

Preface

Alternatives to Animal Testing is a topic which has attracted much public interest and continues to be of concern not only to those professionally involved with chemicals that present a hazard to human health but also to the wider public. All the contributors to this volume are experts in the field and their articles are authoritative and detailed, with appropriate reference to the extensive literature on the subject. However, they also have written for non-experts with a general interest in discovering what progress has been made in applying the three Rs: reducing the use of animals, refinement of procedures to reduce pain and distress, and replacement of animals with alternative tests.

The volume begins with a general overview of the safety evaluation of chemicals, written by Paul Illing who is an independent consultant and an honorary lecturer at the University of Manchester. His chapter examines the context in which toxicological risk assessment is undertaken for regulatory purposes. The next two chapters, on 'international validation and barriers to the validation of alternative tests' and on '*in vitro* testing for endocrine disruptors' are written by Michael Balls and Robert Combes, respectively, both of whom are at the Fund for the Replacement of Animals in Medical Experiments (FRAME). Although much progress has been made in using computational methods and molecular and cell biological methods to progressively replace animal testing, all new tests must be validated before they can be accepted into regulatory practice and the problems remain significant. Endocrine disrupting chemicals were the subject of an earlier volume in this series (Vol.12, published in 1999) and much of that material is brought up to date here in the context of an assessment of non-animal test methods.

Intelligent approaches to safety evaluation of chemicals are examined in Chapter 4 by Derek Knight, who is the Director of Regulatory Affairs at Safepharm Laboratories Ltd. He proposes a tiered approach to safety evaluation and testing which aims to inform commercial decisions on what to prioritise: minimising the cost, reducing the time to market, or achieving regulatory compliance for new chemicals. Finally, insights into the way in which a major manufacturer of cosmetic and personal care products is dealing with the relevant regulatory framework are provided by Carl Westmoreland's chapter on alternative tests and the 7th amendment to the EU Cosmetics Directive.

This volume of issues in Environmental Science and Technology provides an important statement of the current state of development of alternatives to animal testing of chemicals. It details the regulatory environment and charts the progress made towards the goal of reducing the use of experimental animals while improving our understanding of the health risks associated with chemicals. The volume will be of particular interest to those involved in the development and introduction of new

chemicals, to those concerned with regulatory controls such as REACH and the Cosmetics Directive, and to all with a concern for animal welfare.

Ronald E. Hester

Roy M. Harrison