

## Registration

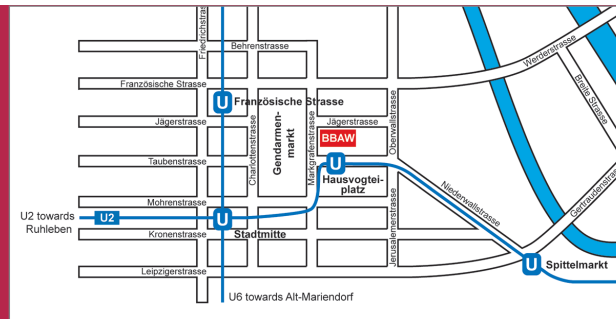
**Deadline: 3rd September, 2007**

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## Conference venue



SYMPOSIUM  
**NEW APPLICATIONS  
OF GENETIC ENGINEERING  
IN LIVESTOCK**

## Scientific Coordination

**Dr. Margret Engelhard**  
Europäische Akademie GmbH, Bad Neuenahr-Ahrweiler

**Dr. Mathias Boysen**  
AG Gentechnologiebericht, BBAW, Berlin

## Scholarship

A limited number of scholarships may be granted to students.  
Scholarship includes travel and accommodation expenses.

Please send your CV together with reasons for your application  
by 20th August to:

Dr. Margret Engelhard, [margret.engelhard@ea-aw.de](mailto:margret.engelhard@ea-aw.de)

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[www.bbaw.de](http://www.bbaw.de)

**For more information see:**

[http://veranstaltungszentrum.bbaw.de/en/directions/map\\_bbaw.pdf](http://veranstaltungszentrum.bbaw.de/en/directions/map_bbaw.pdf)

**21st–22nd September, 2007**

Berlin-Brandenburgische Akademie der  
Wissenschaften, Leibniz-Saal

## New applications of genetic engineering in livestock

Last year, the first “zoopharming” product reached market approval: it is a recombinant human protein for medical use that is produced in the milk of transgenic goats. This is only one example of upcoming applications of livestock genetic engineering. Other applications include enhancement of productivity (e.g. higher milk or meat yields), alterations of product quality (e.g. leaner meat), disease resistance (e.g. against udder inflammations), and alterations of environmental variables (e.g. reduced levels of phosphate in the faeces). Also, transgenic livestock may be used for xenotransplantation where genetic engineering is hoped to improve the animals' suitability as organ donors for humans. Currently, livestock genetic engineering is becoming increasingly feasible: the techniques to remove, modify, replace or add genes are being refined, and an increasing amount of genomic information about farm animals can be utilised.

However, while genetic engineering in livestock opens a huge range of possibilities, it also raises safety and justification concerns: does genetic engineering affect animal welfare? Is it safe and morally acceptable to apply genetic engineering to farm animals for the various purposes that are envisaged?

The symposium addresses livestock genetic engineering with an interdisciplinary panel of speakers. They will give talks on the state of the art of the technology and its applications, animal welfare considerations, and ethical aspects.

The organisers gratefully acknowledge funding obtained from the programme of the German Federal Ministry of Education and Research “Innovations- und Technikanalyse”, and from the Hermann und Elise geborene Heckmann Wentzel Stiftung.

## Friday, 21st September 2007

- 13.30 Welcome**  
Professor Dr. Dr. h.c. Carl Friedrich Gethmann  
Europäische Akademie, Bad Neuenahr-Ahrweiler,  
und BBAW, Berlin  
Professor Dr. Bernd Müller-Röber  
AG Gentechnologiebericht, BBAW, Berlin
- 14.00–16.00**
- SESSION I Genetic engineering of farm animals**  
Chair: Dr. Mathias Boysen  
AG Gentechnologiebericht, BBAW, Berlin
- Transgenic farm animals: current status and perspectives for agriculture and biomedicine*  
Professor Dr. Heiner Niemann  
Bundesforschungsanstalt für Landwirtschaft,  
Neustadt
- Novel developments in techniques to generate transgenic animals*  
Professor Dr. Louis-Marie Houdebine  
INRA, France
- 16.00–16.30** Break
- 16.30–18.30**
- SESSION II Assessing the welfare of transgenic farm animals**  
Chair: Dr. Felix Thiele  
Europäische Akademie, Bad Neuenahr-Ahrweiler
- Animal welfare perspectives on the creation of transgenic farm animals*  
Professor Dr. Adroaldo J. Zanella  
Norwegian School of Veterinary Science, Norway
- Assessing the welfare of transgenic farm animals*  
Dr. Kees G. van Reenen  
Institute for Animal Science and Health  
ID-Lelystad, The Netherlands

## Saturday, 22nd September 2007

- 8.30–9.30**
- SESSION III Ethical aspects of livestock genetic engineering**  
Chair: Kristin Hagen, Ph.D.  
Europäische Akademie, Bad Neuenahr-Ahrweiler
- Professor Dr. Matthias Kaiser  
The National Committee for Research Ethics  
in Science and Technology, Norway
- 9.30–10.30**
- SESSION IV Market development of biopharmaceuticals**  
Chair: Professor Dr. Bernd Müller-Röber  
AG Gentechnologiebericht, BBAW, Berlin
- Professor Dr. Gary Walsh  
University of Limerick, Ireland
- 10.30–11.00** Break
- 11.00–13.00**
- SESSION V Production of biopharmaceuticals in transgenic animals: zoopharming**  
Chair: Dr. Margret Engelhard  
Europäische Akademie, Bad Neuenahr-Ahrweiler
- Current developments in zoopharming*  
Professor Dr. Angelika Schnieke  
Technische Universität München
- First market approval of a zoopharming biopharmaceutical*  
Harry M. Meade, Ph.D.  
GTC Biotherapeutics Framingham, MA, USA
- 13.00** Lunch