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Newsletter 2016

Welcome to our new Directors

Safer Medicines Trust is delighted to announce the appointment of Professor Barbara Pierscionek, PhD, MBA, LLM as our Scientific Director and Professor Chris Foster, MD, PhD, DSC, FRCPath as our Medical Director. They are both distinguished experts in human-focused biomedical research, who will lead the charity towards our goal of improving the safety of medicines and the future of biomedical research, by accelerating the paradigm shift from animal-based to human-relevant models.



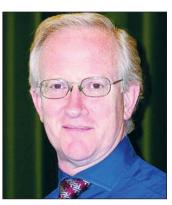
Professor Barbara Pierscionek

Professor Pierscionek is Associate Dean of Research and Enterprise at Kingston University's Faculty of Science, Engineering and Computing. She qualified with clinical and scientific degrees (PhD in protein chemistry and optics) from the University of Melbourne and obtained an MBA and legal qualifications in the UK including the theoretical degree required for practice

as a solicitor in England and Wales as well as a Masters degree in Law (LLM). Her scientific expertise is in the area of eye and vision research. She is a pioneer of multidisciplinary approaches leading to new insights into the vision and the ageing eye that have potential to improve outcomes for cataract patients in the design of

new intraocular implants. She also works on the ethicolegal aspects of medical and biomedical research.

Professor Foster is the Medical Director of HCA Healthcare Laboratories, London, and **Emeritus** Professor Pathology at the University of Liverpool. He is a leading specialist in the pathology of human cancers, particularly of the prostate, bladder and Professor breast. Foster received his BSc in Biochemistry at University College London and qualified



Professor Chris Foster

in Medicine at the Westminster Medical School. He received his PhD from the Institute of Cancer Research and his MD at the Children's Hospital of Philadelphia and the National Institutes of Health, Washington DC. In 2002, Professor Foster was awarded a DSc for his contribution to understanding "The Cellular and Molecular Biology of the Metastatic Process".

Both professors have been Scientific Advisers to Safer Medicines Trust for several years and we are delighted that they are now taking on these leading roles. We welcome them both very warmly and look forward to them helping to lead the transition from animal models to human-relevant models.

Safer Medicines Campaign is an independent group of scientists and doctors with extensive expertise in drug development. Our aim is to change the way medicines are tested, to a system based on *human* biology: the *only* way to ensure safety for patients. A million people are hospitalised by their medicines every year in the UK, costing the NHS £2 billion*. Many thousands are killed. This cannot be allowed to continue: the time for action is NOW!

Safer Medicines Trust is a registered charity. Our international conferences at the Royal Society and the House of Lords showed the benefits to drug safety and medical progress offered by a focus on human, rather than animal biology. Our system of 'pragmatic validation' offers a way to speed the use of superior methods.

Help us put patient safety first

6 We don't have to look for model organisms any more because we are the model organism 9 9

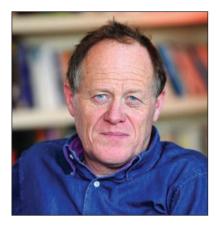
Nobel Laureate Sydney Brenner CH FRS

OUR PATRONS

Sir David Amess MP Caroline Lucas MP Paul Flynn MP Mat Fraser Carol Royle Dr James Le Fanu

Welcome to our new Patrons

We are delighted to welcome three distinguished Patrons:



Dr James Lefanu is a doctor, columnist, social commentator and historian of science and medicine. He is best known as the author of the Telegraph's Doctor's Diary, but also writes for The Times, Spectator, Prospect, The Oldie, The British Medical Journal and Journal of the Royal Society of Medicine. He also writes books, including the highly acclaimed The Rise and Fall of Modern Medicine, which won the Los Angeles Prize Book Award.

He says: "Safer Medicines Trust promotes a vision of a more rational and appropriate future for scientific and medical research, centred on humans, rather than animals, and they are very well qualified to do so. I am proud to represent them as a Patron."

Paul Flynn has been the Labour MP for Newport West for 29 years. He is an outspoken and passionate campaigner on many issues, including health. He has been shadow spokesperson for health and chaired a Council of Europe health committee, which called for greater transparency and better governance in public health, as well as safeguards against undue influence by vested interests.

He says: "The safety of medicines is of paramount concern and should be established by the best methods available. This is what Safer Medicines Trust is calling for and that is why I am supporting them."





Sir David Amess has been a Conservative MP for 33 years, and has an unequalled backbench record for introducing new bills into law. He is one of the most prominent Conservative spokesmen on health issues, becoming Chair of the Conservative Party Backbench Committee for Health in 1999, after serving 10 years on the Health Select Committee. In 2012, he received the 'Outstanding Achievement Award' at the Charity Champion Parliamentary reception, in recognition for his lifetime commitment to charitable work.

He says: "I am very pleased to be a Patron of Safer Medicines Trust. I am passionate about both human health and animal welfare, and I applaud Safer Medicines Trust for showing that there is no contradiction between the two, as we are so often led to believe."

And a warm welcome to our newest Science Adviser

Professor Geoff Pilkington BSc PhD CBiol FRSB FRCPath

is a leader in the field of brain tumour research and was instrumental in the formation of the charity, Brain Tumour Research. He directs the Brain Tumour Research Centre of Excellence Programme at the University of Portsmouth, whose goal is to fast-track promising laboratory successes to the clinic, for patients diagnosed with deadly brain cancers. During 43 years in brain tumour research, Professor Pilkington has developed various all-human 3D in vitro models to study tumour invasion and the blood-brain barrier. He is a passionate advocate of human models for human diseases. We are very honoured that he has chosen to support Safer Medicines Trust.

He says: "We owe it to the patients to get re-purposed and reformulated agents into the clinic immediately; that may be achieved with the use of 3D *in vitro* models rather than through the use of laboratory animals."



Latest publications

Dr Bob Coleman edited a book for the Royal Society of Chemistry's Drug Discovery series, entitled: "Human-Based Systems for Translational Research". Written by worldwide experts within the many fields covered, this book is an essential text for researchers working in translational medicine in both industry and academia. The book and each chapter can be purchased online.

DOI:10.1039/9781782620136

FRAME's peer-reviewed journal, Alternatives To Laboratory Animals (ATLA), published a paper by Bob Coleman, entitled: "Human-based Systems in Drug and Chemical Safety Testing – Toward 'Replacement', the 'Single R'". Dr Coleman asked whether 'Reduction' and 'Refinement' are redundant concepts and whether, instead, we should concentrate on the third R: 'Replacement', which should be based firmly on human biology.

Ref: ATLA 2014 Dec;42(6):357-66

ATLA also published a paper written jointly by Safer Medicines Trust and the US Center for Responsible

Science, entitled: "Barriers to the Uptake of Human-based Test Methods, and How to Overcome Them".

Ref: ATLA 2015 Nov;43(5):301-8

The US Food and Drug Law Institute published our proposal to improve drug safety by updating FDA rules and guidance: "Advancing More Predictive Preclinical Testing Tools", co-written with US charity Center for Responsible Science.

Ref: Food and Drug Policy Forum 2015;5(8) September 2015

As part of a coalition led by Center for Responsible Science, we filed a Citizen Petition asking the FDA to update preclinical testing requirements, so as to ensure safer and more effective medical products are available to patients.

Our letters, signed by many eminent expert scientists, were published by The Observer, the Sunday Times and The Times, among others. They can be viewed via our website.

10+ years of Safer Medicines

Safer Medicines Campaign was founded in 2004, and Safer Medicines Trust in 2005, by Kathy Archibald, who looks back at our achievements over the past 10+ years.

Reading through past newsletters (available at www.SaferMedicines.org/newsletters), I am struck by the enormity of what ought to be a relatively straightforward challenge: to transform an established but failing system of safety testing based on animal tests to a superior system based on cutting-edge human-focused science. Given the urgency and scale of the problem (medicines kill more than 500,000 Europeans and Americans each year); the now overwhelming evidence that animal safety tests are not fit for purpose; and the ready availability of technologies that are fit for purpose*, it is perplexing that progress has been so slow.

I am also struck by the near universal support we have encountered, not only from the public and politicians, but also from doctors and scientists in academia, industry and government. We are certainly not a lone voice. In fact, it seems we represent a silent majority who doubt the relevance of findings in animals for humans.

We set out to demonstrate this in 2004 by commissioning a survey of 500 GPs across the UK. 82% agreed they were

concerned that animal data can be misleading when applied to humans; and 83% agreed they would support an independent scientific evaluation of the clinical relevance of animal experimentation.

We called on the government to act on this extraordinary level of concern, through the first in a series of parliamentary Early Day Motions, which attracted phenomenal cross-party support. Three times, MPs backed our EDM above 99% of other parliamentary motions. Inexplicably, our Safety of Medicines Bill was blocked by the government, despite the strength of evidence and the support of a majority of backbench MPs in our favour.

We have had debates in the House of Commons, meetings with Health Ministers, and with advisers to the Prime Minister, and presented a 15,000-signature petition at 10 Downing Street (see 5-minute clip on our website).

We have participated in many discussions and debates on radio and TV, including the Today programme, the Politics Show, Newsnight and Channel 4 News. We have written

^{*}To be clear: I am not claiming that there is any one technology that could provide all the information necessary to assess the safety of a new medicine. Intelligent testing strategies would need to be employed, with varying combinations of technologies that each contribute vital parts of the complicated jigsaw of information needed. But this is not beyond the wit of the legions of prodigiously gifted scientists working in this field. In fact, such strategies were proposed by two panels of leading experts at a 2013 symposium in Utrecht, as mentioned in our last newsletter.



Professor Chris Foster, Kathy Archibald, Dr Tony Baxter, Dr Bob Coleman, after meeting the Prime Minister's Health Adviser.

articles, papers and letters for newspapers, magazines and scientific journals, in addition to printing and distributing more than a million leaflets to inform the public. We have given many talks to schools, universities and the public.

In 2007, we made a short film, Safer Medicines, which was launched by our Patron, Tony Benn, in the House of Commons. Our international scientific conferences at the Royal Society and the House of Lords were a great success.

Over the past few years, our profile in the pharmaceutical, toxicological and regulatory communities has been boosted tremendously by our previous scientific directors, Dr Bob Coleman and Dr Katya Tsaioun. They have enabled Safer Medicines Trust to work with many outstanding scientists from across the world, who share our vision for a transition to a human focus in medicines research.

In the USA, we have enjoyed fruitful collaboration with the Critical Path Institute, the FDA and the EPA, who have incorporated our proposed comparative study into their ToxCast initiative: we look forward to reporting the results later this year.

Paradigm change

Over the past decade or so, there has been a sea change in the scientific literature around the need for a transition to a new, human-centric paradigm for biomedical research. An explosion of advances in technology has made it possible to identify mechanisms of toxicity (in humans) that were simply not possible to detect ten or even five years ago. At the same time, a tsunami of studies has shown that animal research fails to predict safety for humans and often misleads medical research. There are too many publications to list here, though some are mentioned below. It is impossible not to notice that the chorus of scientists around the world calling for a decisive move away from animal models has grown to a loud crescendo. For example:

In 2004, Pandora Pound and colleagues asked: "Where is the evidence that animal research benefits humans?" (BMJ 2004;328:514) and argued that systematic reviews of existing and future research are needed to establish the clinical relevance (or lack thereof) of animal experiments. Since then, many systematic reviews have been conducted; all of them demonstrating a disturbing lack of clinical relevance of animal research.

A citation analysis of more than 1,000 animal studies reported over 12 years at three German universities showed that none of them led to any new therapies or had any clinical impact (*ALTEX* 2006;23:111). Furthermore, citations of these studies declined to zero after 17 years, illustrating their lack of long-term impact (*ALTEX* 2011;28:242-243).

Another study showed that even the most highly cited animal studies published in the leading scientific journals only translated to human clinical application in 10% of cases, leading the authors to caution patients and doctors about

extrapolating the findings of even highly-cited animal research to the care of human disease (*JAMA* 2006;296:1731-1732).

Analysis of 20 systematic reviews examining the human clinical utility of animal research, found that animal studies contributed towards clinical interventions in only two cases, one of which was contentious. (*Reviews on Recent Clinical Trials* 2008;3(2):89-96)

In 2007, the US National Research Council published their seminal report on "Toxicity Testing in the Twenty-first Century: A Vision and a Strategy". They called for "a paradigm shift from the use of experimental animals...toward the use of more efficient *in vitro* tests and computational techniques." (National Academies Press 2007)

In 2008, neurologist Dr Michael Benatar called for a reappraisal of the use of "nearly useless" animal models of neurodegenerative diseases. He said: "I think there's a sense of desperation that we need a convenient model for bringing drugs to clinical trial. But desperation is an inadequate justification for the continued use of a poor model. It's a bit like the proverbial drunk who keeps looking for his lost keys under the lamp post, simply because the light's better there." (*Nature* 2008;454:682-685)

Immunologist Professor Mark Davis made a passionate plea for an effort to collect information from human blood and tissue samples, rather than studying mice. He said: "Mice are lousy models for clinical studies. But think about what we can do with people. People come to hospitals, get vaccinations, give blood and tissue samples for routine lab tests and clinical trials. We're not learning nearly as much as we could from these samples. We seem to be in a state of denial, where so much is invested in the mouse model that it

seems almost unthinkable to look elsewhere." (Immunity 2008;29:835)

Vaccine researchers in Australia called on their government to invest in "non-furry immunology", saying: "Use of murine models to study the immunobiology of infectious diseases, such as malaria and herpes simplex virus, has severely skewed our understanding of immune control of these pathogens in humans, and it could be argued that over reliance on these model systems may have slowed progress in the development of effective vaccines against many human pathogens. How long can we justify investing millions of dollars of taxpayers' funds on delineating the murine immune system, which in most cases has limited application for human diseases?" (Immunology and Cell Biology 2011;89:330-331)



Dr Margaret Hamburg, when Commissioner of the US FDA, made this powerful plea: "We must bring 21st-century approaches to 21st-century products and problems. Most of the toxicology tools used for regulatory assessment rely on high-dose animal studies and default

extrapolation procedures and have remained relatively unchanged for decades, despite the scientific revolutions of the past half-century...The FDA is...working to eventually replace animal testing with a combination of *in silico* and *in vitro* approaches...Policy-makers, industry leaders, and the scientific community have the opportunity and the power to answer this call to action. It cannot wait any longer." (*Science* 2011;331:987)

Dr Francis Collins, Director of the US NIH (National Institutes of Health: the world's largest medical research funding agency), has made many appeals to challenge the status quo, e.g.: "The use of animal models for therapeutic development and target validation is time consuming, costly, and may not accurately predict efficacy in humans. As a result, many clinical compounds are carried forward only to fail in phase II or III trials; many others are probably abandoned because of the shortcomings of the model...With earlier and more rigorous target validation in human tissues, it may be justifiable to skip the animal model assessment of efficacy altogether...We must move forward now. Science and society cannot afford to do otherwise." (Science Translational Medicine 2011;3(90): 90CM17)

Dr Elias Zerhouni, former NIH Director, reflected: "We have moved away from studying human disease in humans... researchers have over-relied on animal data. The problem is that it hasn't worked, and it's time we stopped dancing around the problem...We need to refocus and adapt new methodologies for use in humans to understand disease biology in humans." (NIH Record, 21 June 2013)

In 2013, a large consortium of leading researchers called for a switch in focus of research from animals to humans. They showed that 150 drugs tested in patients with sepsis (the

leading cause of death in intensive-care units) failed because the trials were based on studies in mice (PNAS 2013;110(9):3507-3512). They concluded that "years and billions of dollars have been wasted following false leads as a result" and also that the findings "raise troubling questions about other diseases that involve the immune system, including cancer and heart disease." Ronald W. Davis, Professor of Biochemistry and Genetics at Stanford University School of Medicine, commented: "They are so ingrained in trying to cure mice that they forget we are trying to cure humans." Dr. Mitchell Fink, a sepsis expert at the University of California, Los Angeles, said: "This is a game changer." Dr Richard Hotchkiss, Professor of Medicine and Surgery at Washington University School of Medicine said: "It argues strongly – go to the patients. Get their cells. Get their tissues whenever you can. To understand sepsis, you have to go to the patients." (New York Times, 11 February, 2013)

The journal *Nature Medicine* commented on the study in an editorial entitled: "Of men, not mice" (4 April 2013): "These results should prompt some soul-searching among disease researchers... Rather than over-relying on animal models to understand what happens in humans, isn't it time to embrace the human 'model' to move forward?"

Dr Azra Raza, Professor of Medicine at Columbia University argued in a very moving talk that: "We have to stop studying mice because it's essentially pointless, and we have to start studying freshly obtained human cells." (*TEDx New York* 2014: "Why curing cancer is so hard." mdspatientsupport.org.uk/ted-talk-on-mdsaml-research-by-expert-dr-a-raza/)



In 2014, *BMJ* published another paper by Dr Pandora Pound and Professor Michael Bracken, asking: "Is animal research sufficiently evidence based to be a cornerstone of biomedical research?" They warned that if not, "expensive but ultimately fruitless clinical trials [may] needlessly expose humans to potentially harmful drugs or may result in other potentially beneficial therapies being withheld." *BMJ* Editor, Fiona Godlee, asked: "Where would you place the balance of effort: investment in better animal research or a shift in funding to more clinical research?" (*BMJ* 2014;348:g3387)

In 2015, a global consortium of researchers called for a new paradigm in health research, using advanced human-specific approaches that could revolutionise our understanding and treatment of human disease. They advocate a formidable effort and redeployment of funds, to shift the emphasis of medical research away from animal models and toward human biology, in order to unlock the full potential of the 21st century models and approaches. (*Environmental Health Perspectives* 2015;123:A268-272)

Formidable evidence

The excerpts above help to illustrate that it's time to acknowledge we have reached a tipping point in the transition towards a human-focused biomedical future.

Many scientists have been calling for better evidence of the value of animal research for many years. For example, in 1984, Professors Lawrence, McLean and Weatherall observed: "The methods of assessing toxicity in animals are largely empirical and unvalidated... It is urgently necessary to know whether the tests as in fact conducted have sufficient predictive value to be justifiable, or whether they are a colossal waste of resources to no good purpose." ("Safety Testing of New Drugs –Laboratory Predictions and Clinical Performance", *Academic Press*, 1984)

More than 30 years later, it seems that their worst fears have been confirmed. Dr Jarrod Bailey and colleagues have published a series of studies involving thousands of drugs (the most comprehensive analyses ever compiled), which show that even if a medicine appears to be safe in tests using mice, rats, rabbits, dogs and monkeys, none of these results provide any degree of evidence that the medicine is also safe for humans. (*ATLA* 2015;43:393-403)

Another study found that animal tests missed 81% of the serious side effects of 43 drugs that went on to harm patients. (*Regulatory Toxicology and Pharmacology* 2012;64:345-349)

In 2006, six young volunteers nearly died in a clinical trial of a drug that was declared completely safe at 500 times the dose in macaque monkeys. This year, a man has died in France in a clinical trial of a drug that had, again, been tested in many animals, including primates, with no indication that there might be a problem.

For too long, criticism of animal research has been viewed as more emotional than rational. Yet the accumulated evidence of its poor predictive value, and the often devastating consequences, together with the deluge of amazing scientific advances, call for a revised perspective.

Overcoming barriers

There are many encouraging signs that pharmaceutical safety testing, in particular, is moving in the right direction, with increasing use of more predictive human biology based tools. This is inevitable, as these methods are not only more accurate but faster and cheaper as well. Some of the more valuable technologies are expensive – but worth it: there is nothing more expensive than getting the wrong answer. Human tissue company Biopta estimates an average saving of £7 for every £1 invested in predictive human assays.

There is no doubt that this transition will continue, because its time has come. A multitude of pressures (economic, scientific and public) are driving this change, but there is one force that is conspicuous by its absence: government intervention. Without any pressure from regulators, the pace of change is glacial. Despite overwhelming evidence of the need for decisive change, and despite so many inspirational

words, most notably from science and medicine's highest offices in the US (e.g. "We must move forward now. Science and society cannot afford to do otherwise"), paradigm change has not yet occurred. There are many barriers to change, including powerful passive forces such as inertia, and even more powerful active resistance from defenders of the status quo.

The authors of the landmark report, "Toxicity Testing in the 21st Century", warned that the paradigm shift would encounter resistance, as toxicological testing practices are "deeply ingrained". They said: "Policies designed to overcome tendencies to resist novel approaches and maintain the status quo will be important".

There is a recent pronounced shift in the scientific literature, with many papers, including our own, focusing on these barriers and how to overcome them. An excellent proposal has been made by the Editor in Chief of the Turkish Journal of Gastroenterology, Professor Hakan Sentürk. He challenges other scientific journals to follow his lead and avoid publishing animal research, saying: "Given the limitations of animal models, publishing animal studies would mislead the scientific community into futile research and give the general public false hope. This is unethical...Human-relevant approaches should be more aggressively developed and utilized instead. Fortunately, non-animal research methods like established clinical, computational and in vitro models abound, and new technologies like guts and other organson-chips are constantly being developed and validated." (Turkish Journal of Gastroenterology 2015 26(5):363) His challenge, if accepted, would make an immediate and profound impact.

Safer Medicines Trust proposes a new system of pragmatic validation, to accelerate the adoption of superior technologies. The current validation process works – perversely – in the opposite direction, and actually delays the acceptance of superior methods.

We are also working to persuade the Government to mandate the use of safety tests that are fit for purpose. Please sign our ongoing petition, if you haven't already. The statistics are shocking: medicines are now our 3rd leading cause of death; killing hundreds of thousands of people globally every year and hospitalising millions. This is a public health emergency. The time for governments to act is now.

Pivotal moment

We are on the cusp of a new era of biomedical research, where we will all reap the benefits of more effective and safer medicines, designed and tested specifically for humans. The obstacles to progress are not scientific but political. But governments are eventually susceptible to public opinion. All of us must work together to seize the momentum, which is so strongly in our favour. Safer Medicines is proud to have played a part in reaching this moment. Thank you to all of our supporters for helping us contribute towards a future of better and safer healthcare, where humans take up their rightful place as the model organism at last.



None of our work would have been possible without the generous support of some remarkable people to whom we owe an enormous debt of gratitude. They include: **Beata and Andy Gajek**, who funded us for the first few years of our existence, and provided immense support even more invaluable than their financial generosity. Without their inspirational vision and determination, Safer Medicines would never have existed.

Dr Christopher Anderegg, who was a postdoctoral research fellow at the Swiss Federal Institute of Technology in Zurich, Switzerland, following receipt of his MD and PhD from Yale University, until he came to realise that the animal research in which he was engaged was actually more of a hindrance than a help to medical progress. In 1990, he founded Swiss Action for Humans and Animals in Zurich, Switzerland, which merged in 2001 with the Association for the Abolition of Animal Experiments; an organisation dedicated to promoting the use of safe, reliable research methods directly applicable to humans. Dr Anderegg has made an immense contribution to raising awareness of the fallacy of animal models for drug testing and human diseases. We are profoundly grateful for his wisdom and invaluable support.

Dr Bob Coleman, who has made a vast contribution not only to advancing the use of donated human tissues in drug research, but also to Safer Medicines Trust. It is a great relief that, although he is focusing on other pursuits in his retirement, he remains a valued Scientific Adviser.

Dr Katya Tsaioun, who really put Safer Medicines Trust on the map in the US and across Europe, and built incredible networks of support and shared vision with so many inspiring scientists. We wish her every success in her new role as Director of the Evidence Based Toxicology Collaboration and thank her for continuing with us as a Scientific Adviser.

Rich England, our brilliant webmaster, who has been our IT expert since day one. He has cheerfully taken several reincarnations of the website in his stride, somehow managing to improve it every time.

Many more people have helped us immeasurably over the years, including all of our wonderful supporters, to whom we are deeply grateful: we couldn't do what we do without you! I am sorry that space does not permit me to list all the people I would like to thank, but I must say a very special thank you to Ann Lander, Katherine Howard, Peter Fenn, Alan Duffell, Kaye Wotherspoon, Rita Donovan, Ruth Winstone, Wendy Corson, Irina Corson, Tessa Hayes, Gerald Clark, Malvina Borletti, Mike Maas, Barbara Barrett, Diana Marshall, Dr Martin Ashby, Cliff Goodman and Catherine Heckford-Dickinson.

Thank you, you wonderful people!

Legacies of hope for the future

Much of our funding has come in the form of legacies, generously bequeathed to us by supporters who believed passionately in our vital work of encouraging progress towards a future of *human*-based biomedical research.

We are deeply humbled by and grateful for the support of the following far-sighted people:

Sheila Carson Madeleine Carritt Edward Duke Helena Ellis Dr Mavis Harling Jane Higgens Valerie Kneebone Joyce Marshall John Meldrum Percival D Owen Olive Ratcliffe Patricia Stewart Lorna Tarleton



Percy Owen (right), collecting donations. Percy left his brain and spinal cord for research into Multiple Sclerosis, and his estate to Safer Medicines Trust.

If you are making or altering your will this year, a gift to Safer Medicines Trust would be a truly valuable legacy, which will ensure your ideals live on and continue to help others.



How to help

If you would like to fundraise for us in any way, we would be extremely grateful, and more than happy to provide collecting tins and literature for the event.

One of the best ways to reach people with our message is through our new leaflet. If you can help by distributing leaflets door-to-door, in the street, or at an event, we would be delighted. Just let us know how much literature you would like.

We need more signatures on our petition. Please download petition sheets from our website (or order some from us) and collect as many signatures as you can.

The change we seek is overwhelmingly positive. Patients would benefit, health services would save £billions, animals would be spared and pharmaceutical companies could develop safer medicines at a fraction of current unsustainable time and costs: a win-win situation that should be supported by everyone.

ACTION

Leaflets

If you can help by distributing our leaflets we will be delighted. Donations to help with postage and printing costs will be greatly appreciated.





Newsletters

Please order further copies of this newsletter to distribute if you can.

DVDs

Watch *Safer Medicines* on our website or order a copy: free but please send stamps or a donation. If you know any secondary school teachers or lecturers, please encourage them to ask us for a free copy.



ANIMAL EXPERIMENTATION

Booklets

A Critical Look at Animal Experimentation:

Free booklet examining the impact of animal research on medical progress and outlining more valid human-focused methods of research.

Petition

Sign our petition calling for the use of more reliable safety tests. You can sign on our website or on paper: download a form from our website or order by email, phone or post.

Our medicines are killing sel Adverse drug reactions have reached epidenic proportions, sending a million fintent to hospital of killing more than 10,000 every year. Yet new tochologies are available to predict software reactions that current methods (which paints learn) cannot predict cannot predict. In the undereigned call on the Government to mendate the use of new technologies that can predict the safety of medicines for calletent more reliable than current methods.					
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Donate

Please help us to modernise and humanise the safety testing of medicines, and to distribute our resources to teachers, students and MPs.

You can donate on our website or by post – please see below.

Regular gifts by standing order help us to plan ahead with confidence – if you would like to help us in this way, we will be delighted to send you a standing order form: please contact us or download one from our website.

We rely completely on your generosity. We receive no corporate or government funding and have no expensive overheads: all of our office space is donated without charge.

If you want to see real progress towards a future where medical research is based on studying humans rather than animals, please give generously today.

Please copy this section or cut it off and return to us – thank you				
Please sendLeafletsNewslettersDVDsBookletsPetition Sheets	Name:Address:			
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Please make cheques payable to Safer Medicines Campaign OR Safer Medicines Trust. We can keep costs to a minimum by not sending receipts	☐ Please tick if you are eligible and wish to <i>gift</i> aid your donation to Safer Medicines Trust (donations to Safer Medicines Campaign are not eligible for gift aid). Thank you for your invaluable support — we simply can't do this without you.			
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