

Animal models are an indispensable part in understanding the human musculoskeletal system and its diseases. Research on animals is, however, an expensive and morally sensitive area, so that a considerate and efficient use of animals should guide this kind of research. It turns out that several obstacles impede this goal.

First, there seems to be considerable uncertainty on what animal models are most suitable for studying which human conditions and diseases of the musculoskeletal system. The fact that diseases of the human musculoskeletal system frequently do not match to identical or even only similar diseases in animals draws attention to the need of careful considering the selection of animal models for studying human diseases.

Second and connected to the first point, the coordination of research efforts between the disciplines of human medicine and veterinary medicine could be improved. The gap between on the one hand the research questions of orthopaedics and traumatology and on the other hand the know-how of veterinarians concerning animal models sometimes leads to a considerable loss in effectiveness of musculoskeletal research.

Third, the standards for performing musculoskeletal research in animals vary widely in Europe and beyond. Apart from the risk of performing research and developing products that are legally accepted in one country but may cause prosecution in another, this variety of guidelines poses a moral problem: Is it acceptable that the moral boundaries of using animals in research do differ widely across countries – even those that belong to the same culture group as e.g. the European countries?

The meeting will convene a relatively small group of experts in order to enable an intensive goal-oriented discussion on the above topics. One of the main aims of this meeting will be to determine whether there is need for further concerted action on behalf of the scientific community. Furthermore, as a result of the meeting, suitable instruments for elaborating recommendations for improving effective and morally acceptable animal research should be suggested.

2nd February 2006 Thursday

09.00 Welcome and Introduction

I. Criteria for Choosing the Suitable Animal Model

Chair: Joerg Auer

9:30-10:10 Selecting Animal Models for Biomedical Research: Practical Issues
Steven Arnoczky

10:10-10:40 In vivo Models in the Study of Mechano-Regulation of Bone Repair
Allen Goodship

10:40-11:10 Animal Models used at the AO Research Institute for evaluation of Osteosynthesis Problems
Simon Pearce

11:10-11:30 Break

11:30-12:00 Application of the “3R”-Approach in Research Involving Animals
Brigitte von Rechenberg

12:00-13:00 Discussion

13.00-14.30 Lunch Break

II. Linking the Research Interests of Human and Veterinary Medicine

Chair: Felix Thiele

14.30-15:00 Animal Models for Fracture-Studies
Lutz Claes

15.00-15.30 The Use of Animal Patients in the Validation of Research Results: “Pre-human Clinical Studies”
Joerg A. Auer

15:30-16:30 Discussion

16:30-17:00 Break

17:00-18:00 Pain Control in Experimental Animals
Jill Price

Dinner

3rd February 2006

III. The Moral Problem of Multiple Ethical Guidelines

Chair: Felix Thiele

9:00-10:00 Possibilities and Limits to the Harmonisation of National Research Guidelines
Berthold Rittberger

10:00-10:30 Break

10:30-11:30 Moral Boundaries - on the Sense and the Nonsense of an Ethical Competition
Klaus Peter Rippe

11:30-12:30 Legal Harmonisation of National Research Guidelines - Limits and Desirability
Ralf Müller-Terpitz

12:30-14:00 Lunch

14:00-15:30 Final Discussion and Formulation of Guidelines for Animal Models in Musculoskeletal Research

Speakers

Professor Dr. Steven Arnoczky
College of Veterinary Medicine, Michigan State University

Professor Dr. Joerg A. Auer
Equine Hospital, Universität Zürich

Jill Price, PhD
Equine Hospital, Universität Zürich

Professor Dr. Lutz Claes
Institut für Unfallchirurgische Forschung und Biomechanik, Universitätsklinikum Ulm

Professor Allen Goodship, PhD
Royal Veterinary College, London

Priv.-Doz. Dr. Ralf Müller-Terpitz
Institut für Öffentliches Recht, Universität Bonn

Simon Pearce
AO Research Institute, AO Foundation, Davos

Priv.-Doz. Dr. Brigitte von Rechenberg
Equine Hospital, Universität Zürich

Priv.-Doz. Dr. Klaus Peter Rippe
Ethik im Diskurs, Zürich

Professor Dr. Berthold Rittberger
Politikwissenschaft, TU Kaiserslautern

Scientific Organisation

Professor Dr. Joerg A. Auer
Equine Hospital, Universität Zürich

Dr. Felix Thiele
Europäische Akademie, Bad Neuenahr-Ahrweiler

Professor Dr. Erich Schneider
AO Research Institute, Davos

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Conference Fee: 100 CHF

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Professor Dr. Dr.h.c. Carl Friedrich Gethmann

Experimental Animal Models in Musculo-Skeletal Research

Determining the Need for a European Regulation

2 – 3 February 2006

AO Research Institute, Davos