Chapter 11

THE WELFARE OF LABORATORY DOGS

Robert Hubrecht\(^1\) and Anthony C Buckwell\(^2\)

\(^1\)Universities Federation for Animal Welfare, Wheathampstead, Hertfordshire, and
\(^2\)Division of Biomedical Services, University of Leicester, Leicester, United Kingdom

1. INTRODUCTION

In this chapter we aim to provide a concise introduction to the care of dogs bred for and used in research, paying particular attention to the manner in which health, and welfare, may be enhanced and maintained, and to how an integrated management system should provide for the dogs’ behavioural as well as physiological requirements.

It may be also be useful for readers to note that there are two recent, but at the time of writing, ongoing reviews of dog housing. The first, part of the revision of Appendix A of the European Convention ETS 123 (Draft proposals) is aimed at drawing up recommendations which, while in themselves not binding, are likely to have an impact on national legislation. As part of this process a review of the literature underlying the recommendations has been carried out and it is intended that this will be published at some stage (Group of experts (cats, dogs and ferrets), to be published). The second is the 8th publication in a series by the BVAAWF/FRAME/RSPCA/UFAW joint working group on refinement (Prescott et al. in preparation). This document comprehensively reviews refinements in all aspects of laboratory dog husbandry and use, drawing on scientific knowledge and experience with the aim of promoting the spread of best practice.

The function of laboratory housing is to keep animals in conditions that meet their needs, and to provide a practical, standardised environment to reduce experimental variability. It is probably the case that neither of these two aims has been met in the past. Although husbandry conditions are...
normally, although not always, held relatively constant within any one institution, there has always been variability in housing conditions between institutions. For example, within the UK, pen housing for pairs of dogs has been standard for many years, but cages as well as pens have continued to be used in the US and in some mainland European countries. For those interested in improving laboratory dog welfare, this diversity actually makes it easier to introduce improvements as given the fact that there are existing variations in structures of pens, it becomes less of an issue for other laboratories to consider making changes.

Housing systems for laboratory dogs are currently going through something of a revolution in the UK, and the advances that have been made in terms of social housing and enrichment are beginning to have an impact internationally. The sorts of barren enclosures described by Hubrecht (Hubrecht 1995a) are becoming rarer but old-style dog-housing is still in existence and this can cause problems for managers attempting to provide a good housing regime for their dogs. The lesson to be learnt here is that traditional methods of pen construction, using substantial materials, can make it difficult to introduce innovative ideas during the lifetime of the building. However, as old dog accommodation reaches the end of its life and new kennels are built it then becomes possible to implement real improvements in dog welfare. To do this without repeating the errors of the past, it is essential to fully consider the natural history of the dog, to understand its nature and biology and to take full account of current best practices. Moreover, because our knowledge of dogs’ needs will continue to improve, their accommodation should be designed so that it is possible to incorporate new ideas without having to make expensive changes to the structure of the building. Flexible designs are the key to ensuring that this is possible.

2. BIOLOGY AND BEHAVIOURAL NEEDS

2.1 Origins and natural behaviour of the dog

The dog’s biology and hence its needs have been moulded by both evolution and through natural selection. The archaeological evidence suggests that dogs have been domesticated for at least 14,000 years (Clutton-Brock 1995). However, analysis of mitochondrial DNA indicates that their origins might be much older (Vila et al. 1997). It has generally been accepted that dogs are derived from a lupine ancestor, most likely to be the Asiatic wolf Canis lupus pallipes, although Koler-Matznick (2002) takes a different view and argues that the dog lineage is separate to that of the wolf.