



IETS

INTERNATIONAL EMBRYO TRANSFER SOCIETY

Program Book

January 19–22, 2013

Hannover Congress Centrum,
Hannover, Germany

PROGRAM BOOK

39TH ANNUAL CONFERENCE OF THE
INTERNATIONAL EMBRYO TRANSFER SOCIETY

THEME:

*“ADVANCES AND NEW CONCEPTS
IN THE UNDERSTANDING OF...”*



JANUARY 19–22, 2013

HANNOVER CONGRESS CENTRUM
HANNOVER, GERMANY

CO-CHAIRS OF THE SCIENTIFIC PROGRAM:
CHRISTINE WRENZYCKI AND DIMITRIOS RIZOS

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2012-2013 IETS BOARD OF GOVERNORS

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2013 ACKNOWLEDGMENTS AND PREFACE

The 39th Annual Meeting of the International Embryo Transfer Society will be held at the Hannover Congress Centrum, Hannover, Germany, from January 19 to 22, 2013. This year's program theme is Advances and New Concepts in the Understanding of... (i) follicular development, (ii) early embryonic development, (iii) uterine biology, (iv) reproductive outcome, and (v) modern reproductive biotechnologies. The theme addresses recent progress and advances in embryo transfer technologies, both with relevance for basic science as well as practical applications of modern breeding technologies.

This year's meeting includes 11 invited speakers, all recognized experts in their field, including the keynote speaker, Dr. Fuller Bazer, who will discuss the contributions of an animal scientist to understanding the biology of the uterus and pregnancy. More than 330 abstracts will be presented as posters, and we have chosen 5 to be given as oral presentations. Another 6 abstracts, representing some of the highest quality research, have been entered into the student competition. For the first time, 1 student has been chosen as a winner of the Peter W. Farin Memorial Student Travel Award.

It is obviously impossible to organize such a large event without the help of many of our society's members and colleagues, and we are indebted to all those who willingly agreed to help us in making this meeting a success. We thank the invited speakers and their co-authors for providing, on time, excellent scientific manuscripts. Special thanks go to the section editors who coordinated the abstract review process, and to so many of our colleagues for their effort and expertise in reviewing manuscripts and abstracts. We also thank Drs. Claire Ponsart and Sybrand Merton for organizing the Practitioner's Forum titled "How Can ET Praxis Find its Feet in the Age of Genomics?" and Dr. Fulvio Gandolfi for organizing the Domestic Animal Biomedical Embryology (DABE) forum titled "Natural and Induced Pluripotency in Domestic Species." Special thanks go to Dr. Heiner Niemann for arranging the pre-IETS Symposium: "Advances in Transgenic Animal Production."

The local organizing committee chaired by Dr. Heiner Niemann and involving his colleagues and student volunteers have done an outstanding job in choosing a great location and ensuring that we will have an excellent time, both scientifically and socially. We encourage all students to participate in the events organized by our student members, the Morulas, who have developed into a very active and enthusiastic group, representing the bright future of our society.

We also thank the IETS Board of Governors for their support in preparing for the 2013 Annual Conference. Our sincere appreciation is extended to Debi Seymour of FASS, executive secretary of IETS, and Dr. Tony Flint, editor-in-chief, and Caroline Hadley, publisher, of *Reproduction, Fertility and Development* for their help in the production of the conference booklets and proceedings.

This meeting would not be possible without the critical financial contributions of our sponsors, and we especially thank them for their support.

Finally, we thank you all for attending and contributing to the conference and hope that you have an exceptionally rewarding experience at the 39th Annual Conference of the IETS.

Christine Wrenzycki and Dimitrios Rizos
Program Co-Chairs

2013 RECIPIENT OF THE IETS PIONEER AWARD

JOACHIM HAHN



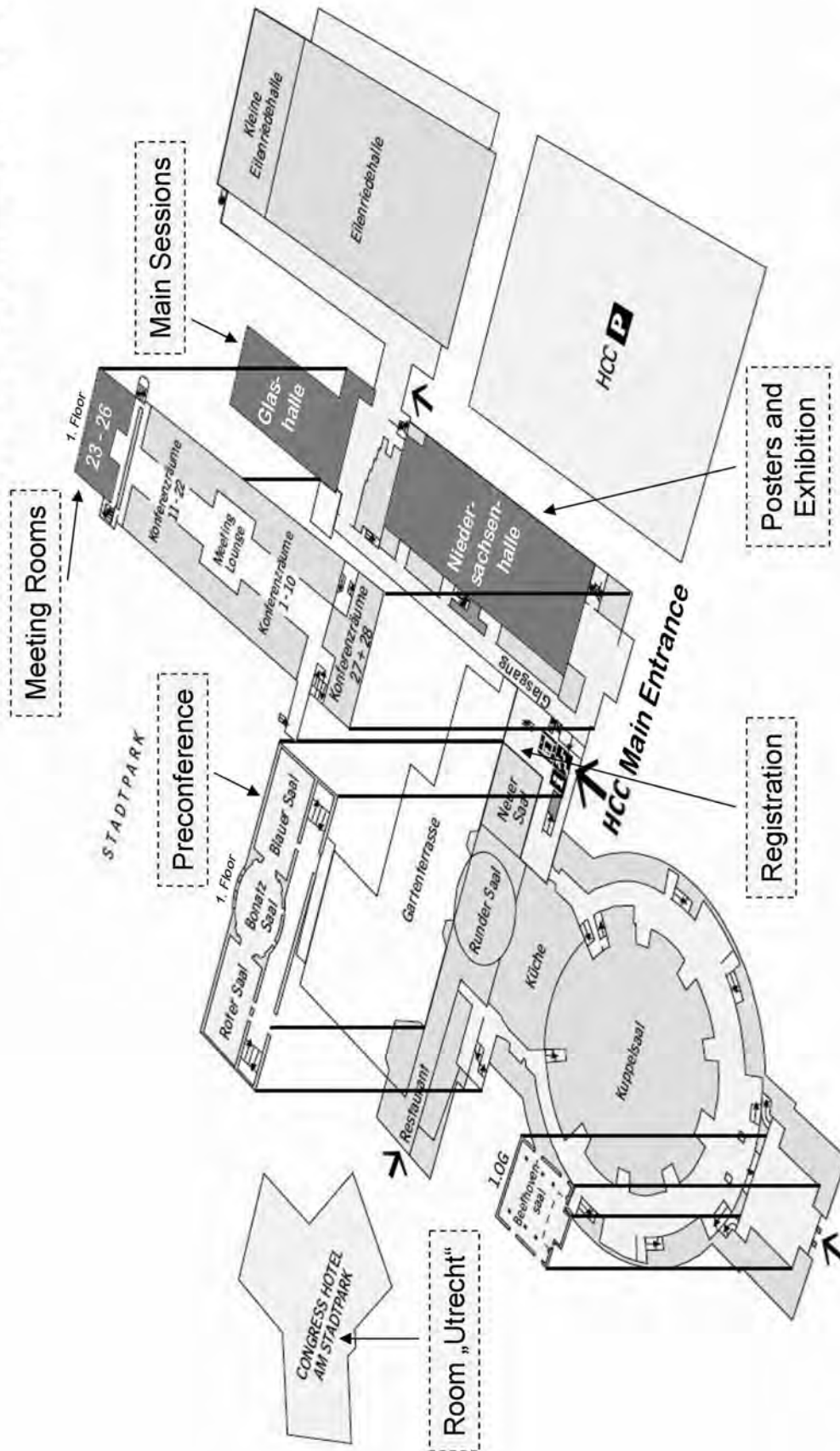
Award Presentation: Tuesday, January 22, at 15:30

PREVIOUS RECIPIENTS

- | | |
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| R. J. Mapletoft (2010) | C. R. Austin (1995) |
| S. P. Leibo (2009) | N. W. Moore (1994) |
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| R. M. Moor (1999) | L. E. Casida (1984) |
| I. Gordon (1998) | M. C. Chang (1983) |
| | R. O. Berry (1982) |

MAP OF THE VENUE

HANNOVER CONGRESS CENTRUM



Theodor-Heuss-Platz 1-3 | 30175 Hannover
 Fon 0511 8113 0 | Fax 0511 8113 429 | info@hcc.de | www.hcc.de

GENERAL INFORMATION

MEETING ROOM DIRECTORY

Main Conference Sessions	Glashalle
Exhibits	Niedersachsenhalle
Poster Displays	Niedersachsenhalle

Please see the Scientific Program for additional room assignments.

REGISTRATION DESK HOURS

The registration desk is located in the entrance hall of Hannover Congress Centrum.

Pickup of preregistration packets only

Friday, January 18 16:00–19:00

On-site registration hours

Saturday, January 19 07:00–18:00

Sunday, January 20 07:00–18:00

Monday, January 21 07:30–16:00

Tuesday, January 22 08:00–15:00

EXHIBIT INFORMATION

Niedersachsenhalle

Setup

Saturday, January 19 13:00–18:00

Exhibits Open

Sunday, January 20 08:00–17:00
19:00–20:30 (Reception)

Monday, January 21 08:30–17:00

Tuesday, January 22 08:30–13:00

Teardown

Tuesday, January 22 13:00–17:00

Details on the exhibitors can be found in the Exhibit Directory on page 62.

BADGES

As a security requirement, we request that all participants wear their conference name badges to all sessions and social functions.

CERTIFICATES OF ATTENDANCE AND PRESENTATION

If you requested a Certificate of Attendance or Certificate of Presentation with your registration, it will be included in your badge packet. If you did not request a certificate and need one, please come to the registration desk.

CURRENCY

The euro is the legal tender in Germany. Should you need to exchange your local currency, various exchange bureaus, banks, and hotels will be happy to assist you and offer competitive rates. However, most people choose to only carry small amounts of euros within Hannover and prefer to use either a credit card or debit card where possible.

MESSAGE BOARD

Any messages received for conference delegates will be posted on the message board located near the registration desk.

REFRESHMENTS

Morning and afternoon refreshments are included in your registration fee and are provided during the scheduled break times in the Exhibition area located in Niedersachsenhalle.

DINING AND ENTERTAINMENT

The gastronomic diversity of the Hannover region is great and includes a huge variety from haute cuisine to good plain cooking. It goes without saying that this city of trade fairs and congresses can offer an entire A to Z of international food specialities. Moreover, at the end of a busy day in Hannover, the party scene awakens to life. In discotheques and clubs, in pubs, cocktail bars, and all-night cafés, the rhythm is dictated by rock, house, or hip-hop. In the evening you can move in the direction of Raschplatz, where the “Osho” and the “Palo Palo” dancing palaces dominate the scene. In the “Altstadt”, the historic center, with its picturesque half-timbered houses, you will find an amazing diversity of pubs and bars to meet the demands of everybody.

A sampling of restaurants, bars, and clubs:

Restaurant Altes Rathaus (closed on Sundays)

Karmarschstr. 42, 30159 Hannover, Phone +49-511-3008040

This restaurant in the heart of historic Hannover impresses with its mixture of a cross-shaped vault and a bright courtyard covered by a modern glass roof.

Restaurant Ständige Vertretung

Friedrichswall 10, 30159 Hannover, Phone +49-511-2138690

Long live the Rhineland Republic! This restaurant serves wholesome fare and exquisite dishes from the Rhineland.

Restaurant Clichy (closed on Sundays)

Weißekreuzstr. 31, 30161 Hannover, Phone +49-511-312447

“Luxury but without all the fuss!” is the motto of this temple of French cuisine.

Restaurant Sausalitos

Osterstr. 38, 30159 Hannover, Phone +49-3530919

Tex-Mex cuisine, delicious cocktails, and a positive atmosphere. Take time off and enjoy.

Restaurant Paulaner

Prinzenstr. 1, 30159 Hannover, Phone +49-511-3681285

Typical solid Bavarian food, five types of beer, and cosy hospitality.

Brauhaus Ernst August (open from 08:00 to 05.00 every day)

Schmiedestr. 13, 30159 Hannover, Phone +49-511-365950

The historic Ernst August Brewery is the living embodiment of hospitality “Hannover style”—pub, restaurant, brewery, live club, and disco, all rolled into one.

GOP Variété-Theater

Georgstr. 36, 30159 Hannover, Phone +49-511-30186710

Artists from all over the world offer the fun and thrills of international variety with performances of spectacular acrobatics, fascinating magic and comedy – all introduced by light-hearted compering.

SERVICES AND AMENITIES

Congress Hotel am Stadtpark is a 4-star hotel situated in the city park, next to the Hannover Congress Centre. There is plenty of free parking for guests and a breakfast buffet is included with your hotel reservation.

THE PROGRAM CO-CHAIRS ACKNOWLEDGE AND THANK THE FOLLOWING PEOPLE

SECTION EDITORS

Ken Bondioli, *Student Competition*
Hiroaki Funahashi, *Artificial Insemination*
Daniel Salamone, *Cloning/Nuclear Transfer*
Teresa Mogas, *Cryopreservation*
Sergio Ledda, *Developmental Biology*
Matthew Lucy, *Early Pregnancy/ Pregnancy Recognition*
Isabelle Donnay, *Embryo Culture*
Marcelo Bertolini, *Embryo Manipulation*
Gabriel Bo, *Embryo Transfer*
Ann Van Soom, *Epidemiology/ Diseases*
Naida Loskutoff, *Exotic Species*
Roberto Sartori, *Folliculogenesis/Oogenesis*
Dawit Tesfaye, *Gene Expression*
Carmen Diez, *IVF/IVP*
Dimitrios Rizos, *Male Physiology*
Cindy Tian, *Oocyte Activation*
Tomas Samfai, *Oocyte Maturation*
Pablo Bermejo-Alvarez, *Sexing*
Giovanna Lazzari, *Sperm Injection*
Tiziana Brevini, *Stem Cells*
Peter Bols, *Superovulation*
Jorge Piedrahita, *Transgenesis*

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—Dr. Wolde, Ethiopia

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—Dr. Sanchez, USA

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PROGRAM

Thursday, January 17, 2013

12:00–18:00 IETS Board of Governors meeting (Utrecht)

Friday, January 18, 2013

08:00–18:00 IETS Board of Governors meeting (Utrecht)

09:00–18:00 HASAC Research Subcommittee meeting (Konferenzraum 25)

16:00–19:00 Registration (entrance hall of Hannover Congress Centrum)

Saturday, January 19, 2013

07:00–18:00 Registration (entrance hall of Hannover Congress Centrum)

13:00–18:00 Commercial exhibit setup (Niedersachsenhalle)

13:00–18:00 Poster setup (Niedersachsenhalle)

08:30–18:00 Preconference Symposium: “Advances in Transgenic Animal Production” (Blauer Saal)

13:30–17:00 IETS Foundation Board of Trustees meeting (Konferenzraum 23)

17:00–18:00 IETS student group (Morulas) business meeting (Konferenzraum 25)

18:30–19:30 Morulas Student Mixer (Old Town Hannover)

Sunday, January 20, 2013

06:30–08:00 Poster setup (Niedersachsenhalle)

07:00–08:30 HASAC Food Safety Subcommittee meeting (Konferenzraum 25)

07:00–08:30 IETS Foundation Education Committee meeting (Utrecht)

07:00–18:00 Registration (entrance hall of Hannover Congress Centrum)

07:30–08:30 Past Presidents’ breakfast (Konferenzraum 24)

07:30–08:30 Student competition presenters breakfast with Foundation Education Committee (Konferenzraum 23)

08:00–17:00 Commercial exhibition (Niedersachsenhalle)

08:30–08:45 Opening and welcome (Christine Wrenzycki, Dimitrios Rizos, and Heiner Niemann) (Glashalle)

Advances and New Concepts in the Understanding of . . .

Session I: Follicular Development (Glashalle)

Sponsored by Bioniche Animal Health

Session Co-Chair: Jo Leroy, University of Antwerp

Session Co-Chair: Maria Schindler, Martin-Luther-University Halle

08:45–09:30 *Regulation of anti-Müllerian hormone production in domestic animals*
Danielle Monniaux, INRA, France

09:30–10:15 *Effect of superstimulatory treatments on the expression of genes related to ovulatory capacity, oocyte competence, and embryo development in cattle*
Ciro M. Barros, University of São Paulo State, UNESP, Brazil

10:15–10:30 *Effect of duration of the growing phase of ovulatory follicles in superstimulated heifers on oocyte competence after in vitro fertilization*
F. C. F. Dias, D. Dadarwal, M. Honparkhe, G. P. Adams, R. J. Mapletoft, and J. Singh (Abstract 313)

10:30–11:00 Poster exhibit, Exhibition and coffee break (Niedersachsenhalle)

IETS Foundation Student Competition Presentations

Session Chair: Kenneth R. Bondioli, Louisiana State University

11:00 *Cumulus cells protect oocytes against potential lipotoxicity from elevated free fatty acid concentrations in follicular fluid*
H. Aardema, F. Lolicato, B. A. J. Roelen, P. L. A. M. Vos, J. B. Helms, and B. M. Gadella (Abstract 1)

11:15 *Transcriptome analysis of granulosa cells from growing dominant follicle reveals age-associated changes at the time of follicle selection in aged beef cattle*
M. I. R. Khan, F. C. F. Dias, M. A. Sirard, G. P. Adams, and J. Singh (Abstract 2)

11:30 *Oxidative stress induced changes in epigenetic modifying gene mRNA in pre-implantation in vitro bovine embryos*
C. A. Burroughs, G. L. Williamson, M. C. Golding, and C. R. Long (Abstract 3)

11:45 *Influence of a maternal diabetes mellitus type 1 on lipid and cholesterol metabolism in rabbit pre-implantation embryos*
M. Schindler, M. Pendzialek, T. Plösch, J. M. Knelangen, J. Gürke, E. Hauke, B. Fischer, and A. N. Santos (Abstract 4)

12:00 *Altered chromatin conformation in bovine spermatozoa perturbs dynamic DNA methylation in the male pronucleus after fertilization in vitro*
M. B. Rahman, M. M. Kamal, T. Rijsselaere, L. Vandaele, M. Shamsuddin, and A. Van Soom (Abstract 6)

12:15–14:00 Lunch break

12:30–14:00 IETS Board lunch with affiliate society representatives (Konferenzraum 24)

12:30–14:00 HASAC Forms and Certificates Subcommittee meeting (Konferenzraum 25)

12:30–13:30 Morulas Career Development lunch (Konferenzraum 23)

Advances and New Concepts in the Understanding of . . .

Session II: Early Embryonic Development (Glashalle)

Session Co-Chair: Eckhard Wolf, Ludwig-Maximilian-University Munich

Session Co-Chair: Hilde Aardema, Utrecht University

14:00–14:45 *Dynamic regulation of sperm interactions with the zona pellucida prior to and after fertilization*
Bart Gadella, Utrecht University, The Netherlands

14:45–15:30 *Sex-specific embryonic origin of postnatal phenotypic variability*
Alfonso Gutierrez-Adan, INIA, Madrid, Spain

15:30–15:45 *Kinetics and pattern of the first cleavage of in vitro fertilized embryo by in vivo matured oocytes and x-sorted spermatozoa in dairy cattle*
S. Matoba, S. Sugimura, H. Matsuda, Y. Aikawa, M. Ohtake, S. Kobayashi, E. Horiguchi, Y. Hashiyada, M. Nagai, and K. Imai (Abstract 236)

15:45–16:15 Poster exhibit, exhibition, and refreshment break (Niedersachsenhalle)

Advances and New Concepts in the Understanding of . . .

Session III: Uterine Biology (Glashalle)

Session Co-Chair: Trudee Fair, University College Dublin

Session Co-Chair: Mohammad B. Rahman, Ghent University

16:15–17:00 *Association between lipid metabolism and fertility in the dairy cow*
Claire Wathes, Royal Veterinary College, United Kingdom

17:00–17:45 *Hosting the preimplantation embryo—Potentials and limitations of different approaches for analyzing embryo-endometrium interactions in cattle*
Susanne Ulbrich, Technical University Munich, Weihenstephan, Germany

17:45–18:00 *Effects of embryo transfer in a larger breed on postnatal growth and glucose metabolism in horses*
P. Peugnet, A. Tarrade, M. Dahirel, D. Guillaume, L. Wimel, G. Duchamp, F. Reigner, D. Serteyn, and P. Chavatte-Palmer (Abstract 159)

18:00–19:30 Welcome reception (Niedersachsenhalle)

Monday, January 21, 2013

07:30–16:00 Registration (entrance hall of Hannover Congress Centrum)

07:30–09:30 HASAC Regulatory Subcommittee meeting (Konferenzraum 25)

08:30–17:00 Commercial exhibits and poster session (Niedersachsenhalle)

Advances and New Concepts in the Understanding of . . .

Session IV: Reproductive Outcome (Glashalle)

Session Co-Chair: Carol Keefer, University of Maryland

Session Co-Chair: Muhammad I. R. Khan, University of Saskatchewan

08:30–09:15 *Bovine luteal blood flow: Basic mechanisms and clinical relevance*
Heinrich Bollwein, Vetsuisse-Fakultät Universität Zürich, Switzerland

09:15–10:00 *Assisted reproduction techniques in the horse*
Katrin Hinrichs, Texas A&M University, USA

10:00–10:15 *Ex vivo imaging of ovarian follicles and intra-uterine spermatozoa using quantum Dots*
J. M. Feugang, H. L. Sánchez-Rodríguez, R. C. Youngblood, J. M. Greene, S. T. Willard, and P. L. Ryan (Abstract 113)

10:15–10:30 *Effect of ovulation inducing factor (OIF) on development and vascular perfusion of the ovulatory follicle and corpus luteum in llamas*
C. Ulloa-Leal, O. Bogle, G. P. Adams, and M. Ratto (Abstract 182)

- 10:30–12:30 Poster Session I and exhibition (Niedersachsenhalle)
- 10:30–11:00 Coffee break (Niedersachsenhalle)
- 12:30–14:00 Lunch break
- 12:30–14:00 IETS Data Retrieval Committee meeting (Konferenzraum 25)
- 12:30–14:00 Exhibitors' luncheon with the IETS Board (Konferenzraum 24)
- 12:30–13:30 Morulas Mentors Luncheon (Konferenzraum 23)

Advances and New Concepts in the Understanding of . . .

Session V: Modern Reproductive Biotechnologies (Glashalle)

Session Co-Chair: Paul Verma, Monash University

Session Co-Chair: Chelsie A. Burroughs, Texas A&M University

- 14:00–14:45 *Early development of the porcine embryo: The importance of cell signaling in development of pluripotent cell lines*
Vanessa Hall, University of Copenhagen, Copenhagen, Denmark
- 14:45–15:30 *Pluripotent cells in farm animals: State of the art and future perspectives*
Monika Nowak-Imialek, Institut für Nutztiergenetik, Mariensee, Germany

Peter W. Farin Memorial Student Travel Award Winner

- 15:30–15:45 *Whole-ovary cryopreservation: A direct comparison of conventional and directional freezing*
S. Maffei, J. R. V. Silva, M. Hanenberg, G. Pennarossa, T. A. L. Brevini, A. Aray, and F. Gandolfi (Abstract 68)
- 15:45–16:30 Poster exhibit, exhibition, and refreshment break (Niedersachsenhalle)
- 16:30–17:00 IETS Distinguished Service Award Presentation (Glashalle)
- 17:00–18:00 IETS Annual Business Meeting (Glashalle)
- 18:00–18:30 Domestic Animal Biomedical Embryology (DABE) Open Meeting (Glashalle)
- 18:30–20:00 Companion Animal, Non-Domestic and Endangered Species (CANDES) Open Meeting (Glashalle)
- 18:30–20:00 HASAC Open Meeting (Konferenzraum 26)

Tuesday, January 22, 2013

- 07:00–08:30 Organizational meeting of the IETS Board of Governors (Utrecht)
- 08:00–15:00 Registration (entrance hall of Hannover Congress Centrum)
- 08:30–13:00 Commercial exhibits and posters (Niedersachsenhalle)

Practitioners' Forum (Glashalle)

08:30–10:30 *How Can ET Praxis Find its Feet in the Age of Genomics?*

Sponsored by Agtech Inc.

Chairs: Claire Ponsart and Sybrand Merton

08:30–08:50 *Introduction: Where do we stand in 2020 (embryo technologies and breeding)?*
Claire Ponsart and Sybrand Merton

08:50–09:00 Questions and discussion

Visions:

09:00–09:10 Europe: Frank Becker (President, AETE)

09:10–09:20 North America

09:20–09:30 South America: Pietro Sampaio Baruselli (President, SBTE)

09:30–09:40 Asia: Osamu Dochi (Rakuno Gakuen University, Japan)

09:40–09:50 Oceania: John Hepburn (ABS, New Zealand)

09:50–10:30 General discussion

DABE Forum (Konferenzraum 25)

08:30–10:30 *Natural and Induced Pluripotency in Domestic Species*

Chair: Fulvio Gandolfi

08:30–09:00 *The exceptional epiblast: Pluripotency signalling in non-murine species*
Bjorn Oback, AgResearch, Ruakura Research Centre, New Zealand

09:00–09:15 *Proteomic analysis of the blastocoel fluid and remaining cells of bovine blastocysts*
Pernille Linnert Jensen, Laboratory of Reproductive Biology, University Hospital of Copenhagen, Denmark and ORIGIO a/s, Maaloev, Denmark

09:15–09:30 *Identification of 3i target molecules and their involvement in porcine pluripotency networks*
Tiziana A. L. Brevini, Stem Cell Research Centre, UNISTEM, Università degli Studi di Milano, Italy

09:30–10:00 *Efficient reprogramming to pluripotency by synthetic mRNA*
Paul J. Verma, South Australian Research and Development Institute, Turretfield Research Centre, Australia

10:00–10:15 *Stimulation of endogenous OCT4 in bovine fetal fibroblasts with synthetic mRNA transfection*
Tricia L. Adams, Louisiana State University Agricultural Center, USA

10:15–10:30 *Tet1 plays important roles in maintaining characterizations of porcine induced pluripotent stem cells*
Ziyi Li, Jilin University, China

10:30–12:00 Poster Session II and exhibition (Niedersachsenhalle)

- 10:30–11:00 Refreshment break (Niedersachsenhalle)
- 12:30–13:30 11th IETS Annual Fun Run (Stadtpark)
- 13:30–15:00 Lunch break
- 13:30–14:30 Organizational lunch meeting of the IETS Foundation (Konferenzraum 23)
- 13:30–14:30 2013, 2014, 2015 IETS Program Committees Lunch (Konferenzraum 24)
- 13:30–18:00 Commercial exhibit teardown (Niedersachsenhalle)
- 15:00–15:30 IETS Foundation Student Competition Awards, CANDES, DABE, and HASAC Updates (Glashalle)
- 15:30–16:00 IETS Pioneer Award Presentation (Glashalle)

Session VI: Keynote Address (Glashalle)

Session Co-Chair: Christine Wrenzycki, Justus-Liebig-University Giessen

Session Co-Chair: Dimitrios Rizos, INIA

- 16:00–16:45 *Contributions of an animal scientist to understanding biology of the uterus and pregnancy*
Fuller Bazer, Texas A&M University, USA
- 16:45–17:00 Closing ceremony (Glashalle)
- 17:00–19:00 Poster tear down
- 19:30–01:00 Closing party (Yukon Market Hall, Hannover Adventure Zoo)

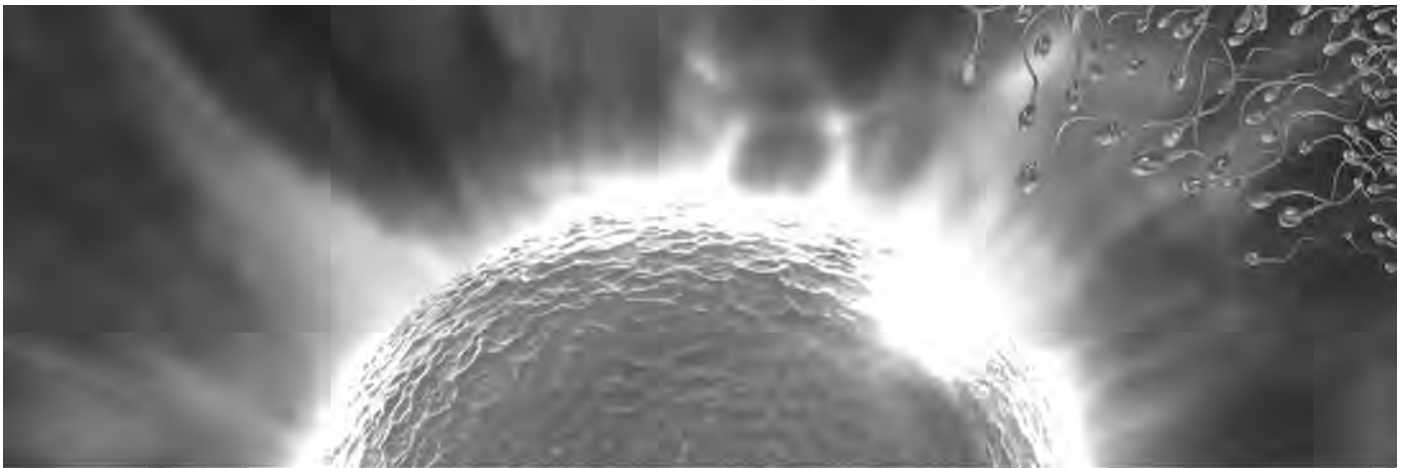


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POSTER SESSIONS

Location

Posters are located in Niedersachsenhalle of the Hannover Congress Centrum (see map on page 6.)

Poster Numbers

Posters are identified by the number corresponding to the abstract number in *Reproduction, Fertility and Development* 2013; 25 (1). Numbering of the posters begins at 1 and ends at 337.

Setup

Posters can be put up from 13:00 to 18:00 on Saturday, January 19, 2013, and from 06:30 to 08:00 on Sunday, January 20, 2013. All posters must remain up throughout the meeting. Authors of posters that are not put up by 08:00 on Sunday will be reported to the IETS President for possible disciplinary action.

Poster Session I

Presentations by authors of odd-numbered abstracts (i.e., 7, 9, 11, etc.) in *Reproduction, Fertility and Development* 2013; 25 (1) and the Student Competition finalist poster presentations will take place Monday, January 21, 2013, from 10:30 to 12:30.

Poster Session II

Presentations by authors of even-numbered abstracts (i.e., 8, 10, 12, etc.) in *Reproduction, Fertility and Development* 2013; 25 (1) will take place Tuesday, January 22, 2013, from 10:30 to 12:00.

Teardown

Poster teardown must take place from 17:00 to 19:00 Tuesday afternoon (January 22, 2013). Posters that are not taken down by 19:00 on Tuesday will be taken down and discarded.

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1. Source: Charalut et al. Intravaginal progesterone insert for synchronisation returns to natural of previously inseminated dairy cows, (IS 2012 06 2019 2049) Use medicine responsibly. www.pfizer.co.uk/medicines/cidr. Date of preparation 09/11.

POSTER SESSION ORDER BY TOPIC

Poster Number = abstract number in *Reproduction, Fertility and Development* 2013; 25(1)

*STUDENT COMPETITION

- 1 CUMULUS CELLS PROTECT OOCYTES AGAINST POTENTIAL LIPOTOXICITY FROM ELEVATED FREE FATTY ACID CONCENTRATIONS IN FOLLICULAR FLUID
H. Aardema, F. Lolicato, B. A. J. Roelen, P. L. A. M. Vos, J. B. Helms, and B. M. Gadella
- 2 TRANSCRIPTOME ANALYSIS OF GRANULOSA CELLS FROM GROWING DOMINANT FOLLICLE REVEALS AGE-ASSOCIATED CHANGES AT THE TIME OF FOLLICLE SELECTION IN AGED BEEF CATTLE
M. I. R. Khan, F. C. F. Dias, M. A. Sirard, G. P. Adams, and J. Singh
- 3 OXIDATIVE STRESS INDUCED CHANGES IN EPIGENETIC MODIFYING GENE mRNA IN PRE-IMPLANTATION *IN VITRO* BOVINE EMBRYOS
C. A. Burroughs, G. L. Williamson, M. C. Golding, and C. R. Long
- 4 INFLUENCE OF A MATERNAL DIABETES MELLITUS TYPE 1 ON LIPID AND CHOLESTERIN METABOLISM IN RABBIT PRE-IMPLANTATION EMBRYOS
M. Schindler, M. Pendzialek, T. Plösch, J. M. Knelangen, J. Gürke, E. Hauke, B. Fischer, and A. Navarrete Santos
- 5 THE EFFECT OF ELEVATED NONESTERIFIED FATTY ACID CONCENTRATIONS ON MURINE *IN VITRO* FOLLICULOGENESIS AND SUBSEQUENT OOCYTE DEVELOPMENTAL COMPETENCE
S. Valckx, V. Van Hoeck, L. Jordaens, E. Merckx, R. Cortvrindt, P. E. J. Bols, and J. L. M. R. Leroy
- 6 ALTERED CHROMATIN CONFORMATION IN BOVINE SPERMATOZOA PERTURBS DYNAMIC DNA METHYLATION IN THE MALE PRONUCLEUS AFTER FERTILIZATION *IN VITRO*
M. B. Rahman, M. M. Kamal, T. Rijsselaere, L. Vandaele, M. Shamsuddin, and A. Van Soom

ARTIFICIAL INSEMINATION

- 7 LAPAROSCOPIC INTRAUTERINE AND INTRAPERITONEAL INSEMINATION IN FAT-TAILED EWES
A Niasari-Naslaji, V Akbarinejad, K Hoseinipajoo, G Akbari, S Gharibi, and H Arabha
- 8 DURATION OF ESTRUS AND TIME OF OVULATION IN SUPEROVULATED SANTA INÊS EWES
J. T. M. Lima, J. F. Fonseca, L. V. Esteves, A. B. V. Peneiras, M. S. D. Lima, and F. Z. Brandão
- 9 SINGLE FIXED-TIME LAPAROSCOPIC INTRAUTERINE INSEMINATION IN PIGS TO PRODUCE LOW-DIVERSE EMBRYOS
K.-P. Brüssow, H. Torner, and J. Rátky
- 10 SPERM BINDING TO PORCINE UTERINE EPITHELIAL CELLS MIGHT BE LECTIN MEDIATED
A. Bergmann, U. Taylor, and D. Rath
- 11 INFLUENCE OF SPERM STIMULANTS ON EQUINE EPIDIDYMAL SPERM APOPTOSIS
C. M. Melo-Ona, L. C. O. Magalhães, C. P. Freitas-Dell'Aqua, F. C. Landim-Alvarenga, R. R. Mazieiro, J. A. Dell'Aqua Jr., G. A. Monteiro, R. F. Soares, and F. O. Papa
- 12 PROGESTERONE SUPPLEMENTATION DAY 3 TO 5 POST-OVULATION IN AI-BRED MARES
H. Richard, P. Appleton, D. J. Kesler, and C. E. Ferguson

- 13 REACTIVE OXYGEN SPECIES IN STORED STALLION SEMEN
J. M. Morrell, A. Lundgren, P. Humblot, and A. Johannisson
- 14 FREEZING OF DONKEY SEMEN AFTER 24 HOURS OF COOL STORAGE: PRELIMINARY RESULTS
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- 17 MANIPULATION OF PROESTRUS PERIOD BY EXOGENOUS GONADOTROPIN AND ESTRADIOL DURING TIMED ARTIFICIAL INSEMINATION PROTOCOL IN SUCKLED BEEF COWS
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- 18 PREGNANCY RATES IN LACTATING DAIRY COWS TREATED WITH GONADOTROPIN-RELEASING HORMONE-BASED SYNCHRONIZATION PROGRAMS AND INSEMINATED AT A FIXED TIME
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- 19 THE EFFECT OF FOLLICLE-STIMULATING HORMONE IN A MODIFIED CO-SYNCH SYNCHRONIZATION PROTOCOL ON SUBSEQUENT PREGNANCY RATES OF CROSSBRED LACTATING BEEF CATTLE
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2013 RECIPIENT

IETS DISTINGUISHED SERVICE AWARD



Dr. Andrzej Bielanski has served as a member of the Health and Safety Advisory Committee (HASAC), formerly the Import/Export Committee, of the International Embryo Transfer Society for many years, and with outstanding dedication and commitment. He certainly deserves this testimony of gratitude from the IETS—the Distinguished Service Award.

Andrzej was born in 1944 in Cracow, Poland, during a dramatic year for Europe, but was raised in an environment of horse breeding with a father who was also a veterinarian. Andrzej soon decided to follow studies in veterinary medicine; he graduated as a DVM in Wroclaw in 1967 and then defended his PhD in reproductive biology at Cracow University in 1973. He began his research career at the Animal Production Institute in Balice/Cracow, where he concentrated on endocrinology of pregnancy and the effect of leptospirosis on fetal mortality in pigs. It is noteworthy that he began his career

studying the relationship between pathogens and procreation physiological function (pregnancy and fetus)—this has remained his primary interest throughout his career.

As a visiting scientist, he pursued his studies with Drs. J. Raeside and R. Thompson at the Ontario Veterinary College, University of Guelph, Canada, and in 1982, he was awarded a research fellowship from the Natural Sciences and Engineering Research Council of Canada and posted at the Animal Diseases Research Institute (ADRI), Nepean/Ottawa, to study disease transmission by embryo transfer. This gave him the main guidelines for research that he pursued over the next three decades. He took a break for a year when he joined the embryo transfer research team directed by Dr. R. Mapletoft at the Western College of Veterinary Medicine, University of Saskatchewan, Canada, to study the integrity of zona pellucida during cryopreservation of bovine embryos and to provide the very first on-farm embryo cryopreservation services in Western Canada. In 1985, Dr. Bielanski returned to the Nepean Institute and Dr. D. Hare's research group as a senior research scientist, to continue his work on disease control via assisted reproductive technologies (ART), where he has remained until the present time.

Together with ADRI scientists at Nepean, and in collaboration with USDA researchers at Plum Island, New York, Dr. Bielanski contributed to the first study on the potential transmission of BLV and FMDV by embryo transfer. The findings that these two pathogens were not transmitted by embryo transfer, for the first time convincingly demonstrated that embryos can be safely transferred without the risk of disease transmission, even from acutely infected donors with highly infectious agents.

Dr. Bielanski's research has included development of methods for disinfection of embryos and semen, and detection of pathogenic microorganisms in infected micromanipulated embryos. He developed an *in vitro* fertilization program to study the interaction of pathogens with the zona pellucida of *in vitro*-produced embryos. This included a variety of viral (IBRV, BVDV, BIV, PCV), bacterial (Bovine TB, Johne's disease, *Leptospira*, *Campylobacter fetus*, *Mycoplasma*) and parasitic agents (*Tritrichomonas fetus*, *Neospora caninum*). More recently, his research has been directed toward the risk of contamination and cross-contamination of animal and human embryos via vitrification and sanitary aspects of banking germplasm in liquid nitrogen.

Andrzej started working with the Import/Export Committee of the IETS in 1989, reinforcing the impressive contributions of Dr. D. Hare and L. Singh from Canada in the early nineties. He has since attended all IETS meetings and has contributed greatly. He has been sharing with his thoughts and reflections, and has been very attentive in listening to what colleagues had to say regarding pathogen-embryo interactions. Andrzej has been very serious in ensuring that the embryo would remain the safest means of exchanging genes. His many experiments have demonstrated how "tricky" this interaction could be, and he has always been open-minded when confronted with challenging facts. In this regard, he has been scrupulously important to the IETS/HASAC group. For example, all members of HASAC were recently captivated by his electron microscope pictures pointing out details that many would have missed, and yet so critical to the subject at hand.

Dr. Bielanski's work has produced novel findings on the transmission of infectious agents by embryos and semen, which are of international concern. These findings have the potential to influence international trade of germplasm. He has published more than 100 research papers and reviews in peer-reviewed international journals pertinent to his expertise and co-authored chapters in the last two editions of the IETS Manual as well as two text books.

The Board of Governors, on behalf of the membership of the IETS, is indebted to Dr. Andrzej Bielanski, who has had a very significant impact on the considerable work done by the IETS/HASAC group, sharing facts and ideas and reviewing with extreme care all published papers on pathogen-embryo interactions. His contributions have been of great benefit to our society and to the embryo transfer industry at large.



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SPECIAL EVENTS

MORULAS (IETS STUDENT GROUP) BUSINESS MEETING

Saturday, January 19

17:00–18:00

Konferenzraum 26

MORULAS STUDENT MIXER

Saturday, January 19

18:30–20:00

Old Town of Hannover

Following the Morulas' business meeting, all trainees are invited to enjoy German food and drinks and have a fun night out together in the old town of Hannover organized by local PhD students and post docs. This will be a great opportunity to establish a network at the start of the meeting and build the Morulas' association.

MORULAS CAREER DEVELOPMENT LUNCH

Sunday, January 20

12:30–13:30

Konferenzraum 23

We are very pleased to announce that this year's Career Development lunch will feature Assistant Professor Dr. Pablo Ross from University of California, Davis. The focus of the lunch will be trainee/young investigator preparation for a successful career in academia. This informal lunch will be a great opportunity to learn first-hand some of the joys and challenges a young principal investigator faces and what it takes to get that first academic position. **(Ticket required)**

WELCOME RECEPTION

Sunday, January 20

18:00–19:30

Hannover Congress Centrum

The Welcome Reception will take place on January 20 at 18:00. Wines, cocktails, and hors d'oeuvres will be served at the Niedersachsenhalle.

MORULAS MENTOR LUNCHEON

Monday, January 21

12:30–13:30

Konferenzraum 23

Enjoy a meal while networking with some peers and a professional in your field of interest. Whether you are interested in the commercial applications of embryo transfer or are thinking about an academic research career, a career in private industry, or working for a government agency, we will have a mentor for you. This will be a great opportunity to learn about a field of interest to you and get a glimpse of the future. Enjoy this event with your fellow students, who will more than likely end up as friends and maybe future colleagues. **(Ticket required)**

OPEN MEETING OF THE DOMESTIC ANIMAL BIOMEDICAL EMBRYOLOGY (DABE) COMMITTEE

Monday, January 21
18:00–18:30
Glashalle

OPEN MEETING OF THE COMPANION ANIMALS, NON-DOMESTIC AND ENDAN- GERED SPECIES (CANDES) COMMITTEE

Monday, January 21
18:30–20:00
Glashalle

OPEN MEETING OF THE HEALTH AND SAFETY ADVISORY COMMITTEE (HASAC)

Monday, January 21
18:30–20:00
Konferenzraum 26

PRACTITIONERS' FORUM—*HOW CAN ET PRAXIS FIND ITS FEET IN THE AGE OF GENOMICS?*

Monday, January 22
08:30–10:30
Glashalle

DABE FORUM—*NATURAL AND INDUCED PLURIPOTENCY IN DOMESTIC SPECIES*

Tuesday, January 22
08:30–10:30
Konferenzraum 26

11TH IETS ANNUAL FUN RUN

Tuesday, January 22
12:30–13:30
Stadtpark

We look forward to seeing you participate in this year's fun run.

CLOSING PARTY

Tuesday, January 22
19:30–1:00
Yukon Market Hall, Hannover Adventure Zoo

The closing party will take place at the Hannover Adventure Zoo in the Yukon Market Hall, located within walking distance of the Hannover Congress Centrum. The party will include dancing to the music of a superb rock 'n' roll band, delicious food, and as much as you wish to drink. Please join us for this unforgettable closing event of the 39th IETS meeting. **(Ticket required)**



TOUR TO MARIENSEE

Wednesday, January 23, the busses will depart from HCC to Mariensee at 9:00 am and return at 4:00 pm. The visit will include a tour to the Monastery and the Institute. A light lunch and coffee will be served.

EXHIBIT DIRECTORY

BOOTH LISTING BY NUMBER

Booth# Company

- #1..... Consarctic® GmbH
- #2..... Ludwig Bertram GmbH - MEDVET
- #3..... Minitube International AG
- #4..... AgTech Inc.
- #5..... ICPbio Reproduction
- #6..... Professional Embryo Transfer Supply Inc. (PETS)
- #7..... Gynemed GmbH & Co. KG
- #8..... Eppendorf
- #9..... Labotech GmbH
- #10..... EGG Technologies International Ltd.
- #11..... Bioniche Animal Health Canada Inc.
- #12..... IMV Technologies
- #13..... Olympus
- #14..... ReproPharm

ALPHABETICAL LISTING OF COMPANIES

Agtech Inc.

Agtech is proud to be the embryo transfer supply source for thousands of reproduction professionals worldwide. We offer a large selection of cattle embryo transfer and artificial insemination products and equipment. With more than 400 items to choose from, Agtech has the reproduction supplies and equipment you need to succeed.

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Phone: 785-776-3863
Fax: 785-776-4295
www.agtechinc.com
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Bioniche is a Canadian animal health business that is responsible for researching, developing, manufacturing, and marketing innovative animal health biopharmaceutical technologies worldwide. The company's animal health products are marketed directly in Canada, the United States, Australia, and Europe and through selected distributors in the rest of the world. Bioniche Animal Health Inc. operates marketing, production, and research facilities in Belleville, Ontario, Canada; marketing and manufacturing facilities in Athens, Georgia, and

Pullman, Washington, in the United States; marketing and manufacturing facilities in Armidale, Australia; and a sales and marketing office in Ireland.

PO Box 1570
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Belleville, Ontario, K8N 5J2, Canada
www.bioniche.com
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Consarctic GmbH

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PO Box 1133
63821 Schoellkrippen, Germany
+49 6024 80274
www.consarctic.de
Booth #1

EGG Technologies International Ltd.

EGG Tech has been servicing animal reproduction clients for many years. We are now the foremost distributor of AI/ET products within Europe, because we undoubtedly provide the most comprehensive choice by virtue of our strong relationships with world-renowned companies. Our customer service is already regarded as second to none and consequently we are extending our activities with practitioners throughout Europe, the Middle East, Africa, Asia, and beyond.

18 Springfield Park
Salisbury, Wiltshire, SP3 6QN, United Kingdom
Booth #10

Eppendorf AG

Eppendorf is a biotech company that develops, produces, and distributes systems for use in all spheres of life science. At IETS 2013, Eppendorf primarily presents its products for cell manipulation and cell growth. On display will also be new high-quality products, including pipettes, consumables, and the new instrument for PCR—the Eppendorf Mastercycler® nexus.

Barkhausenweg 1
22339 Hamburg, Germany
+49 (0) 40 53801
www.eppendorf.com
Booth #8

Gynemed GmbH & Co. KG

Since its foundation in 1998, Gynemed has distributed high-class medical products in the field of reproductive medicine, ambulant-gynecological surgery, and conservative gynecology. In Germany, Austria, and Switzerland, we can look back on a successful development of our business in these fields. We have only products that meet the highest standards and demands of quality and represent the latest state of the scientific development. For that purpose we initiate clinical studies. It is at all times our ambition to adapt our range of products to current trends and advancements. That ambition made us develop our own IVF-media line, which

is adapted to the latest scientific cognitions. That IVF-media line is available since March 2006 and is already established as the standard in many laboratories in Europe as well as throughout the world. Since January 2006, we offer high-class laboratory devices by renowned brands Research Instruments (England) and IVF-Tech (Denmark), including service and maintenance as exclusive distributors. By cooperation with other specialized companies and our own developments, we are able to equip complete IVF laboratories in the human and veterinary fields. Furthermore, we adopt suggestions from operators and develop customer-specific products in cooperation with biologists, doctors, and laboratory personnel. We offer a wide range of products to gynecologists, such as one-way specula, one-way biopsy suction curettes (Probet), hysteroscopes, cervix dilators, cervix brushes, and contraceptive copper coils. For us closeness to our customers is the highest priority. Besides the competent consulting and the optimized service by our personnel, our customers particularly appreciate the intensive, trustful care and our support far in excess of the norm.

Lübecker Straße 9
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+49 4363 903290
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ICPbio Reproduction

ICPbio Reproduction is a global supplier of embryo transfer products including flushing and embryo handling media for the equine, bovine, and ovine embryo transfer industries and veterinarians.

PO Box 39
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Labotect is a specialist in innovative laboratory technology for use in the field of assisted reproduction, medicine, and scientific laboratories. With its own R&D department, Labotect has evolved from a trading company in medical technology to one of the world's top ten producers of incubation technology. Cell culture and reproductive medicine demand high quality from all points of view. "Made in Germany" has a special significance in this particular sector of technology.

Anke Martin, ART Consultant
PO Box 200212
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+49 551 501010
www.labotect.com
Booth #9

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Minitube@minitube.de
www.minitube.com
Booth #3

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Box 188
Canton TX 75103 USA
www.pets-inc.com
Booth # 6

ReproPharm

ReproPharm is a start-up company launched in September 2009 by 3 scientists working at INRA (National Institute of Agronomic Research) in Tours, France. It is dedicated to the discovery, development, and marketing of diagnostics kits to

better control reproduction in domestic animals. Its project is to develop innovative products to improve the control of reproduction in breeding animals (bovine, porcine, ovine species), particularly AI performance. Its economical context is the significant decrease of fertility observed in breeding animals due to intensification of production by genetic selection (more milk, more meat). To this aim, ReproPharm has developed Predi'Bov®, a farm test to predict the ovulation time in cow and

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www.repropharm.com
Booth #14



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FUN RUN

The fun run will be held in the Stadtpark (City Park) next to the Hannover Congress Centrum. The course is 1 km and five laps will be run. The dots mark the path through the Stadtpark. The runners will meet in front of Glashalle facing the Stadtpark (X on the map shows the meeting area).



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IETS – PRECONFERENCE SYMPOSIUM

ADVANCES IN TRANSGENIC ANIMAL PRODUCTION

Saturday, January 19, 2013

Hannover Congress Centrum, Hannover, Germany

08:30 Welcome and Introduction to Symposium - Heiner Niemann (Germany)

Session 1 Transgenic technologies

08:45 Viral – and non viral vectors - *Bruce Whitelaw (United Kingdom)*

09:15 Update on meganucleases for transgenic animal production – *Bjoern Petersen (Germany)*

09:45 Engineering animal genomes with Tal-effector nucleases – *Scott Fahrenkrug (USA)*

10:15 Insulators and chromosome-type vectors for gene transfer – *Lluis Montoliu (Spain)*

10:45 The quest for pluripotent stem cells in the pig – *Stoyan Petkov (Germany)*

11:15 **Coffee break**

Session 2 Transgenic applications

11:45 Genetically engineered animals for use in agriculture – *James Murray (USA)*

12:15 Multi-transgenic pigs for xenotransplantation – *David Ayares (USA)*

12:45 Disease resistance and other applications of transgenesis in the chicken – *Helen Sang (United Kingdom)*

13:15 **Lunch break**

Session 3 Biomedical models

14:30 Genetically engineered pig models for translational diabetes research – *Eckhard Wolf (Germany)*

15:00 Genetically designed pigs as models for human chronic disease processes –
Lars Bolund (Denmark)

15:30 Porcine Models for human cancer – *Angelika Schnieke (Germany)*

16:00 **Coffee break**

Session 4 Regulatory issues

16:30 Guidelines for the regulation of GM animals – *Larisa Rudenko (FDA, USA)*

17:00 **Keynote Address**

Why do we need transgenic farm animals: The challenges of future animal production –
Mike Roberts (University of Missouri, Columbia, USA)

18:00 General discussion

18:30 Adjourn

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