



Fund for the Replacement of Animals in Medical Experiments

Annual Report and Review 2004–2005

One of the most intractable dilemmas encountered in our relationships with other animals results from their use in experimental or other scientific procedures, which may cause them pain, distress and/or lasting harm. Part of the problem is that, whereas in the case of most other uses of animals, such as farm animal husbandry, reasonable compromises between animal welfare and other interests are possible, many of the procedures applied to laboratory animals will inevitably and unavoidably result in significant suffering. This has led to much discussion, debate, confrontation, and even to crime and violence, for well over 150 years. FRAME believes that the best, indeed the only way forward, is genuine cooperation in the middle ground between the extreme positions of the animal rights activists and the pro-research libertarians. FRAME, established in 1969 as a scientific charity, was one of the first organisations to seek to work with other like-minded people in the middle ground, and continues to do so more than thirty-five years after its foundation.

Ten Recent FRAME Achievements

- 1 Completion by the FRAME Alternatives Laboratory (FAL) of work on the ECVAM/ICCVAM international validation study on basal cytotoxicity and starting doses for acute toxicity testing.
- 2 Involvement of FRAME and the FAL in the new EU AcuteTox project on *in vitro* methods for predicting acute systemic toxicity.
- 3 Continuation by the FAL of a FRAME/ECVAM/CR UK project on predicting acute toxicity of anti-cancer drugs.
- 4 Publication in *Regulatory Toxicology and Pharmacology* of the results of a data sharing initiative by the FRAME/RSPCA/Pharma steering group to minimise the use of dogs in regulatory toxicity testing.
- 5 Production of detailed papers on the laboratory use of non-human primates in response to calls for evidence by the Animal Procedures Committee and another working group.
- 6 Development, as part of a project funded by DEFRA, of individual integrated testing strategies for toxicity endpoints for chemicals testing.
- 7 Submission to the Government of questions concerning botulinum toxin and shellfish toxin testing in mice.
- 8 Continuation of a research collaboration with the University of the West of England on a project to develop an *in vitro* model of the lung.
- 9 Publications in *ATLA* and other journals of papers on: a) intelligent testing strategies for REACH; b) improving the OECD health effects guidelines with respect to the Three Rs; and c) analyses of, and suggestions for improving, the UK and EU statistics on laboratory animals.
- 10 Publication of special issues of *ATLA* on *Reduction*, *Biostatistical Methods*, and *In Vitro Toxicity Tests*.



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Ten Current FRAME Concerns

- 1 Continuing and increasing activities which detract from rational debate and from good quality scientific research to develop new alternatives.
- 2 The continuing lack of emphasis placed on strategic planning, experimental design and statistical analysis to reduce animal use and improve scientific quality.
- 3 The disproportionate and scientifically unjustified focus on the genome and its manipulation in the development of animal and non-animal models for use in biomedical research and testing.
- 4 The general reluctance to establish a zero-option policy for the use of non-human primates.
- 5 The lack of awareness and concern about the way botulinum toxin is tested for use as a cosmetic.
- 6 The length of time being taken to develop and validate replacements for tests in mice for screening toxins (such as shellfish toxin and botulinum toxin).
- 7 Inadequacies in the information reported in the UK and EU statistics on laboratory animal use.
- 8 Proposals for streamlining the validation process, which could compromise the independent establishment of test reliability and relevance for a specific purpose.
- 9 The lack of a formal mechanism at the OECD for regularly revising the health effects test guidelines to reflect new scientific methodology and advances in the Three Rs.
- 10 The lack of focused thought and science directed toward the development and implementation of intelligent testing strategies for REACH.

The Aims of FRAME

FRAME considers that the current scale of live animal experimentation is unacceptable and should not be allowed to continue. However, FRAME recognises that the immediate and total abolition of all animal experimentation is not possible, if vital medical research is to continue and the remaining diseases that lessen the quality of human and animal life are to be overcome, and if new consumer products, medicines, and industrial and agricultural chemicals are to be tested in order to identify potential hazards to human and animal health and to the environment.

FRAME advocates the Three Rs approach to this problem, believing that the most immediate prospects are for *reducing* the numbers of animals used through better science and better experimental design, and *refining* procedures so that the suffering of animals necessarily used is minimised, while the long-term aim of eliminating the need for live-animal experiments altogether, lies in the proper development, validation and acceptance of *replacement* alternative methods.

FRAME is a charitable trust, founded in 1969, and is controlled solely by up to six honorary trustees, who employ scientific and administrative staff to work in five main areas, namely: legislative and regulatory reform; scientific research; publications; specific campaigns; and public education.



Publications

I April 2004—I March 2005

2004

Balls, M. (2004). Progressing toward the reduction, refinement and replacement of laboratory animal procedures: thoughts on some encounters with Dr Iain Purchase. *Toxicology in Vitro* **18**, 165–170.

Balls, M. (2004). Are animal tests inherently valid? *ATLA* **32**, Suppl. 1, 755–758.

Balls, M. & Combes, R.D. (2004). The UK National Centre for the Three Rs: Pathway to Progress or Mere Fig Leaf? *ATLA* **32**, 61–64.

Balls, M. (2004). Animal Experimentation and Alternatives in the Age of Extremism. *ATLA* **32**, 151–152.

Bottrill, K. (2004). Search strategies on the internet: general and specific. *ATLA* **32**, Suppl. 1, 585–589.

Combes, R.D. (2004). Peer review of validation studies: an assessment of the role of the OECD by reference to the validation of the uterotrophic assay for endocrine disruptors. *ATLA* **32**, 111–117.

Combes, R.D. (2004). The case for taking account of metabolism when testing for potential endocrine disruptors *in vitro*. *ATLA* **32**, 121–135.

Combes, R.D. (2004). The use of human cells in biomedical research and testing. *ATLA* **32**, Suppl. 1, 43–49.

Combes, R.D., Balls, M., Bansil, L., Barratt, M., Bell, D., Botham, P., Broadhead, C., Clothier, R., George, E., Fentem, J., Jackson, M., Indans, I., Loizou, G., Navaratnam, V., Pentreath, V., Phillips, B., Stemplewski, H. & Stewart, J. (2004). The third FRAME Toxicity Committee: working toward greater implementation of alternatives in toxicity testing. *ATLA* **32**, Suppl. 1, 635–642.

Combes, R.D., Gaunt, I. & Balls, M. (2004). A scientific and animal welfare assessment of the OECD health effects test guidelines for the safety testing of chemicals under the European Union REACH system. *ATLA* **32**, 163–208.

Combes, R.D. (2004). The current OECD Health Effects Test Guidelines are in urgent need of revision. *ATLA* **32**, 463–464.

Carbone, L., Baumans, V. & Morton, D.B. (2004). Report of the workshop on euthanasia guidelines and practices. *ATLA* **32**, Suppl. 1, 445–446.

Festing, M.F.W. (2004). Good experimental design and statistics can save animals, but how can it be promoted? *ATLA* **32**, Suppl. 1, 133–135.

Festing, M.F.W. (2004). Refinement and reduction through the control of variation. *ATLA* **32**, Suppl. 1, 259–263.

Festing, M.F.W. (2004). Is the use of animals in biomedical research still necessary in 2002? Unfortunately, “Yes”. *ATLA* **32**, Suppl. 1, 733–739.

Festing, M.F.W. (2004). The choice of animal model and reduction. *ATLA* **32**, Suppl. 2, 59–64.

Fry, J.R., Hammond, A.H., Jassi, K.L., Bass, A.E., Bruce, G., Laughton, C., Shaw, P.N., Bylov, I.E. & Kovalenko, S.M. (2004). Selectivity of 7-alkoxycoumarins as probe substrates for rat hepatic cytochrome P450 forms is influenced by the substitution pattern on the coumarin nucleus. *Xenobiotica* **34**, 707–722.

Gray, A.C., Malton, J. & Clothier, R.H. (2004). The development of a standardised protocol to measure squamous differentiation in stratified epithelia, by using the fluorescein cadaverine incorporation technique. *ATLA* **32**, 91–100.

Halder, M., Balls, M., Hendriksen, C. & Cussler, K. (2004). ECVAM's activities in promoting the Three Rs in the quality control of biologicals. *ATLA* **32**, Suppl. 1, 93–98.

Hudson, M. & Bhogal, N. (2004). Scientific procedures on living animals in Great Britain in 2003: the facts, figures and consequences. *ATLA* **32**, 473–485.

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Phillips, B., Smith, D., Combes, R., Descotes, G., Jacobsen, S.D., Hack, R., Kemkowski, J., Krauser, K., Pfister, R., Rabemampianina, Y., Sparrow, S., Stephan-Gueldner, M. & von Landenberg, F. (2004). An approach to minimise dog use in regulatory toxicology: production of a best practice guide to study design. *ATLA* **32**, Suppl. 1, 447–451.

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BVA/AFW/FRAME/RSPCA/ UFAW Joint Working Group on Refinement. *Laboratory Animals* **38**, Suppl. 1, S1–S94.

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Sylvia Vaughan



Jeffrey Fry

2005

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Development Activities

The FRAME Research Programme has continued with work being conducted at both the FRAME offices and at the FRAME Alternatives Laboratory (FAL) and the Molecular Toxicology Laboratory in the University of Nottingham Medical School.

Further progress has been achieved with the development of improved organotypic skin and eye models for the safety testing of cosmetics, notably in the co-culturing of the different cell types that are present in these organs in the intact body. The FAL has also been continuing its work to develop models of embryotoxicity by using embryonic stem cells. The FAL has completed its laboratory work for an international interlaboratory collaborative trial to validate tissue culture methods for reducing and eventually replacing animals used for determining the acute toxicity of substances. The data are now being analysed in conjunction with other participating laboratories.

The FAL is also involved in two separate laboratory projects on the use of basal cytotoxicity data from cells in tissue culture to predict human acute toxicity; one of these is part of a large multi-centred EU project, Acute-Tox, and the other is a collaboration with Cancer Research UK and involves predicting the toxicities of a range of anti-cancer drugs.

The Molecular Toxicology Laboratory is nearing the completion of a project to develop a high-throughput screening system based on the use of gene expression of heat shock proteins as early markers of toxicity. Funding is being sought to continue this work.

The FRAME-funded work at the University of the West of England on the development of an *in vitro* model of the lung, for investigating the toxicity of inhaled substances, is also progressing well.

Work in the FRAME office has been greatly strengthened with the appointment of three new and experienced members of the scientific staff. Research has been focused especially on the new EU chemicals testing on legislation, and on its implications for increased animal testing, and the need for improved methods for undertaking risk assessments. FRAME has continued to produce influential publications on this issue, promoting intelligent testing strategies with the maximum use of non-animal approaches, and making constructive suggestions for the improvement of international test guidelines. FRAME is conducting more research in this area, working in close conjunction with regulators, the EU, industry and the UK Government.

FRAME continues its collaboration with several pharmaceutical companies to minimise the use of dogs as laboratory animals, and several manuscripts describing

this work have been published. Other issues that FRAME has been actively researching include: a) the use of mice for the testing of preparations of botulinum toxin for use for cosmetic purposes; b) the monitoring of shellfish beds for toxins by using alternatives instead of severe procedures applied to mice; c) the laboratory use of non-human primates; d) the generation and use of genetically modified animals; e) the implementation of techniques to improve the welfare and reduce the group sizes of animals used in experiments; f) making suggestions for improving the UK and EU statistics on animal experimentation; and g) the development and validation of methods for detecting endocrine disruptors (EDs).

The Director of FRAME has been re-appointed to a US Government Federal committee which advises the US Environmental Protection Agency on the validation of tests for EDs, and continues to serve on the Scientific Advisory Committee of the European Centre for the Validation of Alternative Methods (ECVAM). He is also a member of the advisory committee for the EU Acute-Tox project. His active participation on a working party on research involving animals of the Nuffield Council for Bioethics has ended with the publication of the Council's report.

FRAME's two scientific committees, (the Reduction Committee and the Third Toxicity Committee) have each become standing committees, supported by steering groups and individual working parties.

FRAME's scientific staff have participated in and helped to organise several workshops and meetings, including one held as part of its project on the EU chemicals policy. The Sixth Annual FRAME lecture on 6 October, 2004 was given by Prof. Alan Goldberg (Centre for Alternatives to Animal Testing, John's Hopkins University, Baltimore, MD, USA).



Michael Balls introduces Alan Goldberg

FRAME's campaigns on a number of issues concerned with animal experimentation continue, especially via the All Party

Parliamentary FRAME Group at Westminster. FRAME also continues to publish its newsletter *FRAME News*, and also its information and educational material. A leaflet on the use of human cells and tissues has been published, and leaflets on the EU chemicals testing policy, risk assessment and the use of primates are scheduled for publication in the near future. The FRAME website has been extensively updated and will be further improved over the next 12 months.

During the year, 31 research papers were published in the scientific literature, arising from the FRAME Research Programme.

FRAME Presentations April 2004–March 2005

Balls, M. Animal Research and the Sentencing of Extremists. *Cambridgeshire Magistrates Courts Service Seminar, Cambridge. October, 2004.*

Balls, M. Cell Cultures as Alternatives to Animal Testing: Progressing Toward Total Replacement in the 21st Century. *European Society of Applied Cell Technology Meeting, Leicester. January, 2004.*

Balls, M. International validation and barriers to the validation of alternative tests. *Royal Society of Chemistry Symposium on Alternatives to Animal Testing Are Not Just In Vitro Tests — Current Situation and Future Trends. London. November, 2004.*

Balls, M. The Zero Option and the use of non-human primates. *Meeting of the Boyd Group, London. November, 2004.*

Bhogal, N. Reducing distress to animals and improving experimental data. *Centre for Best Practice in Animal Research, MRC, London. September, 2004.*

Bhogal, N. Cell-based reporter systems as drug screening aids. *13th International Workshop on In Vitro Toxicology, Zegrze, Poland. September, 2004.*

Bhogal, N. The use of animals for medical experiments. *Nottingham High School. March, 2005.*

Bhogal, N. & Combes, R.D. Use of transgenic animal models: an overview of advantages and disadvantages, and their impact on reduction objectives. *In Vitro Toxicology Industrial Platform (IVTIP) Meeting, Cambridge. November, 2004.*

Combes, R.D. FRAME research on developing *in vitro* toxicity tests in relation to recent EU legislation. *British Association for Chemical Specialities COSRAM/Speciality Surfactants Group Meeting on Cosmetic Ingredients — Raw Materials for Personal Care and Cosmetic Formulations, Moat House Hotel, York. May, 2004.*

Combes, R.D. Possibilities for assessing risks to humans from chemical exposure by using non-animal data. *ECETOC Workshop on Alternative Testing Approaches in Environmental Risk Assessment, Crécy-la-Chapelle, France. July, 2004.*

Combes, R.D. Assessing risk to humans from chemical exposure by using non-animal test data. *13th International Workshop on In Vitro Toxicology, Zegrze, Poland. September, 2004.*

Combes, R.D. A critique of the European Commission's Proposals for the testing of chemicals under the REACH system. *13th International Workshop on In Vitro Toxicology, Zegrze, Poland. September, 2004.*

Combes, R.D. Challenges and opportunities afforded by new and proposed legislation on toxicity testing. *13th International Workshop on In Vitro Toxicology, Zegrze, Poland. September, 2004.*

Combes, R.D. Endocrine disrupting agents — new endpoints for existing tests? *Royal Society of Chemistry Symposium on Alternatives to Animal Testing Are Not Just In Vitro Tests — Current Situation and Future Trends, London. November, 2004.*

Combes, R.D. Opportunities for applying Reduction in biomedical research and testing. *In Vitro Toxicology Industrial Platform (IVTIP) Meeting, Cambridge. November, 2004.*

Hudson, M. Improving Sample Size Determination to Reduce Animal Use in Medical Experiments. *LASA Winter Meeting, Birmingham. November, 2004.*

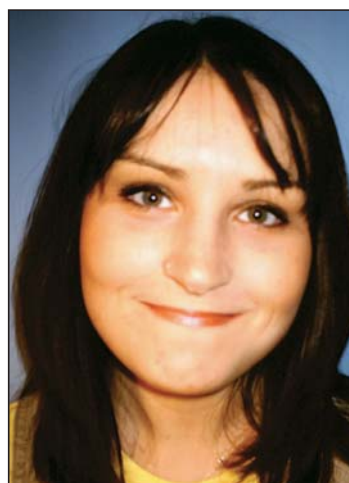
Hudson, M. Non-Invasive Imaging Reduces and Refines Animal Experiments. *LASA Winter Meeting, Birmingham. November, 2004.*

Sladowski, D., Combes, R. & van der Valk, J. ESTIV questionnaire on the acquisition and use of primary human cells and tissues in toxicology. *13th International Workshop on In Vitro Toxicology, Zegrze, Poland. September, 2004.*

Sladowski, D., Combes, R. & van der Valk, J. ESTIV questionnaire on the acquisition and use of primary human cells and tissues in toxicology. *International Congress of the European Association of Tissue Banks, Prague. October, 2004.*



Nirmala Bhogal



Michelle Hudson



Donations and Legacies

1 April 2004—31 March 2005

FRAME Corporate Membership

Five-star members are companies which donated an annual sum of £20,000 or more. These companies may collaborate with FRAME in specific or general research projects, or contribute to the general funding of FRAME.

AstraZeneca UK Ltd
British American Tobacco



Three-star members are companies which donated an annual sum of £10,000–£20,000. These companies may collaborate with FRAME in specific or general research projects or contribute to the general funding of FRAME.

Asda Stores Ltd
The Boots Company plc
The Gillette Company
Pfizer Ltd
Procter & Gamble UK Ltd
Reckitt Benckiser plc
RSPCA
J Sainsbury plc
Shell International Ltd
Tesco Stores Ltd
Unilever
Unilever UK Home and Personal Care



Two-star members are companies which donated an annual sum of £5,000–£10,000, either for a defined purpose or for general funding.

Coty UK Ltd
The Kennel Club



One-star members are companies which donated an annual sum of £1,000–£5,000, either for a defined purpose or for general funding. Such donations are of particular value in providing money for activities such as education and publicity, which do not involve research.

Avon Products Inc
Aventis Pharma Ltd
British Association for Chemicals Specialities
Charles River Laboratories
Church & Dwight UK Ltd
Colgate Palmolive UK Ltd
A & E Connock (Perfumery & Cosmetics) Ltd
Covance Laboratories Ltd
PZ Cussons (UK) Ltd
Liz Earle Cosmetics
Ecover (UK) Ltd
Firmenich UK Ltd
GE Healthcare
Givaudan UK Ltd
GlaxoSmithKline Ltd
Huntingdon Life Sciences Ltd
Johnson & Johnson Ltd
SC Johnson Ltd
Marks & Spencer plc
Merck Sharp & Dohme
Mercona (GB) Ltd
Next plc
Novo Nordisk A/S
SafePharm Laboratories Ltd
Sanofi-Aventis
Smith & Nephew Research Ltd
Somersetfield Stores Ltd
Swallowfield Consumer Products Ltd
Thor Group plc
Waitrose Ltd
Woolworths plc



Donations from Trusts

FRAME gratefully acknowledges the support of the following Trusts, from which a total of £55,518 was received during the year:

John and Susan Bowers Fund
The Buccleuch Charitable Foundation
The Marjorie Coote Animal Charities Trust
The Dominic Trust
The Russell & Mary Foreman 1980 Charitable Trust
Mrs H L Grimwade Charitable Trust
The Innominate Trust
The Rufford Maurice Laing Foundation
The Miller Foundation
The Robertson Trust
Sylvanus Charitable Trust
Toye Charitable Trust
Walker 597 Trust
The Barbara Welby Trust
Mr & Mrs O J Whitley Charitable Trust
The Leslie Williams Trust
The D M & J Wood Deposit Trust

Legacies Bequeathed to FRAME

Legacy income during the year totalled £115,392. FRAME received bequests from the following supporters:

Miss Denise G Anglin of Holland-on-Sea
Miss Dorothy B Brading of Newton Abbot
Ms Winifred E Harvey of Eastbourne
Mrs Iris M Lansdown of Hassocks
Miss Marjorie Maddison of Rochester
Miss Kathleen Osborn of Sheffield
Miss Dorothy R Paget of Keighley
Miss Edith M Powell of Middlesbrough
Miss Margaret Powell of Goring on Thames
Mr Denis Pybus of Sidmouth
Miss Marguerite R Silverman of Bridgwater
Miss Kathleen M Slater of Seaford
Miss Eleanor M Wolskel of Shrewsbury

Donations in Memoriam

Mrs C Cocks in memory of her husband, Mr S G Cocks.

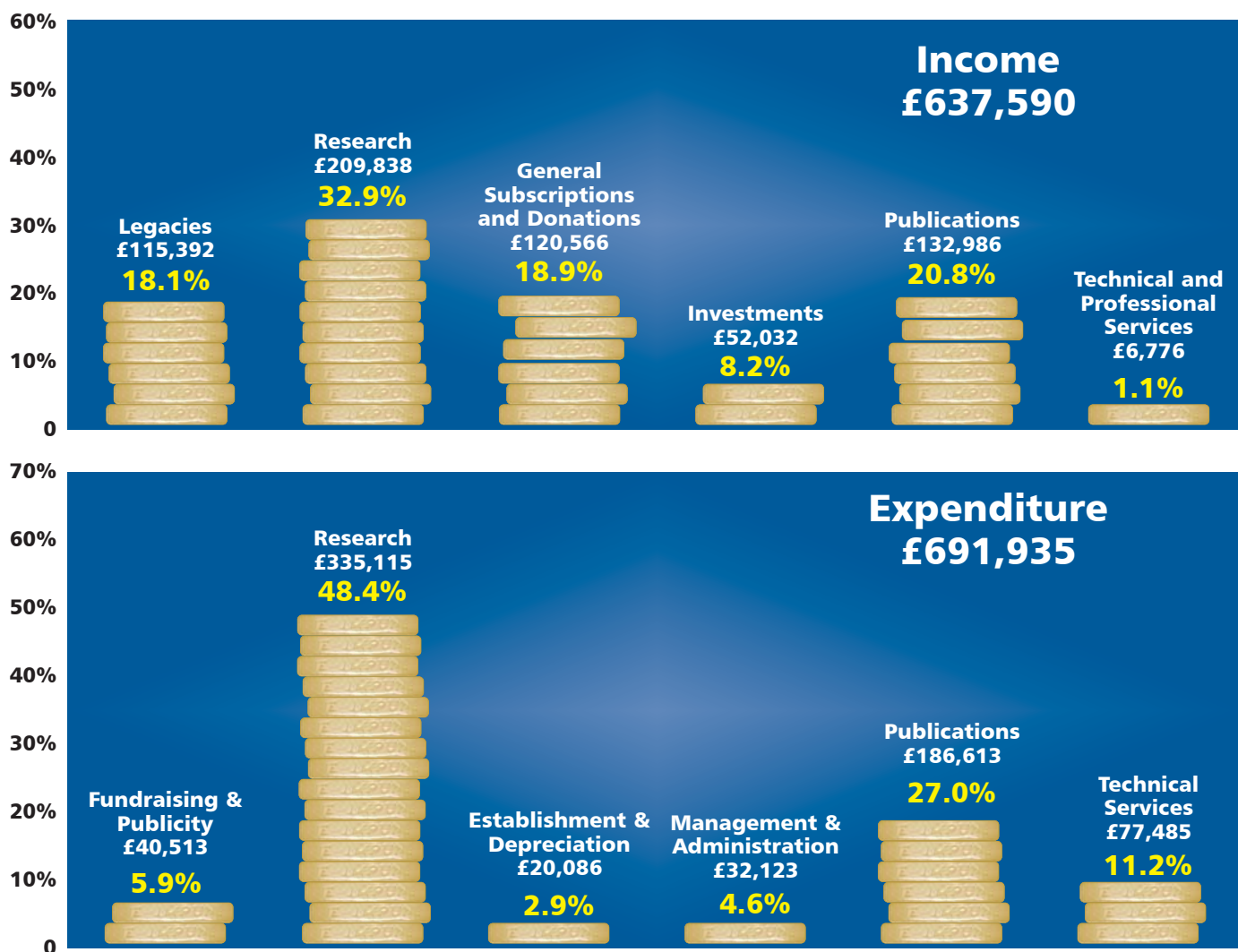
Donations, all in memory of Mr Bill Annett, were received from:

Professor Michael Balls
Sir John Butterfill MP
Mr Gerard Duvé
Mr & Mrs R P Franklin
Mrs J Fraser
Mrs M J Goss
H B Gneditch
Dr Peter Hodges
Mr Peter Jensen
The Kennel Club
Mr Joseph Piccioni
Mrs B Sanctuary
Miss Eileen Waterman



Financial Review

1 April 2004—31 March 2005



During the year to 31 March 2005, total income was 18% lower than the previous year, whilst total expenditure was higher by 4%. The combined effect of this produced a deficit of £54,300 before revaluation of investments, as compared to a surplus of £109,000 during the previous year.

£115,400 was received from legacies, compared with £223,500 in the previous year. Despite this fall, there is some evidence to suggest that legacy income could be on an upward trend; at the year-end, FRAME had been notified of eighteen forthcoming bequests, compared with thirteen such bequests in the previous year.

Sadly, financial support for FRAME's Research Programme fell by one third over the year, and it must be acknowledged that it is becoming increasingly difficult to maintain sufficient income from larger corporate supporters to fund core research activities at the FRAME Alternatives Laboratory in the University of Nottingham. The Trustees are looking into other ways of raising research income in the future.

The corporate membership scheme aimed at smaller industrial supporters saw a 30% rise in revenue over the previous year. This scheme is being developed

successfully with the likelihood of more companies coming on board, and it remains a useful source of income.

Income for the scientific journal, *ATLA*, rose by 27%, but corresponding expenditure rose by 37%, leaving the financial viability of the journal in a weaker position. The production of the journal involved a high level of activity throughout the year, with the publication of two supplements in addition to the standard six issues.

No changes were made to FRAME's investment portfolio. By the year-end, there had been a welcome rise of £67,000 in the overall value of investments. As a result of this, the annual £54,000 deficit of income over expenditure was more than offset by the rise in value of financial assets. Accordingly, the Balance Sheet total rose by a modest £13,000 to £1.32 million during the year. FRAME therefore has sufficient liquidity to meet its current and future commitments.

The Trustees have examined the major strategic, business and operational risks which the charity faces, and confirm that systems are in place which provide them with the appropriate information to enable them to take steps necessary to lessen these risks.

FRAME Patrons and Trustees

Patrons

The Rt Hon David Mellor PC QC was educated at Cambridge, and became a barrister in 1972, a Queen's Counsel in 1987, and a Privy Counsellor in 1990. He was MP for Putney from 1979 to 1997, serving as Minister in six different Departments of State, including the Home Office, the Foreign Office and the Treasury, in the Thatcher and Major Conservative Governments. Since leaving Parliament, he has pursued a multi-faceted career as a businessman, broadcaster and journalist, with specialist interests in football and classical music.

Lord Stratford (as Tony Banks) was a prominent member of the Greater London Council from 1970, and was Chairman from 1985 until its abolition in 1986. He was MP for Newham North West, later renamed West Ham, from 1983 until 2005, and served for two years as a Minister in the Department of Culture, Media and Sport after the 1997 General Election. One of Parliament's staunchest supporters of animal rights, he was created a Life Peer in May 2005. He was Chairman of the All Party Parliamentary FRAME Group at the time of the 2005 General Election, and was immediately re-elected Chairman of the Group when he took his seat in the House of Lords. In July 2005, he accepted an invitation to become a Patron of FRAME.

Lord Soulsby of Swaffham Prior, a veterinarian previously interested in research in parasitology and immunology, now has a wider interest in livestock health and agricultural productivity of the developing world, especially through the application of new biotechnologies. He was elevated to the Peerage in 1990, and he has been a member of the House of Lords Science and Technology Select Committee, and is now President of the Parliamentary and Scientific Committee.

Trustees

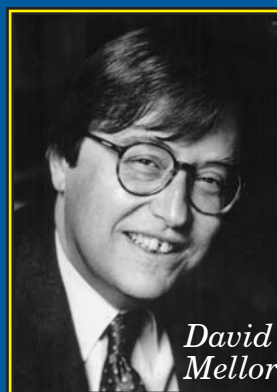
Michael Balls is an Emeritus Professor in the University of Nottingham, and was the first Head of the European Centre for the Validation of Alternative Methods (ECVAM), part of the European Commission's Joint Research Centre, located at Ispra, Italy.

Richard Clothier is Reader in Cell Toxicology in the School of Biomedical Sciences, University of Nottingham, and Director of the FRAME Alternatives Laboratory, where his research is concerned with the development and use of *in vitro* models for predicting the dermal, ocular, bronchial and embryonic toxicity of chemicals and of cosmetic and household product formulations.

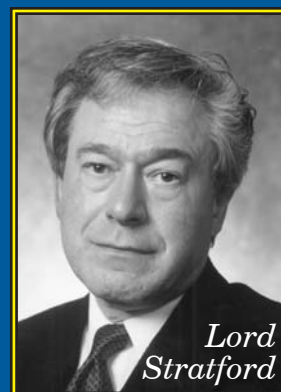
Jack Ferguson graduated from Strathclyde University, Glasgow, with a BSc (Hons) in Biology with Chemistry and a PhD in Bioengineering. He has worked in cosmetic product development for over 20 years, specialising in skin care and sun care product development and functional testing.

David Kendall is Professor of Pharmacology in Biomedical Sciences, University of Nottingham Medical School. His major research interests are in the mechanisms of actions of psychoactive drugs and neurotransmitters, particularly cannabis-like agents.

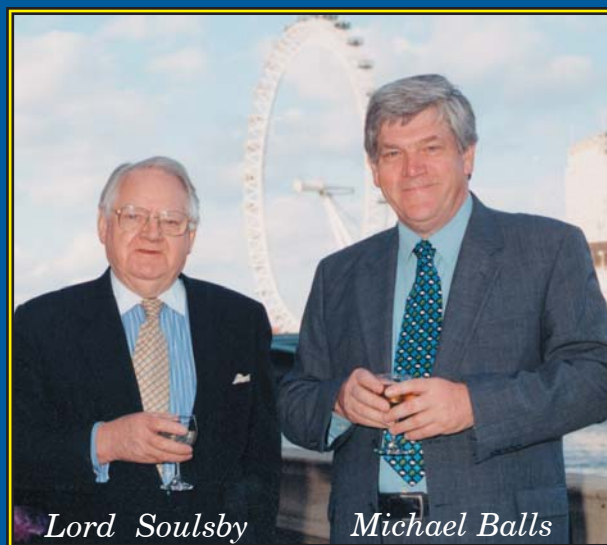
David Morton is the Director of the Biomedical Services Unit at the University of Birmingham. He is a laboratory animal veterinarian with research interests in the welfare of animals, particularly in the recognition and assessment of animal pain, distress and suffering during their use in research.



David Mellor



Lord Stratford

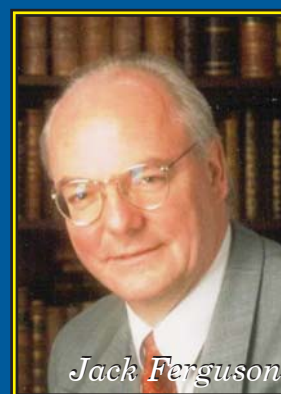


Lord Soulsby

Michael Balls



Richard Clothier



Jack Ferguson



David Kendall



David Morton