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.

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<td>09.00 Welcome and Introduction</td>
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<td><strong>I. Criteria for Choosing the Suitable Animal Model</strong></td>
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<td>Chair: Joerg Auer</td>
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<td>9:30-10:10 Selecting Animal Models for Biomedical Research: Practical Issues</td>
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<td>10:10-10:40 In vivo Models in the Study of Mechano-Regulation of Bone Repair</td>
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<td>10:40-11:10 Animal Models used at the AO Research Institute for evaluation of Osteosynthesis Problems</td>
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<td>11:10-11:30 Break</td>
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<td>11:30-12:00 Application of the &quot;3R&quot;-Approach in Research Involving Animals</td>
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<td>12:00-13:00 Discussion</td>
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<td>13:00-14:30 Lunch Break</td>
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<td><strong>II. Linking the Research Interests of Human and Veterinary Medicine</strong></td>
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<td>Chair: Felix Thiele</td>
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<td>14.30-15:00 Animal Models for Fracture-Studies</td>
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<td>15.00-15.30 The Use of Animal Patients in the Validation of Research Results: &quot;Pre-human Clinical Studies&quot;</td>
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<td>9:00-10:00 Possibilities and Limits to the Harmonisation of National Research Guidelines</td>
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<td>10:00-10:30 Break</td>
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<td>10:30-11:30 Moral Boundaries - on the Sense and the Nonsense of an Ethical Competition</td>
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<td>11:30-12:30 Legal Harmonisation of National Research Guidelines - Limits and Desirability</td>
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<td>12:30-14:00 Lunch</td>
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<td>14:00-15:30 Final Discussion and Formulation of Guidelines for Animal Models in Musculoskeletal Research</td>
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15:30-16:30 Discussion
16:30-17:00 Break
17:00-18:00 Pain Control in Experimental Animals | Jill Price
Dinner
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

Conference Venue

AO Research Institute
Clavadelerstrasse 8
7270 Davos Platz
Switzerland
Phone: +41 (0)81 – 414 22 11
Fax: +41 (0)81 – 414 22 88
E-mail: ari@aofoundation.org
http://www.aofoundation.org/

Registration

Europäische Akademie GmbH
Wilhelmstraße 56
53474 Bad Neuenahr-Ahrweiler
Germany
Phone: +49 (0) 26 41 – 97 33 00
Fax: +49 (0) 26 41 – 97 33 20
Email: europaeische.akademie@ea-aw.de
http://www.europaeische-akademie-aw.de

Conference Fee: 100 CHF

Hotels

Davos Tourismus
Promenade 67
CH-7270 Davos
Tel. +41 (0)81 415 21 21
Fax +41 (0)81 415 21 00
info@davos.ch

Experimental Animal Models in Musculo-Skeletal Research
Determining the Need for a European Regulation

2 – 3 February 2006

AO Research Institute, Davos