

Europeans *for* Medical Progress

Newsletter Summer 05

Europeans for Medical Progress is a non-profit research and educational institute dedicated to improving human health by modernising biomedical research. We focus on rigorous scientific analysis of animal experimentation to assess the balance of help or harm to human health. We oppose animal modelled research as a method for seeking cures and treatments for human disease based on overwhelming scientific evidence that findings from animal models cannot be reliably extrapolated to humans. When such findings are extrapolated to humans, patients, consumers and research volunteers are harmed and medical progress is hampered. We communicate the urgent need to focus on methods of research that truly serve the interests of patients, rather than corporate finances.

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Debate in Oxford

Oxford University is seeking to resume building a controversial new facility for animal research, whose construction has been suspended for a year due to animal rights protests. In order to raise local awareness about the scientific issues behind such a contentious development, EMP organised a public debate in Oxford Town Hall on April 21st. Oxford neurosurgeon Prof Tipu Aziz and RDS director, Dr Simon Festing spoke in favour of animal experimentation, while our scientific consultant, Prof Claude Reiss and science director, Dr Jarrod Bailey explained the basis for our opposition. The event was chaired by Tony Benn, who lent great authority to the evening and ensured an extraordinary level of local media interest. Having been a cabinet minister with various scientific responsibilities from 1964 to 1979, Tony Benn brings a very valuable perspective to such a political hot potato. He gave interviews to BBC Radio Oxford and two other local radio stations, Central TV news, the Oxford Mail and the Cherwell student newspaper. Dr Bailey participated in a debate with Professor Aziz on BBC Radio Oxford and Professor Reiss gave an interview to Central TV news.



Tony Benn

The debate itself followed the customary format, where our speakers produced abundant referenced scientific evidence for the failings of animal experimentation, while their opponents made sweeping claims about the value of animal experimentation without any supporting evidence. Professor Aziz invited one of his patients to address the audience in what was presented as a display of the benefits of animal experimentation. Mike Robins gave a powerful demonstration of the effectiveness of his deep brain stimulator, which was implanted by Professor Aziz in order to control the debilitating tremor he suffered as a result of Parkinson's disease. Professor Aziz claimed that the crucial discovery responsible for this spectacularly successful treatment was made through his research on monkey brains and could not have been made in any other way. In fact, as Professor Reiss explained, the key discovery regarding electrical stimulation of the subthalamic nucleus was actually made in a human patient some years before Professor Aziz had even started his primate experiments. Clearly, Mr Robins owes his restored quality of life to Professor Aziz's surgical skills: that much is not in doubt. What we dispute is that Parkinson's patients or their doctors owe anything to experiments on monkeys: rather, they owe everything to the patients who went before them and their doctors, such as Professor Alim Louis Benabid, who made the crucial observations that led to deep brain stimulation becoming available as a treatment for Parkinson's disease.

The Observer debacle

Almost a month after the debate in Oxford, The Observer published an account of it, written by their senior science editor Robin McKie, which was a complete fabrication. Both Tipu Aziz and Simon Festing were interviewed for the article, which claimed that Mike Robins was terrified as he was "shouted down by hundreds of animal rights activists baying for his blood." Mr McKie was not present at the debate but decided, nevertheless, to print these extraordinary claims without even bothering to check the facts with the organisers. He did attempt to corroborate the story with Tony Benn, who assured him that the version of events he described bore no resemblance to the truth whatsoever - and then printed the story regardless! McKie's article is a slur on both Tony Benn as chair and on EMP as organisers of the debate: of course, neither party would have allowed such a situation to occur. Fortunately, EMP had recorded the entire proceedings and was able to show the Observer how Mike Robins was actually heard in silence and given a polite round of applause by the audience, in a manner as far removed from McKie's fictional version of events as it is possible to be. The Observer admits their phone was "ringing off its cradle with complaints" and that "letters and emails from those at the debate poured in" - yet their response was restricted to printing one short, edited letter the following Sunday. It was not until EMP had persuaded the Readers' Editor to watch the video that the Observer acknowledged their story was inaccurate and unbalanced. We were pleased by this admission but disappointed to be refused an article by way of reparation. We were assured that the Observer's coverage of this issue will be more balanced in future: we certainly look forward to that! McKie's article has already had damaging repercussions: it has been quoted as fact in other newspapers and it has been cited in public fora to support the claim that opponents of animal experimentation are so unreasonable that it is impossible to have a civilised discussion with them.

This episode highlights a serious problem with the media and their lack of independence on this important issue. It shows that the media wield enormous power to shape public perceptions; that their impartiality is open to doubt and that their accountability leaves much to be desired. It also throws into sharp relief the integrity of advocates of animal experimentation and begs the question that if they have such little regard for the truth in one instance, how far can they be believed in defence of their very *raison d'être*?

Hitting the Headlines

BBC 2 followed up the Observer story on their Weekend 24 programme, which included a live interview with Tony Benn. The presenter tried valiantly to keep the focus on ethical issues and animal rights activism but Tony Benn made a powerful case for a scientific evaluation of the issue, pointing out that that was the very purpose of EMP's debate. This was a rare and refreshing occasion in the mainstream media, as was an article published on 4th March in the Financial Times by Robert Matthews, visiting reader in science at Aston University, which concluded; "What is clear is that, given the paucity of systematic evidence, it is not necessary to be a placard-waving protestor to harbour doubts about the validity of animal testing." Such sentiments are conspicuous by their rarity in a media which has been almost universally blinded by the "animal activists v scientists" smokescreen. The Ecologist is a notable exception: their May issue carried a four page article (available on our website) by EMP director, Kathy Archibald entitled "Animal testing: science or fiction" with the introduction; "Given that prescription medicines are the fourth biggest killer in the western world, why hasn't the effectiveness of drug safety testing on animals been subjected to greater scrutiny?" In July, Central TV aired a half-hour current affairs programme devoted to the issue of animal experimentation. Dr Bailey was one of the participants in the studio debate. After the programme, viewers were asked to phone in and vote on the question: "Should we carry out scientific experiments on animals?" 85% voted no.

Europeans for Medical Progress Trust

We are delighted to announce the formation of our charitable wing: Europeans for Medical Progress Trust, whose remit is education and research. This is a truly historic development: the Trust is the only charity in the UK working to expose the human health hazards of animal experimentation. There are charities doing excellent work to develop and promote non-animal methods of medical research, such as the Humane Research Trust, Dr Hadwen Trust for Humane Research and FRAME (Fund for the Replacement of Animals in Medical Experiments). EMP Trust is unique in that our primary focus is to evaluate scientifically the validity of animal experimentation. UK charity law dictates that all charitable purposes must benefit the public. Historically, animal experiments have been perceived as benefiting the public and it has therefore been difficult for any charitable body to challenge that view. However, we believe there is now sufficient evidence to enable us to make a fundamental challenge to that

position, for the benefit of the public.

An end to the use of animals in medical research will never be achieved while people believe that animal research may lead to cures for cancer, Alzheimer's or Parkinson's disease. Only by appraising the scientific processes that lead to successful innovations, can we determine which methods are responsible for medical advances. Our goal is to speed medical progress by directing it towards the most productive avenues, which invariably means human-based research. As an independent group of scientists, we are uniquely placed to influence the allocation of medical research funding, which is currently directed largely towards animal studies. A donation to EMP Trust can help to influence the future direction of medical research, towards strategies that are more likely to result in effective treatments or cures for a multitude of human diseases.

We are very honoured that Tony Benn, Mat Fraser (www.matfraser.com) and Dr Caroline Lucas MEP are lending their valuable support as patrons of the charity. The Trust shares the same website as EMP and is able to accept Gift Aid donations and also donations by credit or debit card online. The Trust spends no money on overheads or staff, so every penny donated is used for our vital educational work.



Dr. Caroline Lucas MEP



Mat Fraser

Inquiries into animal testing

The Nuffield Council on Bioethics published a report in May on "the ethics of research involving animals" (available at www.nuffieldbioethics.org). The report followed an 18 month inquiry, to which we submitted both written and oral evidence. We welcome the report, which made some excellent recommendations: in particular that "it would be desirable to undertake further systematic reviews and meta-analyses to evaluate more fully the predictability and transferability of animal models." We could not agree more. However, the main focus of the report was ethical rather than scientific. We agree with the Working Party that "separation of scientific and ethical questions is essential if greater clarity is to be achieved in the debate about animal research." It is our ambition to move the debate from the ethical to the scientific arena, to address the crucial question: does animal testing help medicine or hinder it? This question is so rarely addressed and when it is, the media seem determined to misrepresent this vital human health issue as an "anti-science-animal-rights-extremism" caricature.

An inquiry into the use of non-human primates in biological and medical research is currently being conducted by the Academy of Medical Sciences, the Medical Research Council, the Royal Society and the Wellcome Trust. We have submitted evidence jointly with Antidote-Europe (www.antidote-europe.org) which can be seen on our website. We await the report, due in spring 2006, with interest and with reservation, as all four of the commissioning bodies have been outspoken in their defence of both non-human primate research and animal experimentation in general. EMP believes it is crucial that any assessment of the scientific merit of animal experimentation is undertaken by fully independent and impartial individuals and institutions, and is not distracted by the associated highly-charged ethical issues.

Action: Early Day Motion 92

Mike Hancock MP has re-launched EDM "Animal testing of drugs" on our behalf, after EDM 385 was curtailed by the election. EDM 92 will remain open until late November 2006, which gives us a great opportunity to amass significant parliamentary support for it. The Government is reluctant to sanction any scientific evaluation of animal testing but large numbers of signatories to EDM 92 will make it much harder for them to resist. Please encourage your MP to

sign EDM 92, pointing out that a scientific evaluation of animal testing will make an important contribution towards safeguarding human health and safety. Please do not mention animal welfare as it will detract from the issue of public health and safety. Every MP has received a briefing from us, setting out several compelling reasons to assess the efficacy of animal tests, as itemised on our website at www.curedisease.net/news/050525.shtml. You can find the name of your MP at www.locata.co.uk/commons or the House of Commons information line 020 7219 4247. The address is House of Commons, Westminster, London, SW1A 0AA.

EDM 92 reads: *"That this House, in common with Europeans for Medical Progress, expresses its concerns regarding the safeguarding of public health through data obtained from laboratory animals, particularly in light of large numbers of serious and fatal adverse drug reactions that were not predicted by animal studies; is concerned that the Government has not commissioned or evaluated any formal research on the efficacy of animal experiments, and has no plans to do so; and, in common with 83 per cent. of general practitioners in a recent survey, calls upon the Government to facilitate an independent and transparent scientific evaluation of the use of animals as surrogate humans in drug safety testing and medical research."*

We have produced a new flyer (enclosed) making the case for EDM 92 and the scientific evaluation it calls for. Please contact us to order as many copies as you are able to distribute: maybe your local library, health food shop or GP surgery would display them for you. We also have a petition to gather support for an independent scientific evaluation of animal testing - please print a copy from our website or request a copy from us by post. You can also add your support on our website.

Thanks to all our supporters

We are very grateful to all our supporters for your invaluable financial contributions - we simply could not exist without you!

We are especially grateful to Terry Stewart for walking 104 miles from Scarborough to Chesterfield, finishing on Easter Sunday, in order to raise money for EMP and other organizations opposed to animal experimentation. Terry suffers from adenomatosis polyposis coli - a rare genetic condition that has

necessitated the removal of his large colon along with a lifelong programme of screening and removal of recurrent intestinal polyps. Terry is keen to stress that animal experimentation has contributed nothing to knowledge of his disease, nor indeed could it. Clinical investigation is the only route to progress and we hope that the recent identification of the genetic fault will lead to successful treatments in the future.



Terry Stewart - almost there!

Our sincere thanks go to Terry and Anna for their tremendous efforts and to everyone who sponsored Terry: you raised almost £1,200 for EMP, which is a magnificent help to us.

Animal testing puts unborn children at risk of birth defects

It is very difficult to achieve publication in peer-reviewed scientific literature when one challenges the animal model paradigm. We are therefore particularly pleased that a study of 40 years of birth defect research conducted by Dr Bailey has been published in the May issue of the peer-reviewed research journal *Biogenic Amines*. The paper is available on our website. The report, "The Future of Teratology is In Vitro", shows that many common drugs and household chemicals have been certified as safe for humans on

the basis of animal tests that are accurate little more than half the time. For decades scientists have been involved in a futile search for the "holy grail" of animal models - a species, or even a combination of species, that would reliably predict teratogenicity in humans. It is now clear that the answer does not lie in animal tests, but in in vitro tests using cells grown in the laboratory, which are cheaper, easier, more reliable and more predictive. Every year we delay the adoption of new, superior methods in place of discredited animal tests brings us that much closer to another tragedy like thalidomide.

Pharmaceutical industry woes

Our detractors often accuse us of being 'anti-pharma' but nothing could be further from the truth. We fully acknowledge the pharmaceutical industry's vital role in society and support their endeavours to discover new drugs that will improve the quality of life of millions of people. However, we are not alone in our criticism of some of their practices, which are reminiscent of the behaviour of tobacco companies in seeking to promote their product at all costs and using any tactics to suppress negative information or evidence of risks to consumers.

The past year has seen an unprecedented onslaught on big pharma in the press, berating them for withholding unflattering evidence from clinical trials; for unethical and improper advertising and marketing practices, including ghost-writing articles in medical journals; for exaggerating drugs' benefits and concealing their risks; for manufacturing lucrative me-too drugs instead of searching for cures to less financially rewarding diseases; for defrauding the NHS of hundreds of millions of pounds by price-fixing cartels and so on. A spate of critical books has recently been published, including "On the Take: How Medicine's Complicity with Big Business Can Endanger Your Health" by Dr Jerome Kassirer, former editor-in-chief of the New England Journal of Medicine, and "The Truth About the Drug Companies: How They Deceive Us and What to Do About It" By Marcia Angell, another former editor in chief of The New England Journal of Medicine and senior lecturer at Harvard Medical School. Dr Angell writes; "The pharmaceutical industry is primarily a marketing machine to sell drugs of dubious benefit . . . [and] uses its wealth and power to co-opt every institution that might stand in its way, including the US Congress, the Food and Drugs Administration (FDA), academic medical centres, and the medical profession itself...Once upon a time, drug companies promoted

drugs to treat diseases - now it is often the opposite. They promote diseases to fit their drugs."

The problems, and the criticism, are mounting on both sides of the Atlantic. In April, the House of Commons Health Select Committee published a report on their inquiry into "The Influence of the Pharmaceutical Industry". MPs on the Committee admitted they were "horrified" by evidence presented to them of drug companies routinely bribing senior doctors not to publish damaging studies and acting in ways that put profits before public health. They concluded that people are being prescribed too many drugs, before their adverse effects are properly identified. They recommended that there should be a public inquiry whenever a drug is withdrawn due to adverse effects, to determine whether adequate testing took place before marketing. A US poll, reported in the British Medical Journal, shows that the proportion of respondents saying they have a positive attitude towards the pharmaceutical industry fell from 79% in 1997 to 44% in 2004 - a bigger drop than for any other industry. 70% of Americans now believe drug companies put profits ahead of people. In recent years, the top ten most profitable companies have included five European giants - GlaxoSmithKline, AstraZeneca, Novartis, Roche, and Aventis, which are all members of the industry's trade association, the misleadingly named Pharmaceutical Research and Manufacturers of America (PhRMA). The pharmaceutical industry is the single most powerful lobbying group on Capitol Hill - employing over 1,000 lobbyists (more than half of them former government officials) and outspending even the oil and banking industries.

EMP finds drug discovery conferences revealing

The drug companies are smarting from all their bad press, as Dr Bailey discovered when he attended several pharmaceutical industry conferences earlier this year. Drug Discovery Technology 2005, held in London, was a major international industry gathering. Regulators at the event lamented the decrease in new drug applications over the past ten years, despite increased spending on research and development. Less than a tenth of new drugs were considered to be 'innovative,' meaning that over 90% are re-hashed variations of previous treatments, often with little or no improvement. Reasons postulated for this included the fact, in the words of the FDA, "We're using 20th century tools to develop 21st century medicines."

Exactly! And those outdated tools that result in over 90% of drugs failing when first tested in people in clinical trials? Animal tests, of course. The answer to these problems, according to the US and European regulators, lies where we have been saying it lies all along: using cutting edge methods to derive more predictive information on efficacy, toxicity and dosing of new drugs; more intelligently designed clinical trials and better monitoring of new drugs after they reach the market. In fact, the FDA is seeking to apply gene-based methods of drug evaluation as outlined in their recent "Critical Path" (Innovation or Stagnation) white paper. This approach is projected to cut drug development times from 15 years to five, saving nearly \$500 billion. Reducing adverse drug reactions could save the health care system and consumers up to \$100 billion a year, according to a report by the Cambridge Health Institute. Adverse drug reactions are currently growing more than twice as fast as the number of prescriptions - and the FDA cautions that the actual number is likely to be between 10 and 100 times greater because of underreporting.

Drug company executives at the event bristled at the regulators' suggestions that they weren't in the business of curing diseases; they felt affronted that their industry was perceived as 'greedy'; they complained that they couldn't get a fair hearing in some medical journals and in the media; and they strongly denied the common accusation that the regulators are 'in the pocket' of the industry. Indeed, there was a general consensus that the industry was over-regulated! The evidence for this was, bizarrely, centred around the biggest drug disaster ever - the Cox-2 inhibitors, in particular Vioxx. The industry opined that the regulators had concerned themselves only with the risks posed by the drugs, and not assessed the risk/benefit ratio. The industry accused the regulators of adopting the precautionary principle too zealously. One astonishing example of this, cited by Dr Robert Ruffalo, President of R&D at Wyeth Pharmaceuticals, involved an application to market a flu vaccine in Japan that had already been in use in the US for years. The Japanese regulators shunned data from 30 million human beings, citing genetic differences between Japanese and North Americans, and insisted on a raft of experiments in monkeys to assess the safety of the drug for the Japanese population.

Encouragingly, though, there is evidence of change for the better. Companies are starting to reap the benefits of adopting new technologies that have more relevance to humans than animal models. The next

challenge is to help the companies, and the regulators, to realise that animal data has no place alongside these technologies. Many industry scientists privately acknowledge this, as Dr Bailey found in conversations with many leading conference delegates, yet animal studies are still central to the drug development process. It is imperative to translate this unspoken acceptance into changes in regulatory requirements and thus in industry practices.

Merck (the company responsible for Vioxx) is running a \$20 million campaign, with the slogan "Merck - where patients come first" in an attempt to repair its damaged reputation. EMP would suggest that the best way for the industry to restore its reputation is to implement practices to ensure its products are safe and effective - and that does not include testing on animals. We concur with Marcia Angell's comment that "Despite all its excesses, this is an important industry that should be saved - mainly from itself."

Medical research in the news: animal studies continue to confound and impede progress

Below is a selection of recent news reports of futile research which serves only to consume vast amounts of taxpayers' money, with no prospect of benefits for patients.

March saw the trumpeting of a pill proclaimed to add 30 years to human life expectancy. An Aberdeen professor has been given almost half a million pounds to further his work showing that thyroxine extends the lives of mice by 25%. High levels of thyroxine in humans are known to cause heart disease and osteoporosis. As one London-based expert in endocrinology commented, "This is an example of research being extrapolated on the basis that a mouse represents the best model for a man. It doesn't. Mice have a different metabolism to humans."

American researchers have revealed that vitamin C can counteract some of the harmful effects of smoking on unborn monkeys, and wonder if this may hold true for humans. Another team has shown that rats are more susceptible to pneumonia when exposed to cigarettes and alcohol. Decades of human observation are clearly considered less instructive than experiments in other species.

Alarm was raised that chemicals found in oral contraceptives and food containers can cause prostate problems in male offspring, based on experiments in mice. As Dr Bailey's paper on birth defects makes plain, the implications of this study for humans are meaningless. This view was shared by a specialist who commented, "The study is on mice and the findings cannot be extrapolated to humans. The mouse is not a good model for the human in this case. During pregnancy, women produce a lot of oestrogen so babies are exposed to this naturally. This does not happen in mice."

Researchers have shown that rats whose grandmothers had a poor diet are at risk of obesity and type 2 diabetes. Conversely, new human epidemiological research has shown that childhood factors such as birth weight are nowhere near as important as obesity in adulthood as a risk factor for type 2 diabetes. A comparison of diabetes research in the mouse with subsequent human clinical trials demonstrated that discrepancies between mice and humans have been responsible for the failure of many potential diabetes drugs.

Studies in mice have shown that alcohol can encourage new brain cells to grow. Conversely, CT scans of the brains of human volunteers have revealed that alcohol causes their brains to shrink: more quickly in women than men.

Dr Alexander Kamb, Global Head of the Oncology Disease Area at the Novartis Institutes for Biomedical Research, wrote in the February issue of *Nature Reviews Drug Discovery*; "Given that many of these investigational anticancer drugs eventually fail, the animal models on which clinical trials are predicated must at best be limited in power, and at worst wildly inaccurate."

Meanwhile, human specific methods make real progress

More than 300 genes involved in hypertension (high blood pressure) have been identified by a team in Finland. "These discoveries open up a new chapter in the development of predictive tests and much improved therapeutics for hypertension", said Professor Jukka Salonen, Jurilab's chief scientific officer. "We have also shown that human studies are relevant and cannot be replaced by animal models."

By studying human populations, scientists have discovered that Herceptin, a drug known to be effective against certain types of breast cancer, may also prove useful against bladder cancer. A protein called HER2 (which is the target of the drug) is known to be especially abundant in many women with breast cancer, and the screening of a population of bladder cancer patients showed this to be the case in this type of cancer too. Then, by combining traditional chemotherapy with Herceptin, the researchers found that these patients were much more responsive to treatment.

In vitro work with human cells has shown that a harmless virus carried with no ill-effects by most people kills several types of human cancer cells, while leaving healthy cells alone. Researchers at Penn State College of Medicine in the US found that the virus, called AAV2, killed cervical, breast, prostate and squamous cancer cells within days in the lab, while leaving non-cancerous cells unaffected.

Brain research stands to benefit greatly from a supercomputer that is being programmed to simulate the human brain, in one of the most ambitious research initiatives ever undertaken in the field of neuroscience. This should have far reaching effects on research into psychiatric disorders, for example.

A rigorous test of the potential of microdosing has shown it to be one of 21st century drug development tools called for by the FDA in their Critical Path white paper. According to Professor Colin Garner, CEO of Xceleron, "this is the result for which everyone in drug development has been waiting." Based on the principle that "the best model for man is man", microdosing allows miniscule amounts of a new drug (less than 1/100th of a 'normal' dose) to be traced through the human body in real-time, revealing aspects of safety and efficacy sufficient to allow it to progress into clinical trials. The method has been given a seal of approval from the drug regulatory agencies in both Europe and the US. With the advent of microdosing, safety tests in animals look more redundant than ever.



Obstacles to medical progress

Dr John Ioannidis of the Department of Hygiene and Epidemiology at the University of Ioannina School of Medicine in Greece wrote in the *Journal of Translational Medicine* in 2004 (Jan 31; 2(1):5) that, with the advent of evidence-based medicine, "It is now acknowledged that a large corpus of clinical information that has haunted the top medical textbooks and experts' opinions was wrong, outdated, and/or dangerous for human health." Much of the blame for that, as well as for the enormous rate of failure of new drugs in clinical trials has to be laid at the door of misleading animal models. According to Geoffrey Duyk, chief scientific officer of Exelixis Inc, writing in *Science* 2003 (302(5645):603-605), "A major contributor to the rate of attrition is the failure of preclinical [animal] models to predict these behaviours in human subjects... The villain in this story is the inherent lack of predictability of our available models for complex biological processes."

As Dr. Francesco M. Marincola, Editor-in-Chief of the *Journal of Translational Medicine*, points out, "These models do not represent the basic essence of human diseases... Prestigious journals, however, appear more fascinated with the modern mythology of transgenic and knock-out mice than the humble reality of human disease." Other authors in the journal explain; "The pathology of humans, in contrast to that of inbred laboratory animals faces the challenge of diversity addressed in genetic terms as polymorphism. Thus, unsurprisingly, treatment modalities that successfully can be applied to carefully-selected pre-clinical models only sporadically succeed in the clinical arena. Indeed, pre-fabricated experimental models purposefully avoid the basic essence of human pathology: the uncontrollable complexity of disease heterogeneity and the intrinsic diversity of human beings." (Jin and Wang, *J Trans Med* 2003; 1:8)

As immunologist Ralph Steinman of Rockefeller University, New York, observed astutely; "Patients have been too patient with basic research. Most of our best people work in lab animals, not people...but this has not resulted in cures or even significantly helped most patients." (Sharon Begley, *Wall Street Journal*, April 25 2003)

Raising our profile and spreading the message

EMP continues to give talks in a wide variety of settings, in order to take our message to as wide an audience as possible. Shelly Willetts, our communications director, gave an inspirational talk at the Green Party Conference in Chesterfield in March. Kathy Archibald spoke at London's Feel Good Show and to students at a further education college in Suffolk. Professor Reiss spoke at a conference on REACH (chemical testing) in Brussels and on the same subject to the WI, who have taken an active interest in this issue. In our next newsletter we will report the results of Professor Reiss's pilot study of chemical testing using human DNA chips. These results demonstrate, in spectacular fashion, that human DNA chips offer a rapid and reliable means to achieve the goals of the REACH programme, namely the protection of human health and the environment.

Dr Bailey spoke at a conference of ethical fund managers on the financial implications of investing in companies that rely on animal testing. We were delighted to have the opportunity to address such an important audience. Ethical fund managers have the power, through their choice of investments, to influence the future of commercial reliance on animal testing. Dr Bailey explained that it would be in the best interests of shareholders for the regulatory requirement for animal testing to be ended. This would decrease the cost of bringing drugs to market and would reduce the enormous costs of adverse drug reactions: currently £466 million a year in Britain alone. As Dr Robert Matthews concluded in his article "Animals make poor guinea pigs in drugs tests" in the *Telegraph* (17th November 04), "There may be woefully little evidence about the value of animal testing, but what there is suggests that shareholders of drugs companies should be among those waving placards in Oxford on Thursday afternoons."

Slowly but surely, we are helping the realisation of this truth to dawn on more and more people. This process would accelerate enormously if the media would take off their blinkers and recognise their duty to report fairly on both sides of this contentious issue. If our voice could be heard by the public at large, our goal would be well within reach. As Joseph Pulitzer so perceptively observed: "There is not a crime, there is not a dodge, there is not a trick, there is not a swindle, there is not a vice which does not live by secrecy. Get these things out in the open, describe them, attack them, ridicule them in the press, and sooner or later public opinion will sweep them away."