

## WINTER MEETING 2008 - EDUCATION TRAINING AND ETHICS SECTION

### LIFE'S DILEMMAS

This session was put together by the Education, Training and Ethics section (ETES) to discuss and explore some of the ethical dilemmas brought about by progress in biology, from biomedical sciences to conservation.

After an update by Dr Manuel Berdoy (Oxford and co-convenor) of the work of the ETE Section to date (see box below), Prof. Kenneth Boyd (Edinburgh) started with a short reflection on the relationship between humans vs. lab and farm animals and its consequences. This was followed by a presentation on Pharmacogenetics, a clear example of biomedical advance (partly underpinned by animal experimentation) and with huge applied potential but, as Christine Stephens (AstraZeneca) explained, one with its own set of ethical obstacles and public perception issues. Dr James Kirkwood (UFAW) then dealt with the consequences of another aspect of public perception by addressing the paradox in our attitude towards the care of animals that are euthanased in the laboratory versus those that are killed as part of pest control programmes. Clearly, the efforts to kill unwelcome wild animals contrast sharply with our efforts devoted to help those that we value; and Dr. Andrew Kelly (RSPCA) then addressed the extent to which our well intentioned efforts to rehabilitate injured animals back into the wild can be ethically and practically justified.

#### UPDATE ON THE WORK OF THE ETE SECTION in 2008

##### **Guiding Principles on Record Keeping for the Personal Licence Holder**

Now available from the LASA website [www.lasa.co.uk/publications.html](http://www.lasa.co.uk/publications.html)

##### **Guiding Principles for Preparing for and Undertaking Aseptic Surgery**

In preparation, to be circulated for consultation in 2009.

##### **Guidance for Local Ethical Review Processes in the UK:**

A joint project, from RSPCA and LASA ETES, the aim of which is to develop guiding principles which will:

- more clearly identify the aims and outcomes for each ERP function;
- help develop more efficient processes;
- give some criteria against which establishments can assess their progress; and thus
- help the ERP evolve in a constructive way.

Two meetings, involving c. 50 stakeholders were held in the latter part of 2008, the information from which is currently being analysed for the final report.

*LASA Education, Training and Ethics Section Members: M. Jennings & M Berdoy (co-convenors), A. Farmer (Home Office observer), B. Howard; B. Law, P. Sinnett-Smith, D. Smith & L. Whitfield.*

The dilemmas brought about by our interaction with animals affect our everyday life in many ways. The presentations explored four of them and their consequences for animal welfare. The first presentation, by Kenneth M Boyd, Professor of Medical Ethics at the University of Edinburgh, set the scene for the session with a short reflection on the relationships between humans and laboratory animals vs. humans and farm animals and their consequences.

### **Conflicts of human interest and animal welfare in lab and farm animals**

Kenneth Boyd, College of Medicine & Veterinary Medicine University of Edinburgh, [www.mvm.ed.ac.uk](http://www.mvm.ed.ac.uk)

Kenneth introduced a discussion of ethical issues surrounding human relationships with laboratory, farm and companion animals. He reminded us of the principles outlined in the Five Freedoms<sup>1</sup> and the way in which these principles are reflected in other guidance such as the DEFRA Code of Practice for the Welfare of Dogs<sup>2</sup>. He then asked us to consider some of the complexities and possible contradictions of animal rights arguments about 'speciesism', illustrating this with reference to a recent paper on the subject by S. Spencer *et al*<sup>3</sup>. If a '*central argument against the use of animals for scientific or medical research is that animals should not be treated differently from humans on the basis of their being different species*', this ought also to apply to farm and companion animals. But this anti-speciesist argument was much less often heard in relation to farm animals. And in the case of pets, there often appeared to be a much more openly speciesist approach to the use in research of cats and dogs, as opposed to rodents, to the ways in which cats treat mice, and to the poisoning of mice and rats (see also the presentation by James Kirkwood below). In the case of some companion animals moreover, as a paper by K. Hens<sup>4</sup> has argued, morally relevant differences between non-human species might well justify treating them differently from one another: because dogs, for example, '*are animals that do not exist outside human cultural context*', humans may have 'extra' and 'special' responsibilities to the dogs they take into their care'.

Complexities and possible contradictions, Kenneth suggested, have also been observed in relation to attitudes towards the ethics of factory farming. N. M. Williams<sup>5</sup> for example, has argued that in this context 'affected ignorance' may be morally culpable if people fail to acknowledge their own involvement as consumers by preferring not to know or ask about the facts and morality of factory farming,

Returning to the ethics of research with animals, Kenneth concluded by referring to a recent study by R. de Vries<sup>6</sup> of the views of biomedical research workers on the use of genetically modified animals. In this group interestingly, 63% strongly agreed, and 29% agreed, with the statement that '*Genetic engineering contributes to the instrumentalisation of animals, i.e., the ever increasing adaptation of animals to our needs and interests*'.

While this might sound somewhat inconsistent coming from people 'directly involved in genetic engineering', part of the reason why they were able to agree with the statement, the author noted, was that many of them argued that not every genetic modification interferes with the identity of the animal. In their view, only the modifications that cause significant changes in the appearance and/or the behaviour of the animals should be regarded as an interference with their identity and therefore as a violation of animal integrity.

#### References:

- <sup>1</sup> Farm Animal Welfare Council 1979 [www.fawc.org.uk/freedoms.htm](http://www.fawc.org.uk/freedoms.htm)
- <sup>2</sup> DEFRA 2008 Code of Practice for the Welfare of Dogs  
[www.defra.gov.uk/corporate/consult/welfare-dogs-cop/](http://www.defra.gov.uk/corporate/consult/welfare-dogs-cop/)
- <sup>3</sup> Spencer S, Decuyper E, Aerts S, de Tavernier J 'History and Ethics of Keeping Pets: Comparison with Farm Animals' *Journal of Agricultural and Environmental Ethics* (2006) 19: 17-25
- <sup>4</sup> Hens K 'Ethical Responsibilities towards Dogs: An Inquiry into the Dog-Human Relationship' *Journal of Agricultural and Environmental Ethics* (2009) DOI 10.1007/s10806-008-9120-y
- <sup>5</sup> Williams N M 'Affected Ignorance and Animal Suffering: Why our Failure to Debate Factory Farming Puts Us at Moral Risk' *Journal of Agricultural and Environmental Ethics* (2008) 21: 371-387
- <sup>6</sup> de Vries R, 'Ethical Concepts Regarding the Genetic Engineering of Laboratory Animals' *Medicine, Health Care and Philosophy* (2006) 9: 211-225.

The next three presentations explored specific examples of ethical issues in science, starting with the issues brought about by progress in Pharmacogenetics. Christine Stephens, a Research Clinical Scientist at AstraZeneca, explained how Pharmacogenetics is one biomedical advance which presents huge applied potential but one which comes with its own set of ethical obstacles and public perception issues.

#### **Ethics of Pharmacogenetics**

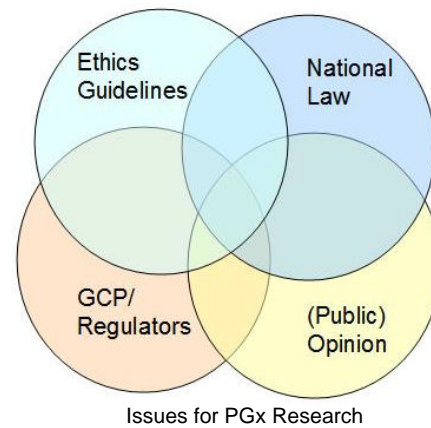
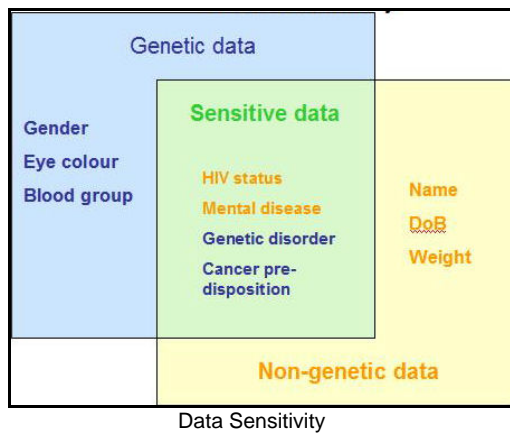
Christine Stephens, Global Clinical Development, AstraZeneca

Christine introduced the audience to the ethical issues associated with the study of the genetics of drug response. Pharmacogenetics (PGx), the study of the genetics of drug response, looks at the ways in which genetic variation in different genes may contribute to inter-individual variation in drug response:

- Absorption, distribution, metabolism, and excretion (ADME) genes: Pharmacokinetic (PK) profile;
- Target gene(s) : Pharmacodynamic (PD) response;
- Variability in relevant biomarker pathways;
- Candidate genes contributing to adverse events.

PGx data are used in a number of ways: for early attrition; to determine efficacy and toxicity (both of which influence dose); for differentiation between competitor compounds; and to identify causal mechanisms of resistance. Key issues, such as data sensitivity, were highlighted along with the various means of addressing these issues through approaches including informed consent, informative data (used to inform patients) and education.

The role of the ethical committee was a significant factor in addressing requirements which inevitably vary between and within different regions of the world and for raising awareness and understanding – ensuring that solutions are in place to secure samples for research.



Conclusions were that PGx research can play a key role in identifying appropriate treatment groups for a drug; that without collecting samples PGx research can't be performed; and without well planned and executed PGx research we may miss opportunities to ensure improved patient care. Ongoing monitoring of the changing ethical, legislative and regulatory areas is essential.

Picking up on the theme of public perception, the next presentation, by Dr. James Kirkwood, Chief Executive and Scientific Director at UFAW, addressed the potential welfare consequences caused by the paradox in our attitude to the care of animals that are euthanased in the laboratory versus those that are killed as part of pest control programmes or indeed bred selectively as pets.

### **Welfare aspects of the control of free-living rodents**

James Kirkwood, UFAW & HSA [www.ufaw.org.uk](http://www.ufaw.org.uk) and [www.hsa.org.uk](http://www.hsa.org.uk)

James introduced us to some of the issues associated with human relationships with animals and the impact that our control of food distribution and other resources inevitably has. In a closed system, the decision to favour one group of animals is likely to have an adverse impact on other animals somewhere, both in terms of size of population and (for sentient animals) of quality of life. We were asked to consider anthropogenic (human induced) threats to the conservation of species such as land use changes; pollution; killing/disturbance of animals; introduction of infections and the way in which these threats come about.

The presentation then led us to consider the factors which influence motivation to tackle wildlife welfare problems:

- intensity of the welfare problem;
- degree of responsibility for stewardship;
- degree of responsibility for causing the problem (anthropogenic vs natural);
- availability of resources; and finally
- the appeal/popularity of the animal (e.g. seals or dolphins vs rats).

Another welfare consideration which was highlighted was the impact of selective breeding, which can lead to genetic defects such as Syringomyelia in King Charles

spaniels and which is associated with signs of chronic, and in some cases severe, neck pain in a proportion of affected dogs.

The impact of anticoagulant rodenticides on welfare was described, including pathological effects (haemorrhage into gut and body cavities including, in a proportion of cases, into joint spaces and intracranially) and the effect on welfare (extending from weakness to severe pain over a duration of days). We were told that this affects in the region of 10 million animals annually in Europe. The pros and cons of a number of different control methods were described and we were told that the UFAW Working Group is working to promote welfare improvements in the control of rodents through providing advice and guidance about current methods<sup>7</sup>; promoting research into new, humane methods and advocating the need for a national animal welfare advisory body to keep pest control methods under review. It was surprising to learn that there is no requirement for traps to be tested for humaneness prior to being placed on the market and that no information is available on the humaneness of the various designs.

The presentation concluded that research is needed and for this, funds are needed and for this, much greater public support for rodent welfare would be helpful. In the meantime James offered some guiding principles for delegates to take away:

*“In tackling problems caused by rats and mice, those controlling rodents should respect their welfare by adhering to the following principles:*

- *affect no more animals than necessary to achieve the aim*
- *refine control methods so as to minimise unnecessary suffering (fear and pain)*

*there is nothing nonsensical or paradoxical about killing kindly. Where killing has to be done, ‘kindly’ is the right way to do it.”*

<sup>7</sup> Available at: [www.ufaw.org.uk](http://www.ufaw.org.uk)

Clearly, the efforts to kill unwelcome wild animals, as addressed in James Kirkwood’s presentation, contrast sharply with our efforts to help wild animals that we value (such as the dolphin which got stuck in the Thames) but helping to rehabilitate animals has welfare consequences too. This was the topic of the last presentation, by Dr Andrew Kelly, Manager of the RSPCA Stapeley Grange Wildlife Centre, who addressed the extent to which our well intentioned efforts to rehabilitate injured animals back into the wild can be ethically and practically justified.

### **Animal welfare, ethics and wildlife rehabilitation**

Dr Andrew Kelly, RSPCA, Stapeley Grange Wildlife Centre, [www.rspca.org.uk](http://www.rspca.org.uk)

Wildlife Rehabilitation, is defined by the International Wildlife Rehabilitation Council (2005) as *‘the managed process whereby a displaced, sick, injured or orphaned wild animal regains the health and skills it requires to function normally and live self-sufficiently in the wild’*. Andrew explained the numbers of animals affected; the problems of mortality rates and the difficulties in determining whether an individual animal could be successfully treated and subsequently rehabilitated. The importance of assessing each individual animal to predict the likelihood of successful rehabilitation was stressed.

UK wildlife rehabilitation centres (estimated to be more than 650) are dealing with an estimated 100,000+ wildlife casualties each year. This work is unregulated, it has no governing body and there is no requirement for formal training. Consequently, there is little scientific basis for the work and poor quality data about what is being achieved; it seems that release is taken as the measure for success by most rehabilitators. This has obvious welfare implications for the animals being cared for. Euthanasia is often seen as a failure. However, the RSPCA wildlife centres see euthanasia as an important welfare tool and only attempt to rehabilitate wildlife casualties if there is a good likelihood of release. Those animals not fit to be released are euthanased on welfare grounds to prevent further suffering.

In addition, the RSPCA wildlife centres' approach is more concerned with what happens to rehabilitated wildlife following release and efforts are being made to prepare animals for release and monitor them post-release so that the success of wildlife rehabilitation can be quantified to enable the organisation to target those individuals and/or species where the prognosis is good.

The work being undertaken with various wild species was detailed to demonstrate specific difficulties being encountered and the very different approaches required. In terms of monitoring, a variety of methods are utilised to suit different species, these include radio-tracking; satellite tracking; ring recoveries; microchip and tattoo identification. Recent studies by the RSPCA wildlife centres have shown good post-release survival in several species including pipistrelle bats<sup>8</sup>, tawny owls<sup>9</sup> and polecats<sup>10</sup>.



Pipistrelle bat showing aluminium ring.

Radio-transmitters weighing 0.35g have been used to demonstrate that hand-reared pipistrelle bats survive well following release. The transmitters are attached using a bio-degradable glue and will fall off after a few weeks.

Anaesthetised polecat showing 15g radio-transmitter attached to a collar.

The collar is designed to fall off after a few months.



*Images courtesy of RSPCA*

To conclude, the major factors to be considered were summarised as our responsibility to:

- reduce or eliminate suffering;
- prepare for release;
- assess post-release survival;
- consider welfare implications and conservation value;
- evaluate, publicise and educate; and
- to be accountable and scientific.

No insignificant task!

<sup>8</sup> Kelly, A., Goodwin, S, Grogan A and Mathews, F (2008). Post-release survival of hand-reared pipistrelle bats (*Pipistrellus* spp). *Animal Welfare*, 17, 375-382.

<sup>9</sup> Leighton, K., Chilvers, D., Charles, A. and Kelly, A. (2008). Post-release survival of hand-reared tawny owls (*Strix aluco*) based on radio tracking and band return data. *Animal Welfare* 17, 207-214.

<sup>10</sup> Kelly, A., Scrivens R and Grogan A (2008). The post-release survival of orphaned polecats (*Mustela putorius*) reared in captivity at a wildlife rehabilitation centre in England. In Preparation.

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