

Protecting experimental animals

SIR —Christine Stevens, president of the Animal Welfare League, presents (*Nature* 27 September, p.295) a convincing case that some animals are being abused in medical research. One can only sympathize with the animals and feel indignant at those persons who are involved. Her remedy, however, which is to have new laws enacted, when the problem according to her, is the failure of enforcement of laws already on the books, appears to be wide of the mark. If Mrs Stevens wishes to rally support for her concerns, there are steps she could take which would help breach the barrier between animal welfare groups and the public, including those engaged in animal research. These animal welfare groups should: (1) state unequivocally that they recognize the necessity for some types of animal experimentation and cite specific areas of research that they support; (2) advocate legislation to provide improved care of animals and better supervision of facilities only if the laws contain provisions to pay for the extra expenses involved. At present, the added costs come from the already constricted funds available for research. There is a widespread suspicion that the real aim of such legislation is to further reduce all animal research. It would be simple to disarm this suspicion if it is not warranted, and (3) actively support the availability of a small percentage of unclaimed stray animals for approved research in accredited and supervised laboratories.

Unless such simple steps are taken and acted upon with sincerity, the public can only conclude that the animal welfare groups do not approve of the development of procedures such as the coronary by-pass operation, advances in microsurgery and other attacks on problems which afflict human beings. The decision that animals should be used in research for the benefit of mankind was not made lightly. However, just as the decision that stray animals must be removed from the city streets and destroyed each year involved the searching of our consciences, there are also situations, such as the need for animal research, which cannot be avoided. It is in the power of Mrs Stevens and groups concerned with animal welfare to take the few steps suggested above to the betterment of animals as well as mankind.

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SIR — David Britt, in his Commentary on ethical committees for animal experimentation (*Nature* 11 October, p.503), suggested that some major animal welfare groups in Britain could be relied on to participate in any initiatives to establish these committees. We at UFAW (Universities Federation for Animal Welfare) have for

several years favoured the establishment of local committees to look at the practical and ethical problems raised by proposed investigations involving animals. (See UFAW's evidence to the Select Committee on the Laboratory Animals Protection Bill (House of Lords), Vol. 2, 1980.) Some ethical functions may already be carried out by research planning committees where these exist. Whether an existing committee is used or a new one is set up, the terms of reference should include consideration of the following: (1) The likelihood of the project achieving its declared purpose. (2) The suitability of the type of animals proposed for use. (3) The proposed use of anaesthesia and analgesia. (4) Ways in which the use of living animals could be reduced or avoided. (5) The competence of the people available to carry out the proposed techniques. (6) The suitability of the facilities available for after-care. (7) Whether, if pain or suffering is likely, the result being sought justifies the use of living animals.

The government's recent White Paper on *Scientific Procedures on Living Animals* proposed a system for licensing projects which requires a sponsor to give an opinion on certain of these questions. We suggest that it would of great benefit to the sponsor as well as to the applicant and to the Home Office Inspector if proposed projects could be discussed at an early stage by a local review committee, before being submitted to the sponsor.

We agree with Dr Britt that the workload of such a committee could, if necessary, be reduced if it were required to investigate in depth only those projects likely to cause more than trivial pain or suffering. We also agree that no useful purpose would be served by the presence of a convinced opponent of animal research. Any lay representative should have an open mind on the subject. It would be up to the proposer to prove the worth of the project.

The meeting held by the Liverpool Animal Ethical Group in October, referred to by Dr Britt, was most successful. When the ideas put forward have been published, the initiative should then be taken up by the scientific community in general and by the universities in particular.

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Seascale and cancer

SIR — Andrew Pomiankowski (*Nature* 13 September, p.100) draws attention to the work of Craft, Openshaw and Birch¹. This epidemiological study examines the incidence of diagnosed lymphoid malignancy in children under the age of 15 within the 675 census wards of the northern

region, during the period 1968 to 1982. Pomiankowski points out that, in this study, the wards are ranked in order of descending Poisson probability, and that the Seascale ward is ranked first (with a probability of occurring through chance of about 1 in 7,500), whereas in the report of Sir Douglas Black² the wards are ranked in order of descending incidence rate, in which the Seascale ward is ranked third (with a rate of 9.73 per 1,000 compared with a regional rate of 0.61 per 1,000). These statistics are based upon 4 cases in a sample of 411 children.

I agree that ranking according to descending Poisson probability is the more statistically appropriate procedure for indicating the significance of an incidence rate in a ward. However, I would question whether the inference that the Seascale ward is thus "unique" is justified. Craft *et al.* point out that: "For other varieties of childhood cancer there is a similar spread of 'highly ranked', but different, wards throughout the region". Indeed, according to Table 2.18 of the Black Report, which gives the ward incidence rates of all childhood malignancies, there is a ward (not Seascale) with an incidence rate having a probability of occurring by chance of about 1 in 3,000 if sampled from a Poisson distribution. Thus the pattern of distribution of childhood lymphoid malignancies in the region would not appear to be markedly different from that of other malignancies.

The results of the analysis of Craft *et al.* also show that Seascale is the only ward in western Cumbria with a childhood lymphoid malignancy rate significantly higher (at the 0.05 level) than the regional mean rate. If a causal relationship is being suggested between excess childhood lymphoid malignancies and an increased radiation exposure of individuals due to the operations of the Sellafield site, then it might be expected that the environmental distributions of discharged radionuclides³ would give rise to higher leukaemia rates in more than just one local ward of the area.

However, the other data in the Black Report do indicate that there are complicating factors in the accurate interpretation of leukaemia incidence, such as length of analysis period, the age range of relevance, and time resident in the district. As pointed out in the report, further epidemiological and radiological studies are clearly needed. Meanwhile, caution is required in drawing conclusions about the role of radiation in the aetiology of childhood lymphoid malignancies in West Cumbria.

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1. Craft, A.W., Openshaw, S. & Birch, J. *Lancet* II, 96-97 (1984).
2. Report of the Independent Advisory Group *Investigation of the Possible Increased Incidence of Cancer in West Cumbria* (HMSO, London, 1984).
3. Cambray, R.S. *et al. Studies of Environmental Radioactivity in Cumbria* AERE Harwell, UKAEA, (1980-82).