

Numbers of lab animals questioned

Sir— The report on US laboratory animal populations¹ contains the surprising assertion that there is an increasing use of animals in research in the United States and that lack of laboratory animal space is threatening the existence of valuable disease models. The proposed remedy includes an infusion of money to expand laboratory animal space.

Such US data as are available indicate that laboratory animal use is, in general, declining. It may be declining as dramatically as it has in Great Britain (more than a 50% decline since 1975), the Netherlands (50% since 1978), Switzerland (75% since 1983) or Germany (35% since 1989). Although the US data are incomplete because mice and rats are not tallied, despite making up 90% or so of the laboratory animals used, the annual report of dog, cat, primate, hamster, guinea pig and rabbit use shows that use of these six species has declined by about 40% since 1976. A report on laboratory animal use by the Department of Defense found that rat use declined by 49% and mouse use by 28% from 1983 to 1991 (ref. 2).

Another study pointed out that, among 20 commercial laboratories providing such data in their annual reports, rat and mouse use had declined by 39% from 1986 to 1994. Rat and mouse use at the National Institutes

of Health (NIH) fluctuated between 1986 and 1993, but mouse use was highest in 1989 (at around 450,000) and then declined to 300,000 in 1991 before rising again to about 380,000 in 1993. Rat use declined slowly but steadily over the same period³. A 1966 report notes that in 1965 NIH used 670,000 mice and 163,000 rats⁴.

Although the available data also indicate that the use of mice (especially in the development of disease models using transgenic and knockout technology) has increased steadily over the past five to ten years, the claim that animal use in general is rising or that the lack of animal holding capacity has reached a crisis is not supported by either the data or by my personal experience of the space availability at four research institutions in the northeast United States from 1984 to 1997. Of course, if investigators now wish to set up facilities to maintain breeding colonies of new mouse models of human disease, then competition for animal space may well develop. Most American institutions are not set up to handle *in situ* breeding and colony maintenance because they usually purchase animals as needed from commercial suppliers.

The trends in biomedical research for the past 20 years have been away from animal use towards molecular and cellular

investigation. The excitement about knockout and transgenic techniques may result in a reversal of the worldwide downward trend in laboratory animal use, but such a reversal is likely to be temporary. Like Sir Peter Medawar in 1969, we look to a future where our growing knowledge of biology — obtained through both animal and increasingly non-animal research — will “provide us with the knowledge that will make it possible for us, one day, to dispense with the use of [animals] altogether”⁵.

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1. Wadman, M. *Nature* **391**, 623 (1998).
2. Weichbrod, R. (PhD Thesis, Walden University Institute of Advanced Studies, 1993).
3. Davis, C. *Animal Use Trends in the United States, 1986–1994* (WARDS, 8150 Leesburg Pike, Vienna, Virginia, 1996).
4. *The Care and Management of Laboratory Animals Used in Programs of the Department of Health, Education and Welfare* (Division of Operations Analysis, Office of the Comptroller, DHEW, 1966).
5. Medawar, P. B. *The Hope of Progress* (Methuen, London, 1972).

● The author's disagreement is with the findings of the US National Research Council, not with our report of those findings. — Editor, *Nature*.

Whither whaling?

Sir— A number of parties to the International Whaling Commission (IWC) met in Antigua on 3–5 February to consider a plan which, its supporters suggest, could end the existing stalemate between pro- and anti-whalers. Despite the moratorium on commercial whaling agreed in 1982, Japan still takes whales under the guise of scientific research, and Norway continues to hunt using a formal objection to the moratorium. Their combined annual take is more than 1,000 minke whales.

The whalers were invited to phase out their whaling and agree to an international trade ban. In exchange, they were offered IWC-endorsed quotas in their domestic waters. Although the rationale for such a compromise has been outlined elsewhere^{1,2}, many conservation groups remained concerned that the deal would end the moratorium, strongly signalling that commercial whaling was again internationally approved. But, although the issue remains on the agenda for the IWC meeting in May³, it seems that the whalers themselves have rejected the compromise. Arguments that coastal whaling

communities deserved quotas to alleviate hardship seem to have lost out to their desire for widespread whaling and trade, appearing to confirm that their motives are purely commercial.

The IWC Scientific Committee is making assessments of whale stocks that will lead to theoretical quotas for various species (even though such quotas have been unilaterally made a reality by Norway for North Atlantic whales). Scientific support for sustainable use also influences the Convention on International Trade in Endangered Species (CITES). At its last meeting, those keen to remove existing trade restrictions on minke whales were only narrowly defeated.

Commercial whaling, however, meets no pressing human need and — however good the modelling — subjects whale populations to unnecessary risk. Baleen whales are long-lived marine predators with relatively low reproductive capacity and tend to make long annual migrations. They may be especially vulnerable to environmental perturbations⁴.

Furthermore, an emphasis on lethal sustainable use may itself help to generate new markets and trade. This already seems

to be the case for caimans⁵ and elephants; the recent CITES decision to resume trade seems to have led to increased poaching. Indeed, several Caribbean states announced in Antigua their wish to start whaling and, on 26 February, three humpback whales were harpooned by aboriginal whalers from Bequia, Grenadines. (The calf was struck first and used alive to lure its mother; a male escort was struck and lost.)

In the light of these recent events, we should like to repeat our call for the establishment of a global whale sanctuary — to protect whales from direct takes in all maritime waters — and seek the support of the scientific community in this endeavour.

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1. Gambell, R. in *Whales, Seals, Fish and Man* (eds. Blix, A. S. et al.) 699–708 (Elsevier Science, 1995).
2. Knauss, J. A. *Ocean Dev. Int. Law* **28**, 79–87 (1997).
3. IWC Chairman's Consultation with Commissioners, Antigua, 3–5 February 1998 (IWC press release).
4. Simmonds, M. P. & Hutchinson, J. D. *The Conservation of Whales and Dolphins — Science & Practice* (Wiley, Chichester, 1996).
5. Brazaitis, P., Watanabe, M. E. & Amato, G. *Sci. Am.* **278**, 70–76 (1998).