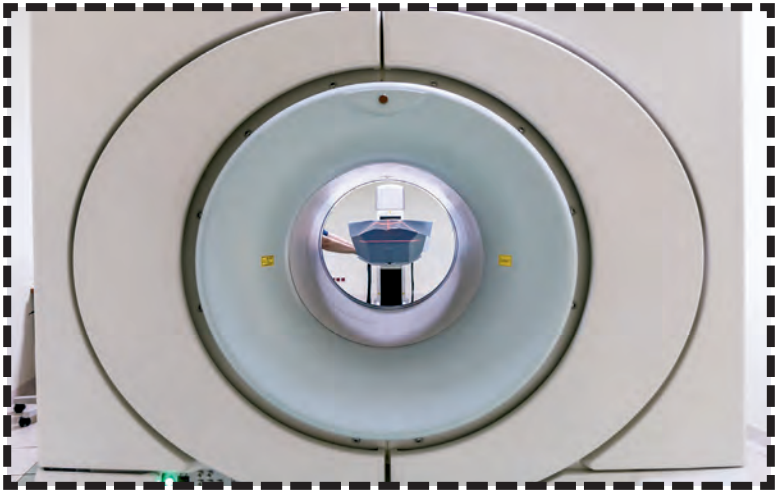
How does the research help humans?

Ultimately, they have demonstrated a method to understand impaired kidney function which could aid the development of therapies in humans. All of these measures allow assessment of the whole kidney and can be performed in a single scan session, without the need for any invasive procedures.

The methods developed in this project will allow specialist care workers to investigate chronic kidney disease in patients, without the need to inject additional chemicals into them or expose them to radiation.

Rodents and pigs are often used to study chronic kidney disease





MRI scanner

What animals are typically used in this type of research?

Currently, rodent and pig models are commonly used to study chronic kidney disease. These animal studies can typically include: genetic manipulation (to induce kidney disease); surgery (to remove a kidney or block the blood flow); or drug administration (for treatment, immunisation or inducing chronic kidney disease by blocking hormones).

During these studies, animals may then undergo repeated blood sampling, urine collection and blood pressure monitoring. They are then sacrificed for kidney removal.

Animal models of chronic kidney disease only approximate the human condition. Therefore, the detailed outcomes measured using animal research are often not seen, found or measured during human trials.

Animal models of chronic kidney disease only approximate the human condition

The impact of this research

This project will lay the foundations of robust human measures required for the replacement of animal studies.

Using this method to study human kidneys will substantially improve the outcomes of patients suffering from chronic kidney disease, by facilitating better assessment, diagnosis and personalisation of care. Opportunities to quantify the changes in kidney function can also be used to inform drug discovery pathways in humans, rather than in animal models.

This model will allow better characterisation of the progression of chronic kidney disease in trials of new drug therapies and provide an understanding of their *in vivo* mechanisms of action, prior to large scale clinical trials.

Project update: growing the guts to improve drug uptake testing

Making studies of drug uptake across the gut lining more accurate and realistic than existing animal and human cell models.

Dr Martin Garnett and his team at the University of Nottingham have made a substantial contribution to making studies of drug uptake across the gut lining more accurate and realistic than existing animal and human cell models.

This research provides a more realistic model for drug transport and toxicology studies that could be used to replace animal studies

How does the research help humans?

To ensure new medicines are safe, it is important to measure how they get into the body. The main route to drug uptake in humans is a layer of cells in the gut known as the epithelium. Drugs are therefore routinely tested to see how well they are transported across the gut epithelium into the body. There are also concerns about the safety of various nanoparticles produced in today's society. This research can also be applied to test whether, how, and in what quantities, nanoparticles can get into the body.

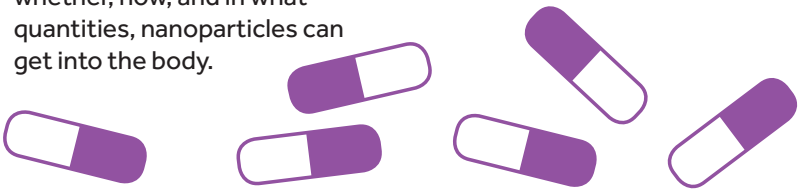
Why did we fund this human-relevant, animal free research?

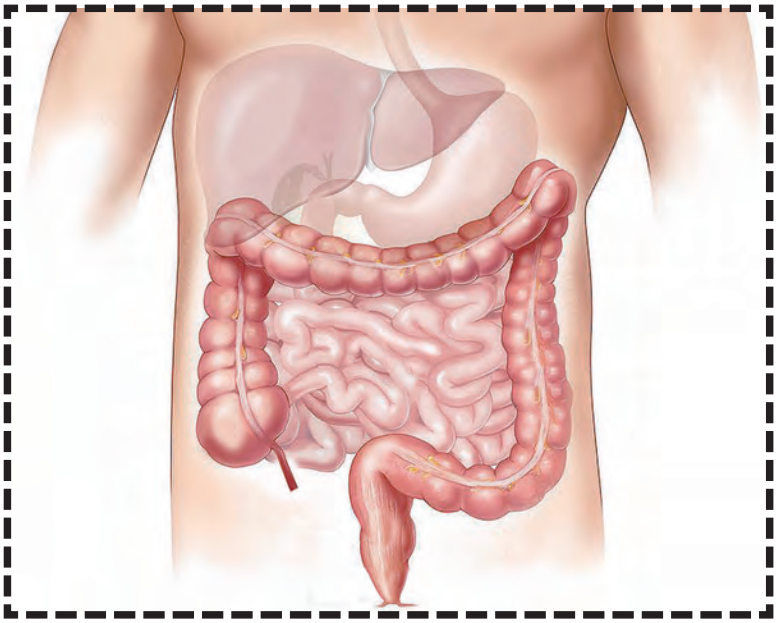
The currently available cellular models are too simple to determine drug and nanoparticle uptake across the epithelium accurately, so animal experiments are still widely used. The Nottingham research team aimed to produce a much more realistic cell culture model of drug uptake across the gut epithelium, to replace these experiments.

How are the animals used?

Tens of thousands of animals, usually rodents, but also dogs and pigs, are currently used in gastrointestinal research.

The pharmaceutical industry still uses a wide range of models to predict oral uptake of drugs under development. These range from *in vitro* cell procedures, tests on excised animal tissue and chronic experiments in surgically modified dogs.





The impact of this research

This research produced a much more realistic cell culture model of drug uptake than any other animal or human cell study. The team developed a human cell model by growing gut cells on a basement membrane; this avoided using animal serum routinely used in cell culture and grew more realistic looking human epithelium. The resulting cell model also solved a known problem occurring in other cell studies, where cells stick together too tightly and so don't allow some drugs to squeeze through. By solving this problem, the team could demonstrate reproducible permeability of their model, which is important for future validation of the method.

Rodents, dogs and pigs are used in gastrointestinal research

This research provides a more realistic model for drug transport and toxicology studies that, once complete, could be used to replace animal studies.

Dr Garnett adds, *"We have made a number of key steps towards the objective of reducing animal experiments and have a better understanding of what still needs to be done to reach our goal".*

The team now want to focus on adding another cell type to their model that will produce a mucus layer, to make it even more lifelike.

Other replacement news

Human cancers don't work the same way in mice

Increasingly, scientists are transplanting tumours from patients, into mice. This is to study cancer and its response to drugs, as part of a drive towards personalised medicine. A study, published in October, in Nature Genetics (doi:10.1038/ng.3967) raises questions about how well these models represent human cancers.

The study finds that when transplanted into mice, the cancers undergo different genomic changes than they do in human hosts. The findings from the paper have major implications for animal-based modelling of human cancer and highlight the need to create human-based systems to develop personalised medicines.

go.nature.com/2DojxGV

Photo by Noah Elhardt

Human-relevant plant model for testing anaesthetic drugs

Scientists have recently shown that plants can be used as an early indicator of the effectiveness of new anaesthetics (rather than needing to use animals). Plants that show touch-induced movement, such as Venus flytraps, could be used as experimental models for testing anaesthetic drugs for humans. The study found that various anaesthetic drugs impaired movements in these plants by blocking similar molecular processes and electrical signals as those observed in humans.

Following further studies and the validation of such models as human-relevant, this new experimental model for anaesthetic drug testing could be more cost-effective and accessible, less time-consuming and more ethical to use than animals.

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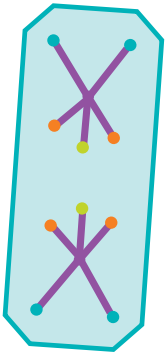
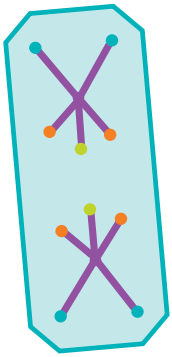


$15 million to support the development of 3D human tissue models

The National Institutes of Health in America has promised to spend more on the development of human-relevant models to understand disease. They have committed $15 million towards 13 two-year projects that will develop 3D micro-physiological system platforms that model human disease. These platforms, called 'tissue chips', support living cells and human tissues to mimic the complex biological functions of human organs and systems and provide a new way to test potential drug efficacy.



"The goal is for these tissue chips to provide more accurate platforms to understand diseases, and to be more predictive of the human response to drugs than current research models, thereby improving the success rate of candidate drugs in human clinical trials," said National Center for Advancing Translational Sciences (NCATS) Director, Christopher P. Austin, M.D.

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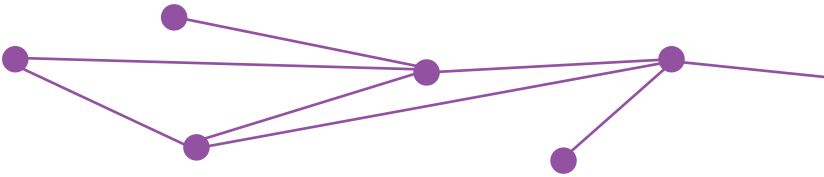

ECVAM Annual Report

Every year ECVAM, the EU body responsible for overseeing the development of methods to replace animal use in toxicological studies, publishes their annual report outlining the development and adoption of replacements to animal testing. This year's report shows the progress that has been made in many areas.

Of note, for health effects such as skin irritation, skin corrosion, eye irritation, serious eye damage and skin sensitisation, several frameworks have already been adopted at international level. The EU flagship project, VAC2VAC, is also progressing the development, optimisation and evaluation of non-animal methods for routine batch testing of vaccines in order to avoid severe animal testing.

bit.ly/2BeR7ZW

Fabulous friends

Thank you to everyone who fundraises and volunteers for us. You are all superstars and we appreciate your support so much!

Going the extra mile

Huge thanks to the Bude group, who raised a whopping **£6,856.15** in 2017. The Bude group have raised this colossal sum with stalls, community fitness fundraising events, collection tins in cafes and with local businesses donating a portion of their profits to us.

Special mention goes to Melissa Roberts (pictured above, centre) for leading the Bude group's fundraising for animal free leukaemia research. In September, Melissa raised £1,400 by doing a 5km park run in memory of her loving partner, Lawrence, who sadly died from leukaemia. If you would like to get fundraising in your community but don't know where to start, head over to page 27 for some great advice.

Rescued lab rats inspire wedding fundraising

A few years ago, Roisin McAuley and Ben Claridge took in two rescued lab rats from a failed lab study at Bristol University. They named them Kale and Kiba and had lots of fun learning how intelligent, funny and playful they were.

Fast forward two years, Kiba had passed away and Kale was starting to get old and sick. Sadly, he died just two weeks before their wedding last September.

Roisin and Ben were heartbroken, but then they had an idea! To honour the memory of Kale and Kiba they would ask for donations to Animal Free Research UK instead of wedding gifts.

Roisin said: *"The response from our friends and family blew us away. The wedding day was perfect, but part of what made it so special was that we raised over £1,500 for Animal Free Research UK. Those two little lab rats who changed our lives now have a lasting legacy. I feel confident that with this donation they will continue to change the lives of so many more sentient creatures."*

If you like to donate to Animal Free Research UK as part of your wedding celebrations, contact Danielle on **Danielle@animalfreeresearchuk.org.**

You can read the full story on our website: bit.ly/2iMlXD4.

Roisin and Ben who raised £1,500 at their wedding in memory of their rescued lab rats, Kiba and Kale

Fabulous friends

A year of Hurst

When their dear friend, Wendy Hurst, died last year, Jane Mckears and friends (pictured below) in Birmingham wanted to do something special in her memory.

Wendy was a longstanding vegan, animal rights activist and eco-warrier. Animal Free Research UK was her favourite charity so they decided to fundraise for us in her memory.

They've held skittles nights, bingo nights, quizzes and even ran a sign language course to raise funds. So far the group have raised an amazing **£2,300**. If you live in Birmingham, go along to one of their events or join the Birmingham support group and get involved.

Find a group near you at: animalfreeresearchuk.org/fundraisinggroups

Daredevil fundraising

Anne-Marie Hewitt decided to celebrate her 40th birthday with something a bit different, a wing walk for Animal Free Research UK!

Anne-Marie raised over £500 and said: *"The wing walk was an amazing experience albeit a little windy up there. Basically, every birthday I do something crazy for charity. I'm both a biologist and a vegan so for my 30th I did a sponsored handglide and for my 35th I did a skydive, all for charity. This time for my 40th I'm fundraising for Animal Free Research UK, which allows me to combine my passion for animals and science."*

Vegfests

In October we had an amazing time at Vegfest, chatting to supporters and getting to know new ones. We enjoyed all of the yummy food on offer (probably a bit too much) and raised £900.

Vegfests are a great way for us to raise awareness about our work, but they are also very expensive. Attending two Vegfests costs around £2,000, which covers the stall fee and other associated expenses.

We hope to be at Bristol in May and in London again in October. Attending two Vegfests allows us to spread our message to a potential audience of 24,000 people. These festivals present a really big opportunity for us to engage with more valuable supporters like you.

If you would like to help us reach more people and are interested in sponsoring our stalls for Bristol and London please get in touch with danielle@animalfreeresearchuk.org.

Facebook fundraising!

You can now fundraise on Facebook!

Go to **facebook.com/AnimalFreeResearchUK** and click on 'Fundraiser' to set up your fundraising page. It's that simple!

Why not set up a birthday fundraiser and ask for donations to us in lieu of gifts?

Facebook do not charge any fees so all the money raised goes straight to us!

Looking for a challenge?

Push yourself in 2018 with a great challenge AND raise funds for animal free medical research.

We have lots of challenges for you to choose from all over the UK. You choose your challenge, the distance and whether you walk, jog or run it. The challenges are:

- 5th-6th May – Isle of Wight Challenge
- 26th-27th May – London 2 Brighton Challenge
- 30th June-1st July – Cotswold Way Challenge
- 21st-22nd July – Jurassic Coast Challenge
- 11th-12th August – Wye Valley Challenge
- 25th-26th September – South Coast Challenge
- 8th-9th September – Thames Path Challenge
- 8th September – Thames Bridges Trek

To book and find out more, visit our website: animalfreeresearchuk.org/fundraising-events/

Calling all volunteers - we need you!

We need your support to help fund our work. We are looking for 'Tin Captains' to join our 'Tin Army'.

You will manage collection tins in your local community and arrange and carry out supermarket collections.

We are also on the lookout for Community Ambassadors to use their local knowledge and passion for connecting with people to raise funds with local businesses, schools and community groups. If you are interested in any of these opportunities please email **danielle@animalfreeresearchuk.org** for more information.

I want to get involved but where do I start?

by Steph Jones-Giles, Animal Free Research UK Bude Group

See if there are existing groups in your area

Contact Danielle Goodwin (Fundraising Development Officer) at Animal Free Research UK HQ to see if there is a group you can become involved in. Danielle will also be aware of larger events where an Animal Free Research UK stall is appreciated e.g. Animal Aid Christmas Without Cruelty Fayre.

Nothing in your area?

Let the world know you are looking for like-minded people. Consider writing an article for your local paper or a letter for the letters page. Create posters for local shops or post on facebook or other social media. Even if only one person responds then you have two heads to share ideas and plan.

Too shy to advertise but want to get started?

Contact your local supermarket and ask if you can hold a collection in the store. Danielle has a useful collection request template you can personalise. She also has lots of resources to give away to raise awareness of the charity. Ask a close friend or family member if they will help you/keep you company on the day (or failing that, help you set up and pack away).

Give a talk

You may have links to the Women's Institute, local schools or other groups. How about approaching the organiser and offering to give a short talk? Again, take the literature along.

Find suitable location for collection tins

There may be a café or restaurant nearby who cater well for vegetarians and vegans. This could be a good place to start. Rely on your local knowledge to approach relevant shops you think will cater to the cause. I would suggest avoiding places that already have (in some cases several) tins.

Volunteers really do make a difference so go for it and remember to take plenty of photos for Replacement News!

www.animalfreeresearchuk.org/volunteer

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

ANIMAL FREE
RESEARCH UK

Download our free legacy guide at
animalfreeresearchuk.org/leave-a-legacy/