

A new generation of superb models



National Centre for the Replacement, Refinement and Reduction of Animals in Research

The UK's National Centre for the Replacement, Refinement and Reduction of Animals in Research (NC3Rs) has announced, as part of its main 3Rs research funding call in 2009, a priority funding area for projects that replace animals protected under the Animals (Scientific Procedures) Act 1986 with invertebrate models. Those interested in submitting an application in this area should contact the NC3Rs. The closing date for full applications is 25 February 2009.

The NC3Rs is a scientific organization established by the UK government to provide a national focus for promoting, developing and implementing the 3Rs in animal research and testing. Working closely with scientists, veterinarians, animal care staff, funders and regulators, both in the UK and internationally, the NC3Rs funds research, organizes workshops and symposia, and develops information resources and guidelines.

The 3Rs funding scheme is for hypothesis-driven and applied research that will advance knowledge and application of the 3Rs and improve laboratory animal welfare. Proposals that are relevant to any area of medical, biological or veterinary research or testing can be submitted and applications that integrate a range of disciplines are invited. In 2009, up to £2.5 million will be available for research grants.

Examples of projects in this priority area that could fall under the NC3Rs remit are:

- use of invertebrates as replacement models for vertebrate tests in toxicity screening or drug discovery
- development/implementation of invertebrate replacements for vertebrate models of human diseases.

The NC3Rs also manages a Small Awards Scheme, run in conjunction with the Laboratory Animal Science Association (LASA), that provides funds of up to £2000 per application to support small-scale projects, pilot studies, exchange visits, equipment, and training in the 3Rs and laboratory animal welfare. There is one deadline per year and application is via an online submission. The next deadline for applications to this scheme is 24 October 2008.

The NC3Rs also awards an annual prize for an original contribution to scientific and technological advances in the 3Rs in medical, biological or veterinary sciences published within the last 2 years. Sponsored by GSK, the prize consists of a prize grant of £10,000, plus a personal award of £1000 to the lead author, and is part of the Centre's commitment towards recognizing and rewarding high quality UK-based research that has an impact on the use of animals in the life sciences. The deadline for submission for the 2008 prize is 7 November 2008.

Further information on these funding opportunities, including details of previously awarded grants and prizes, plus other NC3Rs activities and a 3Rs information portal can be found at www.nc3rs.org.uk.

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NIH Transformative R01 grant deadline approaches

The new NIH Transformative R01 (T-R01) program, announced in September 2008, will specifically fund high-risk research in areas that are in need of radical change and progress such as pharmacogenomics, understanding and facilitating behavioral changes for disease intervention, mitochondrial variation, and dysfunction and chronic pain management. The applications for the 5-year grants are due by 29 January 2009. The grant proposals, which are unique from traditional R01 grading systems, will be evaluated by a distinctive review process being piloted by the NIH Center for Scientific Review (CSR). This new research support and review program aims to stimulate scientific creativity and unique approaches, which will hopefully lead to high-impact discoveries and breakthroughs. Further information on this program can be found online at: <http://nihroadmap.nih.gov/T-R01>

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Allan Spradling wins 2008 Gruber Genetics Prize



DMM would like to congratulate founding editor Allan Spradling on receiving the 2008 Gruber Genetics Prize. This award bestows a gold medal and US\$500,000 in recognition of an outstanding scientist whose unusual talents have made significant contributions to genetics research. Spradling, director of the Carnegie Institution's Department of Embryology, used the fruit fly to discover the first described stem cell niche in the fly ovary. He was also a co-developer of the first techniques that provided successful gene insertion into the fly genome. His work has advanced the tractability of the fly as a model organism and has significantly advanced our understanding of stem cells and their niches.

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MacArthur Foundation Fellowships

The MacArthur Foundation Fellowships, which were announced in September 2008, are as unique as their recipients. These US\$500,000 awards are designed to encourage intelligent risk taking to advance studies into uncharted territories. The MacArthur Foundation provides funds directly to awardees, over a 5-year period, independent of their institutional affiliations and with 'no strings attached'. Awards are given to people who show passion and courage in their work, and who are likely to advance their field in ways that reflect new innovation and fresh insight. An anonymous group of leaders nominate individuals that they feel embody the originality and motivation worthy of the prize. Awards are meant to stimulate originality in numerous fields, from farming to musical composition, and include some that recognize the innovative ways used by some scientists to approach biological questions through the novel use of model organisms.

'Model' recipients include Susan Mango and Rachel Wilson.



Susan Mango is tackling the complex issue of how a variety of cell types are formed to create a heterogeneous and functional organ. She is a Professor at the University of Utah and is using *C. elegans* as a model organism to understand and identify the genetic components that regulate cell differentiation and the integration of cellular functions.



Rachel Wilson uses *Drosophila* as a model system to understand the representation of chemical stimuli in the brain that allow for distinction between separate sensory inputs, such as smells. She is an Assistant Professor at Harvard University and hopes to extend these findings to even more complex issues, such as integration of information for higher processing in speech or color recognition.

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