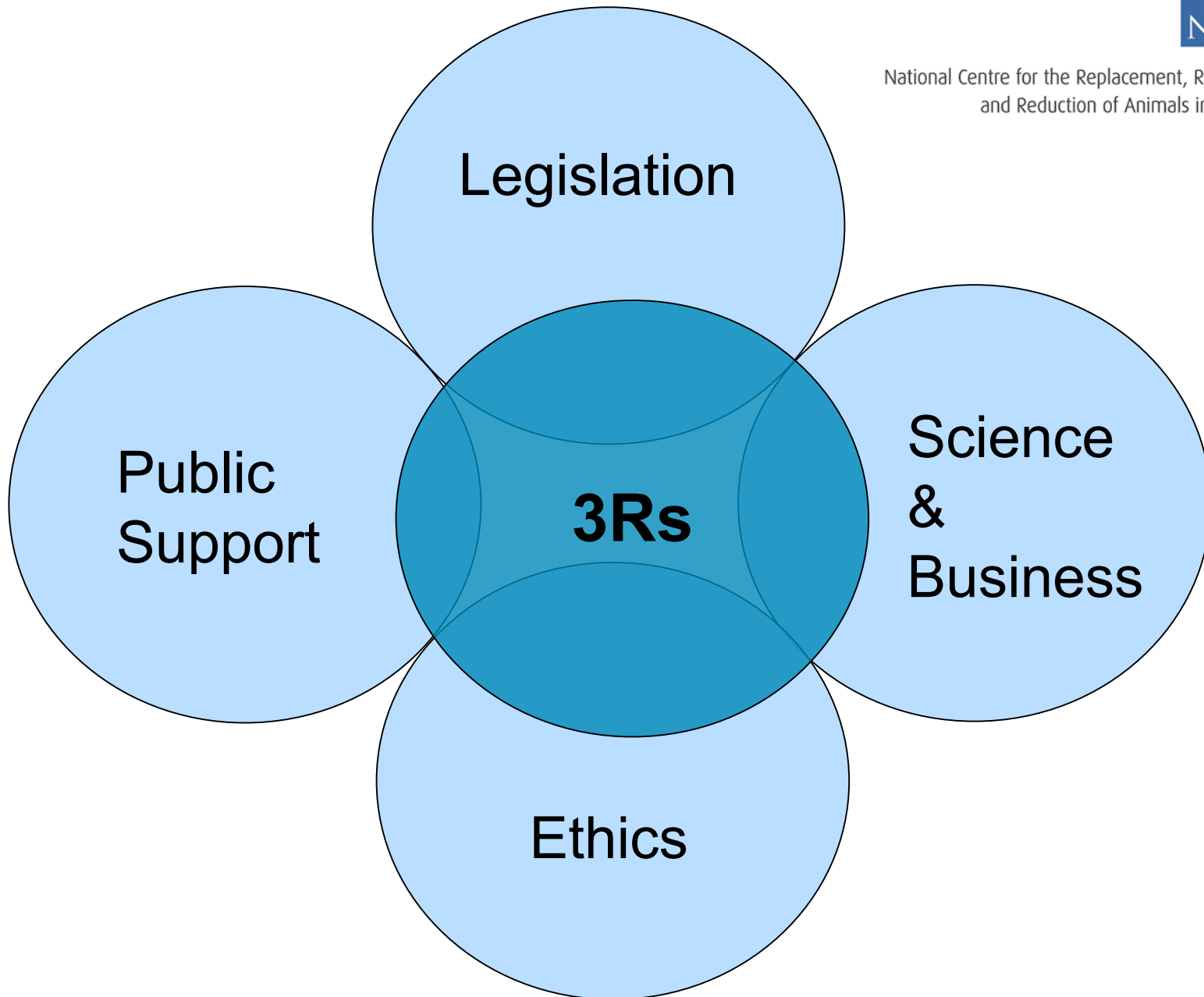


NC3Rs – the UK National Centre for the 3Rs

Dr Laura Playle





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

Background to the NC3Rs

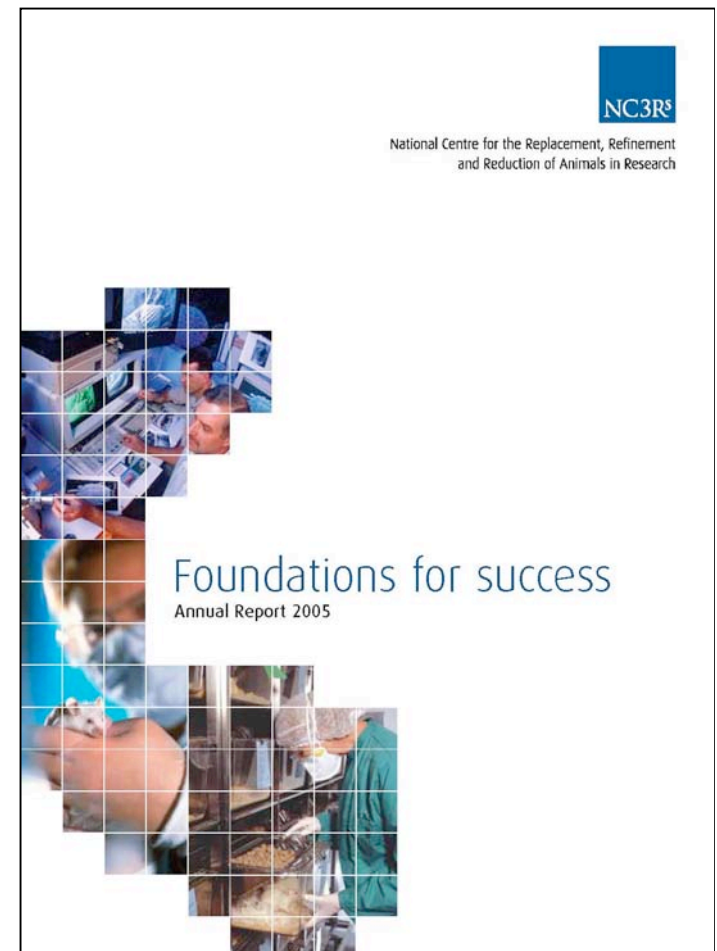
- House of Lords report, July 2002
- Taken forward by Home Office and Department of Trade and Industry
- Consultation process
- Establishment of NC3Rs announced by Science Minister, May 2004, replacing CBPAR
- Launched – September 04

What is NC3Rs

- Independent scientific organisation
- Catalyst and focus for 3Rs
- Administrative Centre
- Broad remit
- Funding from Government, industry, charity
- Wide range of stakeholders, partners and funders
- Non-executive Board
- Report to Science Minister
- 13 staff
- Based at Medical Research Council Head Office



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



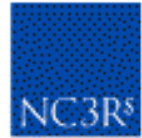
NC3Rs Board



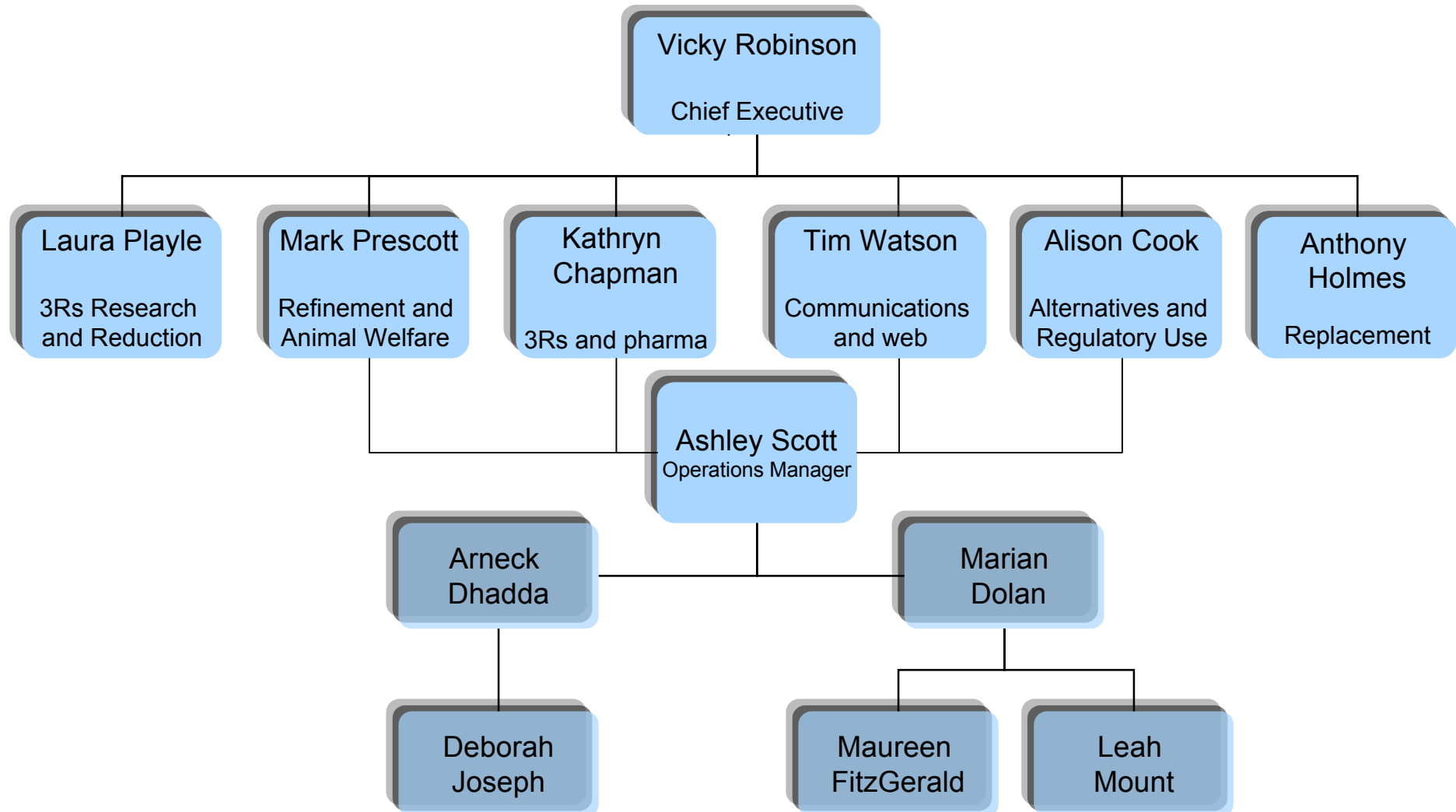
National Centre for the Replacement, Refinement
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Lord Leslie Turnberg	Chair
Professor Paul Flecknell	Deputy Chair, University of Newcastle
Dr Vicky Robinson	NC3Rs
Professor John Bell	University of Oxford
Dr Diana Dunstan	MRC
Dr Julia Fentem	Unilever
Dr Michael Festing	University of Leicester
Dr Lesley Heppell	BBSRC
Dr Bryan Howard	LASA
Professor Jane Hurst	University of Liverpool
Dr Maggy Jennings	RSPCA
Dr James Kirkwood	UFAW
Dr Jon Richmond	Home Office
Professor Nancy Rothwell	University of Manchester
Professor Malcolm Rowland	University of Manchester
Dr David Smith	AstraZeneca

NC3Rs Staff Organogram



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Income

NC3Rs

National Centre for the Replacement, Refinement
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	04/05	05/06	06/07	07/08
MRC	£600,000	£600,000	£1,425,000	£1,515,000
BBSRC	£61,000	£66,667	£404,000	£453,000
Home Office	£35,000	£125,000	£250,000	£250,000
Wellcome Trust		£75,000	£75,000	£75,000
ABPI		£50,000	£50,000	£50,000
NIH			£13,000	
GSK		£25,000	£25,000	£25,000
LASA		£12,735	£10,000	
Chemicals Industry			£50,000	£50,000
Total income	£696,000	£954,402	£2,302,000	£2,418,000

NC3Rs mission statement

To advance and promote the 3Rs by –

- Developing a UK strategy for the implementation of the 3Rs
- Supporting high-quality research that advances the 3Rs
- Promoting a co-ordinated approach to 3Rs research
- Providing advice and guidance on the 3Rs and animal welfare to the scientific community
- Supporting the UK scientific community's commitment to best practice in all aspects of laboratory animal science and welfare
- Working with regulators on the acceptance of alternative methods

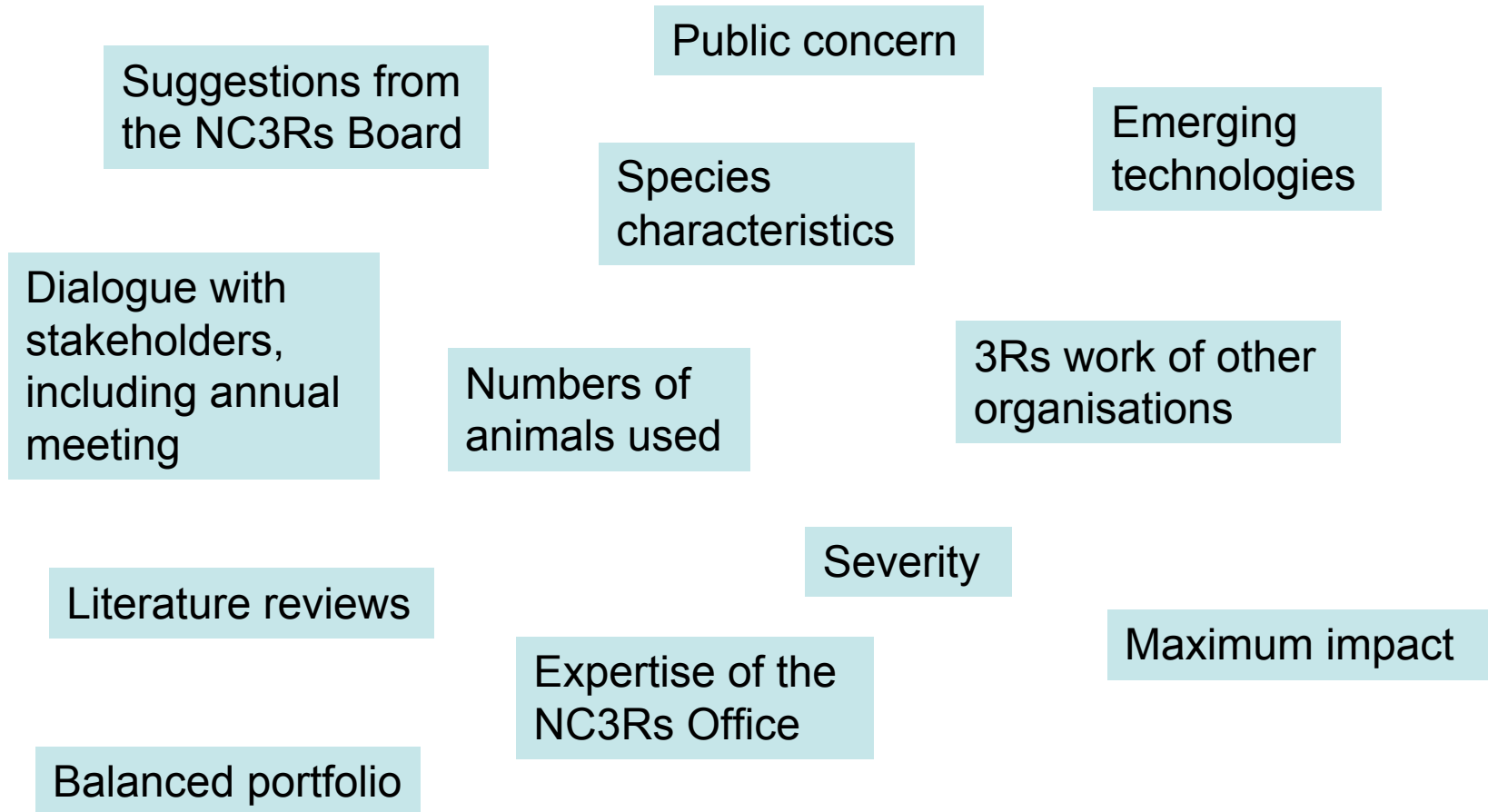
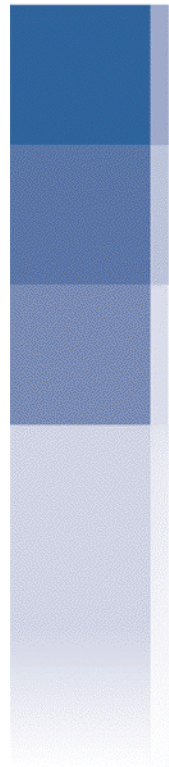


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Strategy in practice

- Fund high quality research
- Raise of awareness of what can be done to implement the 3Rs and provide better access to information and resources to facilitate implementation
- Raise status of 3Rs in scientific community
- Maximise efforts and resources through partnerships and collaboration

Identifying priorities





National Centre for the Replacement, Refinement
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Examples of NC3Rs programmes

- **Research funding schemes**
- **Improving access to information and raising awareness**
 - **Website**
 - **e-newsletter**
 - **Workshops**
- Primate welfare
- GM rodents
- Reduction and experimental design
- Supporting the work of animal care staff
- Range of initiatives with pharma

3Rs research funding scheme



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- Annual research funding scheme launched for high quality hypothesis driven and applied 3Rs research
- 2005 - 40 full applications submitted – 8 funded (20%)
- 2006 – 60 full applications submitted – 9 funded (15%)
- Applications undergo full peer review
 - 5-6 national / international referees
 - Assessed by expert panel
 - Funding decision made by Board
- 2007 – 2 priority areas –
 - Tissue Engineering Solutions for Replacing Animal Use
 - Refinement of Procedures of Substantial Severity

2005 NC3Rs awards

- The development of a cell-based diabetic wound bioassay (£235,000)
- Cell lines for prediction of drug metabolism and toxicity in man (£181,000)
- Development of an air-interface in vitro organ culture (IVOC) of bovine respiratory epithelium (£153,000)
- Replacement of the mouse bioassay: development of SPE and LC-MS for detection of paralytic shellfish poisoning toxins (£128,000)
- Development of replacement in vitro assays for the quantification of clostridial vaccine antigens (£112,000)
- The reduction in animal usage by multiple antigen immunisation schedules (£100,000)
- Maintenance of *Lutzomyia longipalpis* colonies using an artificial membrane blood-feeding method (£43,000)
- Development of a new tissue friendly head implant for use in brain studies in monkeys (£17,000)

2006 NC3Rs awards

NC3Rs

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- Development of an in vitro model for the anterior region of the eye (£145,060)
- Refinement of a mouse model of pulmonary embolism (£149,180)
- In vitro multi-chamber systems for studying neural degeneration processes (£181,068)
- Transcutaneous signal transmission without breaching the skin's natural barrier to infection (£149,176)
- Development of a new human cell genotoxicity assay to reduce the use of live animals in drug development (£133,024)
- Development of alternatives to histamine sensitisation test for pertussis vaccines by in vitro biochemical and biological assays (£262,024)
- Embryonic stem cell-derived cardiomyocytes as a model system for cardiac investigations (£200,880)
- The use of honeybees to screen for toxins (£27,000)
- An ex vivo mouse mandible culture model to study inflammatory bone disease (£193,680)



Improving access to information and raising awareness



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www.nc3rs.org.uk

- Awareness of NC3Rs
- Access to information
- Support implementation of 3Rs
- Gateway to 3Rs research funding
- Balanced information to public and media



www.nc3rs.org.uk

NC3RS

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About NC3Rs

NC3Rs Publications

NC3Rs Programmes

NC3Rs Funding
Schemes

Information Portal

Welcome :: [Home](#)



Events

Use the NC3Rs Events
Calendar



Mission

Read the NC3Rs mission
statement



3Rs Prize

First prizewinner
announced



[GA mouse welfare report published](#)

>>

A multi-disciplinary working group was convened to progress the APC's 2001 recommendations on the assessment of the welfare of genetically altered mice. The full report of the Working Group is now available.



What's new

- Recent papers - **Non-invasive imaging of animals**
- NC3Rs e-newsletter - **Issue 4** Includes Housing and husbandry of fish, papers on non-invasive imaging and article on

Information Portal >>



The Information Portal is an area of the website containing annotated links to online databases, websites, journal articles, legislation and other

Search

Search by category



Search

Submit Link

Submit Reference

Submit Event

Submit Discussion

Email NC3Rs

Improving access to information and raising awareness



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

- Monthly e-newsletter

If you cannot view this email properly please go to www.nc3rs.org.uk/news.asp?id=250



NC3Rs
National Centre for the Replacement, Refinement and Reduction of Animals in Research

NC3Rs e-newsletter - Issue 4

Information Portal - Housing and husbandry of fish  <p>The NC3Rs has an extensive Information Portal where you will find a wide range of the best references and links for guidance on implementing the 3Rs.</p> <p>A new section on housing and husbandry of fish has recently been added. Fish are the third most commonly used experimental animals in the UK after mice and rats (Home Office annual statistics for 2004) and worldwide use is increasing.</p>	Featured article  <p>Innovative Medicines Initiative and the 3Rs</p>
Recent papers - Non-invasive imaging of animals  <p>To keep you up to date on some of the latest published work with implications for the 3Rs, we are also producing lists of recent papers - with a different theme each time.</p> <p>This issue's theme is non-invasive imaging of animals, an area which shows promise for reducing the total number of animals needed and minimising suffering in some areas of research.</p> <p>If you have any suggestions for themes you'd like to see, please email us.</p>	Events calendar  <p>Animal Technicians' Symposium - Bursaries available</p>

To find out more, go to www.nc3rs.org.uk

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To subscribe to future issues of the newsletter go to: www.nc3rs.org.uk/subscribe/newsletters

Raising status of the 3Rs

- Research funding
- 3Rs prize
- 3Rs ambassadors
- Joint meetings e.g. Biosciences Federation, British Toxicology Society
- Working with Research Councils
- Government-funded

NC3Rs Guidelines

Primate accommodation, care and use





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Partnerships and Collaborations

- Associated of the British Pharmaceutical Industry (ABPI)
- European pharmaceutical industry
- USA National Institutes of Health (NIH)
- Biosciences Federation
- Laboratory Animal Science Association (LASA)
- Research funders

Factors aiding success

- Scientific organisation
- Engaging all stakeholders, especially scientists
- Steady development
- Measures of success
- Credibility, Authoritative, Neutral



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

Summary

- NC3Rs is a new scientific organisation
- Aim is to raise awareness, status and investment in 3Rs
- Initiated broad programme of activities
- Keen to engage all our stakeholders and to work in partnership
- Feedback welcome
- laura.playle@nc3rs.org.uk