REPLACEMENT NEWS

Spring - Issue 141

ANIMAL FREE RESEARCH UK

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A company limited by guarantee (No. 08015625) in England and Wales

Springing into action: Celebrating progress and innovation

My heart beats with the excitement that Spring signals – the sun lit and warm days putting a smile on our faces and all the opportunities and activities we have to look forward to in the months ahead.

May 27th is our flagship World Animal Free Research Day - it was on this poignant date 54 years ago when our brilliant charity was born.

And this year it is with great excitement and determination that we launch Herbie's Law, a groundbreaking initiative poised to reshape the landscape of medical research. At its core, Herbie's Law represents a bold declaration of our collective values: a future where animals are no longer used in the name of science. This landmark legislation will set a clear target year for the complete replacement of animal experiments with humane, effective alternatives. It's a visionary step forward – a testament to our dedication to creating a world where every life is valued and respected. Read more about this exciting initiative and how you can get involved on page 6.

We are excited to also announce that we have funded three new pilot grants so far this year. Pilot grants enable researchers to explore new ideas in replacement research that merit further development. These pioneering projects are focusing on Drug Induced Liver Injury – a major cause of acute liver failure and the leading cause of failed and withdrawn new drugs. These projects are showcasing the power of using human-relevant New Approach Methodologies (NAMs) such as organ-on-a-chip and their potential to save both human and animal lives. You can read more about these projects from page 8.

And further great news for patients, science, and animals alike! Animal Free Research UK will be awarding more innovative pilot and transition grants to turbocharge the development and adoption of animal-free technologies. Keep a look out online and in the next issue of Replacement News for announcements of these new grants reshaping the future of medical science.

All this activity is as ever all thanks to your unswerving support and generosity. So on behalf of the scientists you help fund and all the animals you are fighting for, I offer heartfelt thanks.

With you by our side, the months ahead are full of promise, hope and success.

With grateful thanks,

Carla Owen, *Chief Executive*

Latest News

Baroness Bennett asks oral question in the House of Lords with help from Animal Free Research UK

On Monday 18th March, Baroness Natalie Bennett of Manor Castle used an oral question session in the House of Lords to call for decisive action to accelerate the transition to animal-free, human-specific medical research techniques. We were delighted to have provided detailed information about this subject both to Baroness Bennett, and to peers across the political spectrum with an interest in this area.

Asking a question in the House of Lords and other such activities raise the profile of animal-free medical research and play a crucial role in sustaining pressure on both Government and opposition parties to ensure we can make change happen. At Animal Free Research UK, our dedicated Public Affairs team work tirelessly to engage with parliamentarians on this topic, build up our supportive network of MPs and Peers, keep them informed of developments in the sector, and secure profile-raising initiatives like this one. We are always incredibly grateful to all of those who speak up for animals in the corridors of power, and extend our heartfelt thanks to Baroness Bennett for asking this important question in the House of Lords, as well as to the other Peers who made valuable contributions to the discussion.

Accelerating Innovation: We're awarding new grants

Great news for patients, science, and animals alike! Animal Free Research UK will be awarding innovative pilot and transition grants to turbocharge the development and adoption of animal-free technologies. And we're not stopping there – we're looking to spread our impact far and wide, particularly in regions like Wales, the North of England, and the South Coast, where our research presence could be stronger.

Pilot grants enable researchers to explore new ideas in replacement research that merit further development, while transition grants support scientists to transition from animal research to animal-free research. These grants will be focusing on projects tackling dementia, breast cancer, and coronary heart disease.

We've had some great applications in which are being reviewed as we write this so keep a look out online and in the next issue of Replacement News for announcements of these new grants reshaping the future of medical science.

Victory for animals with the end of the Forced Swim Test in sight

Here is some truly heartening news that marks a significant victory in our ongoing fight against animal research.

The Government has announced plans to bring an end to the barbaric practice of the Forced Swim Test.

For far too long, innocent mice and rats have been subjected to unimaginable suffering in the name of science. The Forced Swim Test, which dates back to the late 1970s, has seen mice and rats cruelly confined to containers of water from which escape is impossible. This outdated and distressing experiment has been touted as a model for depression in humans and a means of screening potential antidepressant drugs. However, scientific evidence now clearly shows that the test is not only ineffective but also fails to provide relevant insights into human depression or the safety of antidepressants at all.

Our heartfelt gratitude goes out to everyone who has tirelessly advocated for this momentous progress including our dedicated colleagues at PETA, who have spearheaded a high-profile campaign. And at Animal Free Research UK we submitted rigorous evidence to the Animals in Science Committee's inquiry and supported MPs in tabling parliamentary questions. This unwavering commitment has been instrumental in driving forward this historic change.

This commitment to end the Forced Swim Test marks not only a victory for animal welfare but also a triumph for compassion and progress.

We will continue our dedicated work with parliamentarians from across the political spectrum to provide expert input on non-animal methods and accelerate the day when this distressing test is finally confined to history.

As we celebrate this monumental step forward, let us remain steadfast in our commitment to advocating for a world where the dignity and well-being of all living beings are honoured and respected. Together, we have the power to create lasting change and build a brighter future for generations to come.

World Animal Free Research Day

27 May 2024

Herbie's Law: the Human-Specific Technologies Act, our ambitious call for a new law to set a date for the full replacement of animal experiments and confirm the actions that the Government must take to make sure that this happens.

Meet Herbie...

Herbie is a 14-year-old beagle who lives with Animal Free Research UK's CEO Carla Owen.

He was part of a litter of beagles bred for research. A number tattooed onto his ear testifies to this.

Luckily for Herbie, someone decided that he was not needed in the laboratory he was destined for. He was adopted by Carla's family in 2013 and has happily lived his life in the Midlands, growing old gracefully in his loving forever home.

In our nation of animal lovers, there's a harsh reality hidden behind closed doors: millions of animals bred and born in laboratories, their lives destined for the confines of medical research. But amidst the darkness, there are stories of hope – stories like Herbie's.

Herbie, with the telltale tattoo on his ear, was bred for the laboratory. But those grey hairs on his chin? They tell a different story – one of escape, of freedom, of finding love in a warm home. Herbie is one of the lucky ones.

Yet, for every Herbie, there are countless others who aren't as fortunate. In 2022 alone, over 3 million animals were used in experiments in the UK. And the heartbreaking truth? Over 92% of drugs that show promise in animal tests fail in clinical trials. It's a failure rate that cannot be ignored. Our loved ones continue to suffer, waiting for treatments that may never come. But amidst the despair, there's a glimmer of hope – a promise of change, of progress, of a better future for all.

New technologies like organ-on-a-chip, artificial intelligence, and computer modelling are leading the charge in revolutionising medical research. Based on human biology, these human-specific technologies are a beacon of hope, offering more accurate predictions of drug safety and efficacy than traditional animal testing ever could.

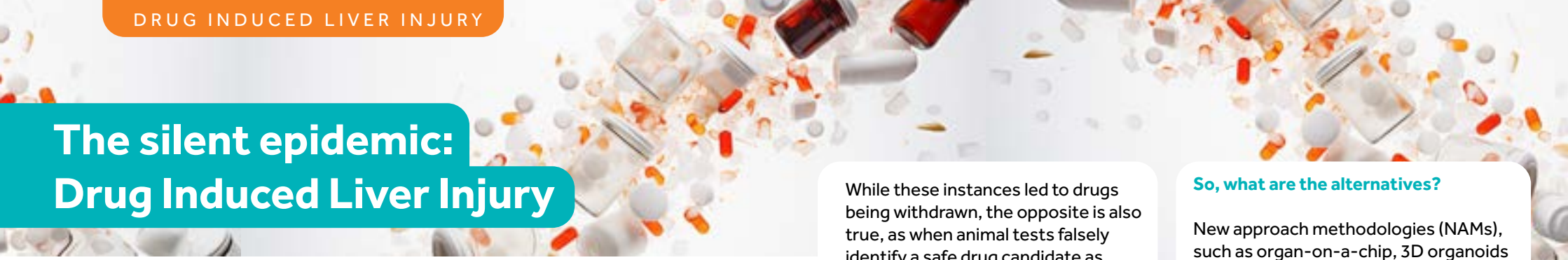
But this isn't just about science – it's about compassion, about ethics, about standing up for those who cannot speak for themselves. It's about Herbie, and the countless others like him, who deserve a chance at life beyond the confines of a laboratory.

That's why, on World Animal Free Research Day, we're calling for Herbie's Law – a bold step towards a future where animals are no longer used for the sake of science. This law will set a target year for the full replacement of animal experiments with humane, effective alternatives. It's a commitment to progress, to compassion, to a brighter future for all.

With the Government committed to writing a roadmap by the summer, now is the time to act. With positive action on the horizon, we want the UK Government to go further, climb into the driving seat and accelerate towards a brighter future.

Herbie says: "Hey, UK, are we there yet?"

Let's make sure the answer is yes.



The silent epidemic: Drug Induced Liver Injury

In laboratories worldwide, countless animals are used in the name of toxicology research. This archaic practice, rooted in tradition, not only inflicts unimaginable suffering upon these sentient beings but also poses significant risks to human health. Among them lies a particular threat: Drug Induced Liver Injury (DILI).

The hidden danger

DILI is the major cause of acute liver failure and the leading cause of failed and withdrawn drug licenses.

This silent epidemic, borne of the inadequacies of animal testing, exacts a heavy toll on human health. Drugs that pass the test in animal research often harbour unseen dangers. And when the liver bears the brunt of these toxic assaults, the consequences can be catastrophic.

From mild cases of jaundice to life-threatening liver failure and even death, the spectrum of DILI is as vast as it is devastating. Yet, despite its prevalence, the roots of this crisis lie buried in the flawed methodologies of animal testing.

What is toxicology research?
Toxicology research is all about understanding how substances—like drugs, chemicals, or even natural compounds—affect living organisms, especially humans. Researchers study the potential harmful effects these substances might have on our bodies, from causing diseases to damaging organs. They investigate how different doses and exposure levels can impact our health, aiming to identify and prevent potential risks.

Numerous drugs have made it onto the market, only to be subsequently withdrawn following adverse side effects in humans and even death. For example:

- Isuprel, a treatment for asthma that killed over 3,500 people in the UK alone, even though it was 'successfully' tested in rats, guinea pigs, dogs and monkeys - all of which had received doses far exceeding the human dose.
- Troglitazone, an anti-diabetic and anti-inflammatory drug, has been linked to 63 liver-failure deaths.

In fact, over 92% of all drugs that pass preclinical tests in animals will fail in human clinical trials. Around half of those that succeed are likely to be later withdrawn or re-labelled due to adverse reactions which were not detected in animal tests.

While these instances led to drugs being withdrawn, the opposite is also true, as when animal tests falsely identify a safe drug candidate as "toxic," the development of the drug will almost certainly be abandoned. Unfortunately, many potentially useful drugs have likely failed animal testing and have therefore been lost to patients, even though they could have been both safe and effective in humans. It is unknown how many medicines have been abandoned due to toxicity in animal trials.

DILI is the major cause of acute liver failure and the leading cause of failed and withdrawn drug licenses

Several essential, commonplace drugs used daily all over the world were found to be toxic to animals. However, as they were developed before the strict guidelines that are in place now were established, they were still able to be tested and found to be safe in humans. Some key examples include penicillin which is fatal to guinea pigs and hamsters, and paracetamol which is toxic for dogs and cats.

Although there is a deep-rooted belief that animal experiments can predict human toxicity, there is now much evidence to the contrary, helping to make the strong case to move away from animal experiments into human-relevant science.

So, what are the alternatives?

New approach methodologies (NAMs), such as organ-on-a-chip, 3D organoids and artificial intelligence, are continually being developed and are highly relevant in drug development and toxicity testing.

However, bias towards animal testing and a lack of trust in new technologies is still widespread throughout the research and pharmaceutical industries, and comprehensive comparison studies between animal and non-animal methods for drug efficacy and safety testing are still to come.

But there is hope. At Animal Free Research UK we are delighted to annouce that we are funding three DILI-focused pilot projects starting in 2024.

They are addressing DILI from three different angles:

1. Creating a stackable model of the human liver containing all essential liver cell types, which can be used to test drugs and predict DILI
2. Developing a model to find a link between a fatty liver and DILI
3. Studying the effects of drugs on bile transporter proteins leading to DILI, and using stem cells to create liver cells for drug safety testing

You can read more about these pioneering research projects over the next few pages...

Reducing costs, saving lives: The NANOSTACKS™ advantage

At Revivocell Limited, Dr Abdullah Talari is currently building a 3D-engineered model that accurately mimics the range of different cell types found in the human liver for use in drug safety testing.

Dr Abdullah Talari

Animals to be replaced: Mice, rats, guinea pigs and rabbits

The Problem

Once the liver has processed a drug, it is usually removed from the body through the digestive system. However, drugs can sometimes remain active or be changed into a more harmful form, making them harder for the liver to get rid of. If the drug is taken repeatedly, harmful toxins can build up in the liver and cause damage known as drug induced liver injury (DILI). Most people can fully recover from DILI once they stop taking the drug which caused it, however some people can become very unwell and during drug development, it is difficult to know which drugs are at risk of causing DILI.

Please support Professor Talari's project today.

Your donation fuels cutting-edge, humane science

SCAN ME

Drug discovery and development is also a long and expensive process, on average taking over a decade and costing around $2 billon per drug. Most drug candidates have a success rate of just 10%, with 20-40% failing because of DILI, in part due to animal tests which do not accurately reflect how the drug will work in people.

> Drug discovery and development takes on average over a decade and costing around $2 billon

Due to these issues, in the USA, the FDA's Modernization Act 2.0 (2022) now allows alternative methods of drug discovery that do not include animal testing, including organ-on-chip technologies (miniature replicas of human organs on microchips). However, current animal-free liver models cannot represent the full complexity of the cell types found within the liver. Recent advancements in organ-on-a-chip technologies hold promise, however they are expensive and time consuming to use.

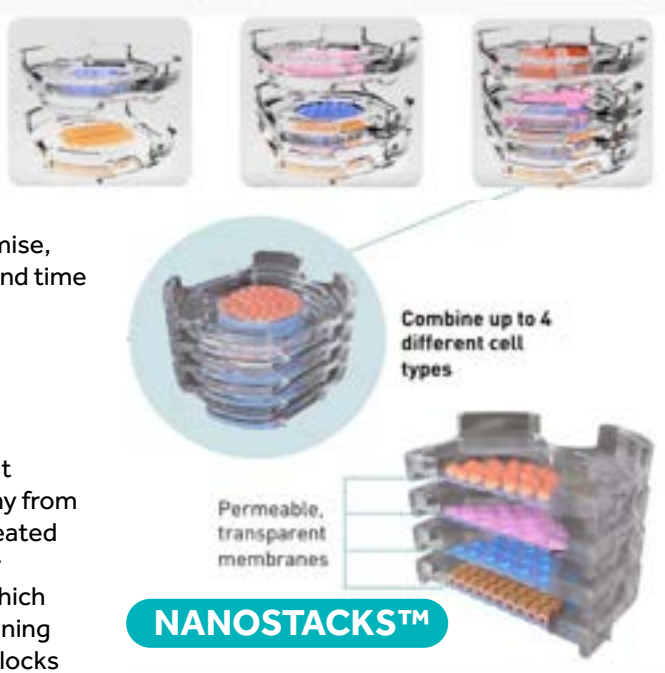
Biological building blocks

To help with this problem, Dr Abdullah Talari and the team at Revivocell, a spin-out company from Lancaster University, have created an innovative new technology known as NANOSTACKS™, which are "LEGO-like" blocks containing cells. Researchers can stack blocks containing different types of cells to quickly create models recreating the complex mix of cells found in an organ, such as the liver.

> Some drugs discarded after failing animal tests may have been safe for humans, meaning this potentially beneficial medicine is lost

The current version of NANOSTACKS™ has been made using some animal-derived products such as foetal bovine serum which is blood taken from the hearts of unborn cows, and collagen, which is made from pig or cow skin. This project aims to complete testing of NANOSTACKS™ using only animal-free materials, making this technology completely human-specific.

Fail early to improve outcomes for patients



This exciting and unique technology could significantly reduce costs and increase the efficiency of drug development. It is estimated that using NANOSTACKS™ instead of animals in drug trials to predict DILI development alone could save around $200 million per drug and reduce development time by at least 2-3 years. This "fail early, fail fast" strategy could result in improved drug safety for patients and reduced chances of DILI development, lower overall costs and shorter times for drugs to be available on the market. This product could also replace animals in drug development, saving the lives of millions of animals each year, resulting in a win-win for both patients and animals.

Dr Talari plans to share the results of this project so that the data can be used by other scientists and raise awareness to expand the uptake of the technology.

Developing a 3D human liver model to assess drug safety

Professor Christopher Goldring at the University of Liverpool is developing human liver models to improve drug safety predictions for both widely used drugs and those in development. He works closely with and shares data with other academics, clinicians and the pharmaceutical industry to make sure his work is human-relevant and has a patient focus.

Prof Christopher Goldring

Animals to be replaced: Mice, rats, guinea pigs and rabbits

The problem

Non-alcoholic fatty liver disease (NAFLD) is the most common liver disease worldwide, caused by a gradual accumulation of fat within the liver. This condition affects 1 in 4 people (over 5 million people in the UK alone) and it can also affect children.

The liver is an important organ involved in many bodily functions including food digestion and the breakdown of drugs into inactive forms. Once the liver has processed a drug, it is usually removed from the body through the digestive tract. However, sometimes drugs can remain active or be changed into a more harmful form, which can make it harder for the liver to remove. If the drug is taken repeatedly, harmful toxins can build up in the liver and cause drug induced liver injury (DILI).

Non-alcoholic fatty liver disease is the most common liver disease worldwide affecting 1 in 4 people

People with a fatty liver may be more sensitive to the toxic effects of some drugs, including commonplace medicines such as paracetamol and antibiotics, and so may be at a higher risk of developing DILI. The link between NAFLD and DILI development is not well understood, but as a quarter of the global population has fat accumulation in the liver, there is an urgent clinical need to understand this issue.

Animal experiments are often used for NAFLD drug testing, usually mice or rats which have induced symptoms from dietary, chemical or genetic intervention. Guinea pigs and hamsters are also becoming more commonly used in this field. In the first half of 2023, over 150 research papers investigating NAFLD were published, with each study using at least 20-40 animals. However, due to differences between animal and human liver function and anatomy, no animal can fully reproduce all the characteristic features of human NAFLD, meaning it is difficult to predict when DILI will develop.

Although all drugs taken by patients will have successfully passed animal testing, around 9.4% of DILI patients will die or need a liver transplant within 2 years.

Human-relevant models that include all essential cell types found in the liver are therefore urgently needed to replace animal experiments.

Finding the link

In this Animal Free Research UK funded pilot study, Professor Christopher Goldring at the University of Liverpool is developing a complex 3D human cell model of the liver. Importantly, fat can accumulate in this liver model as it would in the body, accurately mimicking the conditions found in NAFLD. Drugs can then be tested on the cells to understand how fatty livers process drugs compared to those with less fat. It is hoped that this technology will help to understand the link between a fatty liver and the body's ability to process drugs.

This type of research often uses animal-derived products to help the cells grow in a lab-based environment, however in this pilot study Professor Goldring will develop a new completely animal-free model of fatty liver disease. The simple nature of this model will also mean that the experiments can be easily reproduced by any laboratory. This could lead to the wider replacement of animals used for drug testing, saving the lives of millions of animals and forwarding research into safe and effective drugs to benefit patients worldwide.

Reducing the risk of DILI

This study may highlight a need for testing of fatty liver status before patient treatment choices are made. Helping NAFLD patients to avoid drugs known to cause toxicity problems could reduce the risk of DILI, directly benefiting millions of patients worldwide. The results will be used to apply for larger follow up grants to continue testing drugs on the fatty liver models, establishing a reliable, human-relevant way to predict DILI in patients with NAFLD. The data will also be used as part of a Medical Research Council Career Development Award fellowship application by Primary Scientist Dr Giusy Russomanno, a Research Associate working in Professor Goldring's department, supporting her transition to becoming an independent researcher in this field.

Please support Professor Goldring's project today.

Your donation fuels cutting-edge, humane science

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Revolutionising drug safety: Growing game-changing human liver cells

At Queen Mary University London, Professor Kenneth Linton's main area of research is the study of proteins that move things in and out cells, known as transporters, and their functions, including the movement and flow of bile from the liver. This new project focuses on the role of transporters in liver cells to understand their role in the development of drug induced liver injury.

Animals to be replaced: Mice, rats, guinea pigs and rabbits

Prof Kenneth Linton

The problem

The liver makes a fluid called bile, which helps break down fats during digestion and carries waste products out of the liver into the digestive tract, where they leave the body. Proteins known as transporters act as conveyor belts to move the bile and processed drugs out of the liver into the gut. Sometimes drugs mistakenly target these transporters, which can cause drug induced liver injury (DILI).

Although drugs are tested in animals before they are approved for use in humans, DILI is still a common and serious problem which can result in patient deaths. This is because there are important differences in the chemical makeup of human and animal bile fluid and in its production.

Millions of animals are used each year worldwide for the safety testing of drugs and other substances.

To avoid this problem and replace the use of animals in drug development, human liver cells can be used for drug safety testing in the lab. However, when grown for long periods of time, liver cells can lose or undergo changes in their unique characteristics, including their ability to make bile. This could make the results unreliable, putting patients at risk.

Please support Professor Linton's project today.

Your donation fuels cutting-edge, humane science

SCAN ME

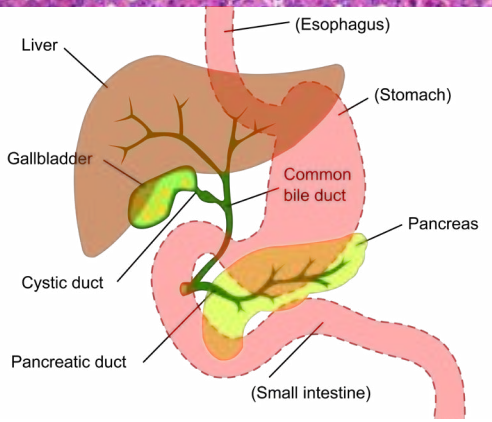
A better liver model

To overcome this problem, Professor Kenneth Linton at Queen Mary University of London has developed a new way to make liver cells from human-derived stem cells (special cells which can develop into many different cell types). These cells are able to keep their characteristics and most importantly, keep their bile-making abilities when grown in the lab. If scaled up, this technique could provide a limitless supply of cells for drug testing, replacing animals in experiments.

Professor Linton is currently growing these liver cells using a gel-like scaffold system for the cells to grow on called Matrigel, which is made using animal ingredients. Over the course of this Animal Free Research UK funded 12-month pilot project, he will replace these Matrigel structures with an animal-free alternative to allow drug testing on the liver cells without the use of any animal-derived products.

Training the next generation

Over the course of the project, two early career researchers will be trained in these techniques (one masters student and a final year undergraduate Biomedical Scientist). Professor Linton is also preparing two papers for publication and will share the results on his lab webpage, through presentations and through his relationships with industry partners, which will help other scientists to learn about and use the technology. In the future he also plans to apply for further funding to grow this technology and implement its use in standard drug development and testing practices.



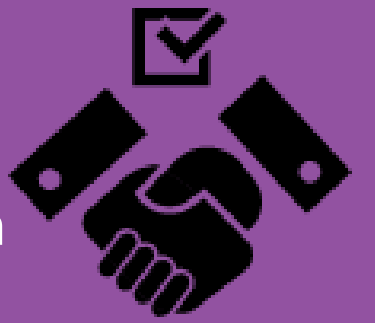
Millions of animals are used each year worldwide for the safety testing of drugs and other substances, most of which are mice and rats. The use of these liver cells for drug safety testing could replace animals used in these experiments while gaining human-relevant results, leading to safer and more effective treatments for patients.

Thank you

These innovative DILI projects are only made possible thanks to your continued support and generosity.

By standing with us you are supporting more scientists to make animal-free the gold standard of research. And helping even more bright and ambitious researchers along the way join our movement for a brighter future.

Momentum in motion: Celebrating progress in animal-free research advocacy



What a few months our Public Affairs Team have had! From the Government making a landmark five announcements on animal testing and announcing plans to end the cruel and outdated Forced Swim Test, to animal use in medical research being discussed in the House of Lords – the progress that we have seen in these last few months is truly remarkable. Momentum is clearly building on this issue in Parliament and we're so grateful for all of your support in making this happen.

So how have we been involved? Carla (CEO) and Isobel (Public Affairs Director) were delighted to meet with the Minister for Science, Research and Innovation in February to discuss animal replacement. It was fantastic to be able to discuss this vital topic with the Minister, and we were delighted to be able to provide him with information and recommendations for the Government to take forward.

A couple of weeks later, in a Westminster Hall Debate prompted by two e-petitions set up by dedicated campaigners including Will Young, the Government made five pledges to support the acceleration of non-animal alternatives in research and more rigorous regulation of animal testing:

1. Double the Investment: UK Research and Innovation to double funding for research into the 3Rs (Replace, Reduce, Refine) and non-animal alternatives from £10 million to £20 million.
2. A Roadmap: 'A plan to accelerate the development, validation and uptake of technologies and methods to reduce reliance on the use of animals in science' to be published this summer.
3. Increasing the cost of animal research: An increase in fees for licences to use animals in research.
4. Considering licence duration: A review of the duration of licences for research using animals with a view to putting 'more challenge into the system'.
5. Measuring public opinion: A 'Public Attitudes to Animal Research Survey' with the British public to be published in the autumn.

We were very grateful to the group of cross-party MPs who made positive contributions to the debate and were pleased to hear both our name and ARC 1.0 being mentioned by multiple speakers. It is truly incredible to see the impact our small charity is making in this area. We are so proud of the reputation we have built with policymakers and will continue to use this to push for action for full replacement of animal testing in medical research.

Oral Question in the House of Lords

It's not only in the House of Commons that we are calling for the replacement of animals in medical research, but also in the House of Lords. [Separate to the House of Commons where MPs sit, the House of Lords is the second chamber of the UK Parliament. Its role it is to scrutinise legislation that the Government puts forward, help to shape policy, hold the Government to account and challenge their work, and investigate issues through inquiries.]

On Monday 18th March, Baroness Natalie Bennett of Manor Castle used an oral question session in the House of Lords to call for action to accelerate the transition to animal-free medical research techniques. Ahead of the session, we were pleased to provide detailed information about this subject both to Baroness Bennett and to Peers across the political spectrum. So, what was asked to the room full of Peers? See the full question below:

"To ask His Majesty's Government what steps they are taking to promote the use of human-specific medical research techniques, such as "organ-on-a-chip" and computer modelling, in place of animal testing."

In their responses to the question, we were encouraged to hear such strong cross-party support amongst Peers for action to replace animals. Yet, the Government's official response echoed familiar sentiments, highlighting the need for a more forward-thinking approach from them in this area.

Asking a question in the House of Lords and other such activities raise the profile of animal-free research and play a crucial role in sustaining pressure on both Government and opposition parties to ensure we can make change happen. We are always incredibly grateful to all of those who speak up for animals in the corridors of power and extend our heartfelt thanks to Baroness Bennett for asking this important question in the House of Lords, as well as to the other Peers who made valuable contributions to the discussion.

And as ever, thank you to you for your unwavering support. Together, we are making progress and we will continue to work tirelessly to engage those with the power to act.

Breaking barriers: Advancing science with The Organ-on-Chip MasterClass

Step into the world of cutting-edge innovation with The Organ-on-Chip MasterClass, a thrilling collaboration between Animal Free Research UK and AZAR Innovations. This dynamic two-day masterclass wasn't just about learning—it was about transformation.

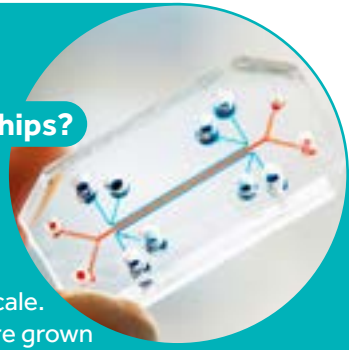
From lively group discussions to hands-on training with diverse organ-on-chip designs, attendees from academia and industry immersed themselves in the future of research. Specialised lectures illuminated the path forward, tackling the obstacles hindering the adoption of non-animal technologies ('new approach methodologies' or 'NAMs') head-on.

The masterclass wasn't just about acquiring knowledge; it was about empowerment. Each organ-on-chip model was meticulously dissected, revealing its unique strengths and applications. The goal? Equipping attendees with the tools and insights needed to revolutionise their approach to research.

As the event drew to a close, an atmosphere of inspiration lingered. During an informal networking session, attendees reflected on their experiences and shared their newfound determination. Many left with a renewed commitment to champion organ-on-chip technology in their workplaces, advocating for its adoption over animal testing and spreading awareness among their peers.

This was more than just a masterclass—it was a catalyst for change that will pave the way for a future where compassion and innovation go hand in hand.

What are organ-on-chips?



They mimic human organs on a 3D microscopic scale. Human cells are grown on transparent chips where a network of controllable fluid-filled channels can be adjusted to match the specific conditions found in the body.

Mini-Hearts Project update: A thank you from Professor Chris Denning

The response to our Mini-Hearts Projects over the last three years has been incredible. Thanks to your support and generosity the project has now been fully funded. We caught up with Chris who had a few words that he wanted to share with you...

"I am filled with an overwhelming sense of gratitude as I extend my heartfelt thanks to each and every one of you who have generously contributed to our project through Animal Free Research UK.

Your unwavering support has not only propelled our research forward but has also empowered us to push the boundaries of scientific innovation.

With your invaluable contributions, we have been able to harness cutting-edge technologies to create mini versions of the human heart in our laboratory. Through these remarkable advancements, we are revolutionising the landscape of medical research by replacing outdated and ethically questionable animal experimentation with sophisticated human-centric systems that hold the key to understanding and combating human diseases.

But your impact extends far beyond the confines of our laboratory walls. By supporting our work, you are investing in the future of science itself. Your generosity enables us to nurture and empower the next generation of researchers, providing them with the resources and opportunities they need to carry the torch of innovation forward into the future.

It is through your unwavering dedication and support that we are able to make strides towards a brighter, more compassionate future for all. Your donations are not merely financial contributions; they are a testament to your belief in the power of science to transform lives and shape a better world for generations to come.

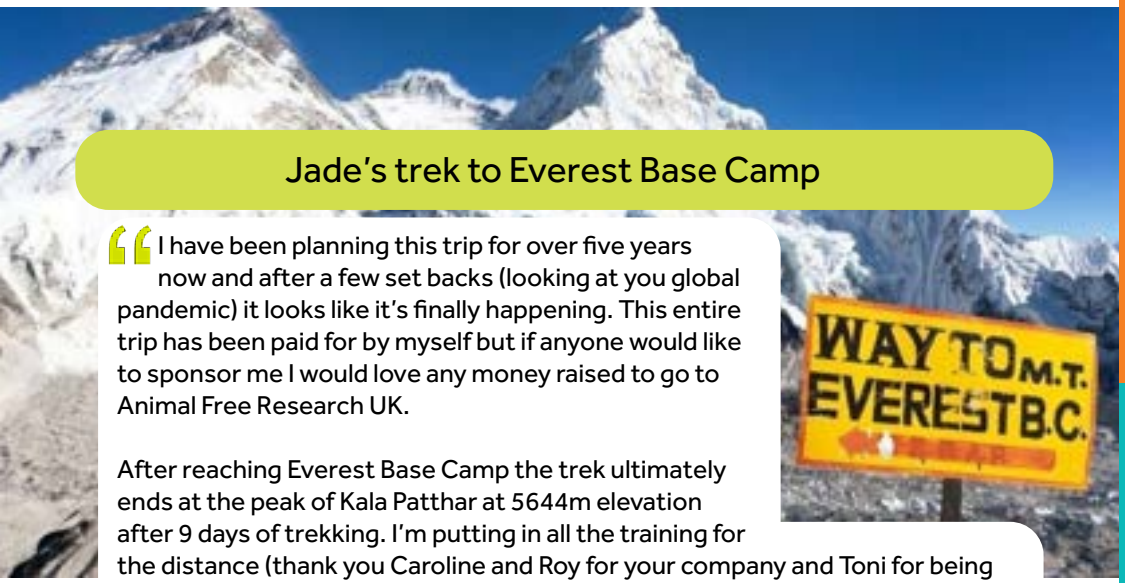
From the depths of my heart, I extend my deepest gratitude to each and every one of you. Your generosity inspires us, motivates us, and gives us hope for a brighter tomorrow.

FABULOUS FUNDRAISERS

James' marathon a month for a kinder science

"I will be running a marathon a month every month in 2024 to raise funds for Animal Free Research UK. In a world of factory farming, hunting with hounds and so called sports where animals die on an almost daily basis, animal testing may be the cruelest. But Animal Free Research are creating a world where human diseases are cured faster with animal-free human-specific technologies.

Inspired by Natalie and Charlotte completing this challenge in 2022, I had intended on doing this last year but felt I was not fit enough. Now half a stone heavier and into my 40's, I can't see putting it off any longer helping things to get easier!"



Jade's trek to Everest Base Camp

"I have been planning this trip for over five years now and after a few set backs (looking at you global pandemic) it looks like it's finally happening. This entire trip has been paid for by myself but if anyone would like to sponsor me I would love any money raised to go to Animal Free Research UK.

After reaching Everest Base Camp the trek ultimately ends at the peak of Kala Patthar at 5644m elevation after 9 days of trekking. I'm putting in all the training for the distance (thank you Caroline and Roy for your company and Toni for being the best gym partner!) but there is no preparation for altitude sickness so fingers crossed I can acclimatise."

Join our team

1 September 2024

SCAN ME

Join the Animal Free Research UK team and soak up the incredible atmosphere of this epic half marathon around London's iconic landmarks.

The event is set to become one of the UK's biggest running events, so don't miss out on your chance to be on the start line of The Big Half 2024!

All year - multiple events

SCAN ME

Walk, Jog or Run at YOUR pace on the Ultra Challenge series event of your choice. From the Isle of Wight to the Lake District - with 17 Ultra Challenges to choose from across the UK, there is a perfect one for you.

Join 30,000 others of all ages and experience in 2024 for an unforgettable Challenge. It will be rewarding, fun, and absolutely achievable with your resolve and determination alongside first class support.

CHALLENGE FOR CHANGE

Your challenge, your way

All you need to do is dream up a challenge to complete. Whether you decide to hula hoop for an hour a day, or if you are already taking part in a challenge and want to fundraise for us – you choose your challenge. There are no rules - the main thing is to get active, have fun and fundraise. Scan the QR code to find out more >>>

SCAN ME

Other ways you can help

You're everyday shopping can make a real difference with easyfundraising

Sign up to Easy Fundraising and see your favourite brands donate to Animal Free Research UK whenever you shop with them.

Easy Fundraising turn your daily shopping into every day magic! They partner with over 7,000 brands who will donate part of what you spend and it won't cost you any extra.

And so far our amazing supporters have already raised nearly £8,500 for Animal Free Research UK!

Visit **www.easyfundraising.org.uk** to find out more and register!

Make your birthday even more meaningful and set up a Facebook birthday fundraiser asking friends to donate as an alternative gift.

giftaid it

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!

Welcome to the Animal Free Research UK shop!

shop.animalfreeresearchuk.org

SCAN ME

A gift for the future

What is your legacy going to be?

During our lifetime we each support charitable causes that are close to our hearts - those with which we share our values and beliefs. We see cruelty or injustice - and we are compelled to connect with like-minded people who also want a more compassionate future to become a reality.

The same is true after life: leaving a gift in your will is simply a continuation of those same values and experiences held so dear during life.

Because of this, and wanting to provide for family or friends, your will is one of the most important legal documents you will ever sign – and one of the most heartfelt demonstrations of support that an individual can make to a charity.

After providing for your friends and family, we hope you'll consider including a gift in your will to Animal Free Research UK. Thank you.

For more information about Leaving a Legacy, please visit our website: **www.animalfreeresearchuk.org/leave-a-legacy**

SCAN ME

Should you wish to discuss this further or have any queries relating to leaving a gift in your will, please contact **legacies@animalfreeresearchuk.org**

Your donations are already life-changing. You can make them go even further through Gift Aid.

Every donation you make to Animal Free Research UK could be worth more at no extra cost to you by choosing to Gift Aid it.

If you're a UK taxpayer and have paid income or capital gains tax within the financial year then you're eligible for Gift Aid. It is one of the simplest and most effective ways of giving to charity.

Together, let's unlock the full potential of your generosity. Let's embrace the transformative power of Gift Aid and pave the way for a brighter, more compassionate future for all.

Remember, your donation has the power to change lives. With Gift Aid, that power becomes even greater.