Scientists impress MPs with work to minimise the use of animals

Researchers who were most successful in communicating to Parliamentarians their work to Replace, Refine or Reduce the use of animals in research and testing were awarded prizes of £2,000 each at a poster exhibition, held in Portcullis House on 28th February. The event, hosted by Phil Willis MP, chair of the House of Commons Science and Technology Committee, and organised by the National Centre for the Replacement, Refinement and Reduction of Animals in Research (NC3Rs), featured 50 projects that applied the 3Rs to research using animals in academia and industry.

Prizes were awarded to the best posters in the areas of Replacement, Refinement and Reduction, as selected by a panel of 15 judges on the day, and the event was sponsored by the Association of the British Pharmaceutical Industry (ABPI) and the Wellcome Trust.

The Replacement Prize was won by Kelly BéruBé and Tracy Hughes from Cardiff University's School of Biosciences, for their work to find a possible alternative to animal testing in the field of Inhalation Toxicology. By developing 3-D cell cultures of lung tissue from human cells or "human tissue equivalents of respiratory epithelia", they were able to give them an appearance and behavioural characteristics that closely resembled those found in the human airway, and accurately mimicked the human responses to tissue damage. This innovation could eventually replace the use of animals in toxicity testing of airborne materials.

The Refinement Prize was won by Claire Rourke, GlaxoSmithKline, for her work investigating a novel way to give laboratory rodents doses of drugs for testing. Currently, a tube is inserted down the throat of the animal, but it was found that the animals could be trained to drink voluntarily from a syringe that contained the drug, with some sugar added for taste.

The Reduction Prize was won by Richard Walmsley, University of Manchester, and Paul Hastwell, GlaxoSmithKline, and Nick Billinton of Gentronix Ltd for their work in improving the identification of cancer causing chemicals using cell cultures. They developed a cell line that glows green when exposed to chemicals that damage genetic material. Because this test is much more accurate than the existing cell culture tests, far fewer chemicals have to be tested in animals, which are currently still necessary to see whether chemicals actually have the potential to cause cancer.

Phil Willis said: “My colleagues and I were tremendously impressed with the outstanding range and quality of research on display. The research demonstrated that not only could alternatives to animal models be developed but the quality of scientific outcomes could be improved.”

Vicky Robinson, chief executive of the NC3Rs, said: “We were overwhelmed by the interest that our event ‘Showcasing the 3Rs’ generated. Not only did we get a huge number of researchers keen to communicate their work to a wider audience, but we also had an impressive turnout from MPs, who obviously felt that finding out more about this type of work was central to being informed about the issue of using animals in research when talking to their constituents.”

Kelly BéruBé said: “I was impressed by the level of interest from the MPs. It is important for them to realise that the majority of their constituents will be concerned over the use of animals in medical research, and that researchers like me will only use animal models, such as the rat lung, as an absolute last resort if no replacement model is available.”

Richard Walmsley said "Developing a new test for use in the highly regulated and conservative field of pharmaceutical safety presents unique challenges for companies like Gentronix. However, the enthusiasm within GSK for this innovative and reliable screening method, coupled with the recognition of our work through this award, should ensure wider adoption and corresponding reduction in animal use throughout the industry.”

Philip Wright, Director of Science & Technology, ABPI, said: "Pharmaceutical companies are constantly looking at ways to research medicines that reduce the need for animals and minimise suffering. The ABPI was delighted to be able to support this showcase of the imaginative techniques being developed by academic and industrial scientists. It is critical that wherever developments occur to reduce, refine and replace the use of animals in research, these are communicated as rapidly as possible."

The National Centre for the Replacement, Refinement and Reduction of Animals in Research (NC3Rs) provides a UK focus for the promotion, development and implementation of the 3Rs in animal research and testing. It brings together stakeholders from academia, industry, Government and animal welfare organisations to facilitate the exchange of information and ideas, and the translation of research findings into practice that will benefit both animals and science. Further information available at www.nc3rs.org.uk