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The 32\textsuperscript{nd} Annual Conference of the International Embryo Transfer Society

“Gametes to Fertilization – Impact of New Technology on Embryo Production”

January 7-11, 2006
Caribe Royale Hotel & Convention Center
Orlando, Florida, USA

Co-Chairs of the Scientific Program:
Ina Dobrinski and Richard Fayrer-Hosken
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The 32nd Annual Conference of the International Embryo Transfer Society (IETS) is held at the Caribe Royale Resort & Convention Center, Orlando, Florida, on January 8-10, 2006. This year’s program theme is “Gametes to Fertilization – Impact of New Technology on Embryo Production”. The annual conference of the IETS is organized with five plenary sessions providing in depth overviews of different aspects related to the main theme together with short oral presentations selected from the submitted abstracts. Poster sessions address recent advances in animal biotechnology. In addition, there is a keynote lecture on Developmental Diversity in Mammals.

We are grateful to many people for their valuable contributions of time and effort in organizing this scientific meeting. We would like to thank the main session speakers and their co-authors, authors of the abstracts included in these proceedings, participants of the student competition, section editors, reviewers of the manuscripts and abstracts, and delegates for their involvement in making this meeting a success. Special thanks go to Dr. Peter Hansen, Chair of the Local Organizing Committee, and his committee members as well as student volunteers for the tremendous efforts they have put forth in organizing the venue for the conference, the social events, and a post-conference symposium. We also wish to thank the organizers of the pet cloning symposium and Drs. Mapeltoft, Bavister and Brenner for organizing 2 pre-conference symposia. Our sincere appreciation is extended to Jennifer Gavel, the Executive Secretary of IETS, and Camilla Myers, Managing Editor of Reproduction, Fertility and Development for their help in the production of the conference booklets and proceedings. We thank you all for attending and contributing to the conference and hope that you have an exceptionally rewarding time at the 32nd Annual Conference of the IETS.

Ina Dobrinski and Richard Fayrer-Hosken
Program Co-Chairs

2005-2006 Board of Governors
Matthew B. Wheeler, President
Gabriel A. Bo, Immediate Past President
Takashi Nagai, Vice President
Janneke Van Wagendonk, Secretary/Treasurer
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Richard A. Fayrer-Hosken, Governor
Cesare Galli, Governor
Pat Lonergan, Governor
Ed L. Squires, Governor
2006 Recipient of the IETS Pioneer Award

DUANE KRAEMER

Award Presentation: Monday, January 9 at 17:00

Previous Recipients:

S. Willadsen (2005)
B. Brackett (2004)
R. Foote (2002)
P.J. Dziuk (2001)
R. Yanagimachi (2000)
R.M. Moor (1999)
I. Gordon (1998)
S. Wintenberger-Torres (1997)
W.K. Whitten (1996)
C.R. Austin (1995)
N.W. Moore (1994)
R.L. Brinster (1992)
A.K. Tarkowski (1991)
J.D. Biggers (1990)
G.C. Thibault (1989)
E.J.C. Polge (1987)
T.M. Sugie (1986)
L.E.A. Rowson (1985)
L.E. Cassida (1984)
M.C. Chang (1983)
R.O. Berry (1982)
Calendar of Events

Thursday, January 5, 2006
8:00 – 18:00  IETS Board of Governors Meeting (Curacao 5)

Friday, January 6, 2006
8:00 – 12:30  Pet Cloning Symposium
8:00 – 17:00  Health And Safety Advisory Committee (HASAC) – Research Subcommittee (Curacao 8)
13:00 – 17:00 IETS Board of Governors Meeting  (Curacao 5)
16:00 – 19:00 Registration with pick up of pre-registrations only (Grand Sierra Registration North)

Saturday, January 7, 2006
07:00 – 17:00 Registration (Grand Sierra Registration North)
8:00 – 17:00 AETA Board Meeting (Bonaire 6)
8:00 – 17:00 Pre-Conference Workshop: Successful Publishing in an English Language Journal (Bonaire 5)
8:00 – 18:00 Pre-Conference Symposium: Challenges and Opportunities for In Vivo Embryo Production in Cattle (Bonaire 2/3/4)
8:15 – 18:00 Pre-Conference Symposium: Primate ART to ES Cells  (Curacao 2/3/4)
8:00 – 17:00 Health And Safety Advisory Committee (HASAC) – Food Safety Subcommittee (Curacao 6/7)
13:30 – 17:00 IETS Foundation Board of Trustees Meeting (Curacao 1)
17:00 – 19:00 Health And Safety Advisory Committee (HASAC) – Forms & Certificates Subcommittee (Curacao 5)
14:00 – 18:00 Commercial Exhibit Setup (Grand Sierra A/B/C/D/E)
14:00 – 17:00 AETA Certification Exam
17:00 – 21:00 W1171 Meeting
16:00 – 18:00 Poster Setup (Grand Sierra A/B/C/D/E)

Sunday, January 8, 2006
7:30 – 8:30 Past President’s Breakfast (Curacao 1)
7:30 – 8:15 Student Competition Breakfast with Foundation Education Comm.(Curacao 5)
7:00 –18:00 Registration (Grand Sierra Registration North)
9:00 – 17:00 Commercial Exhibits (Grand Sierra A/B/C/D/E)
8:00 – 12:00 Poster Setup (Grand Sierra A/B/C/D/E)
8:00 – 12:00 Pre-Conference Workshop: Successful Publishing in an English Language Journal (Bonaire 5)
8:00 – 17:00 A/V Library/Speaker Preparation (Curacao 6/7)
8:30 – 10:00 IETS Foundation Education Committee (Curacao 1)
8:00 – 11:00 Health And Safety Advisory Committee (HASAC) – Regulatory Subcommittee (Curacao 2)
10:30 – 10:45 Opening and Welcome (Grand Sierra F/G/H/I)
10:45 – 12:50 Session I: New approaches to gamete preservation (Grand Sierra F/G/H/I)
12:50 – 14:00 Lunch break
13:00 – 14:00 Theriogenology Editorial Board Meeting (Curacao 3)
14:00 – 15:30 IETS-Foundation: Student competition presentations (Grand Sierra F/G/H/I)
15:30 – 16:00 Coffee Break / Exhibition (Grand Sierra A/B/C/D/E)
16:00 – 18:05 Session II: Manipulation of the male germ line (Grand Sierra F/G/H/I)
19:00 – 21:00 Poster session I (Grand Sierra A/B/C/D/E)

32nd Annual Conference
Monday, January 9, 2006
8:00 – 15:00 Registration (Grand Sierra Registration North)
8:00 – 18:00 Commercial Exhibits (Grand Sierra A/B/C/D/E)
8:00 – 17:00 A/V Library/Speaker Preparation (Curacao 6/7)
8:30 – 11:00 Session III: Sperm, eggs and fertilization (Grand Sierra F/G/H/I)
11:00 – 11:30 Coffee Break / Exhibition (Grand Sierra A/B/C/D/E)
11:30 – 13:30 Poster session II (Grand Sierra A/B/C/D/E)
13:30 – 14:30 Lunch break
12:00 – 16:00 IETS Data Retrieval Committee Meeting (Curacao 5)
14:30 – 16:35 Session IV: Epigenetics and placental function (Grand Sierra F/G/H/I)
16:35 – 17:00 Coffee Break / Exhibition (Grand Sierra A/B/C/D/E)
17:00 – 17:30 IETS-Pioneer award (Grand Sierra F/G/H/I)
17:30 – 18:15 IETS Annual Business meeting (Grand Sierra F/G/H/I)
18:30 – 23:00 Dance at The Groove at Universal Orlando City Walk
19:00 – 21:00 Health And Safety Advisory Committee (HASAC) Open Meeting (Curacao 3/4)

Tuesday, January 10, 2006
7:00 – 9:00 Organizational Meeting of the IETS Board of Governors (Curacao 5)
9:00 – 11:00 Organizational Meeting of the IETS Foundation (Curacao 4)
11:00 – 15:00 Registration (Grand Sierra Registration North)
8:00 – 14:30 Commercial Exhibits (Grand Sierra A/B/C/D/E)
8:00 – 17:00 A/V Library/Speaker Preparation (Curacao 6/7)
8:30 – 10:35 Session V: Advances in biotechnology and species conservation (Grand Sierra F/G/H/I)
10:35 – 11:00 Coffee Break / Exhibition (Grand Sierra A/B/C/D/E)
11:00 – 12:30 Practitioner Forum: The influence of sperm quality on in vivo and in vitro embryo production. (Grand Sierra F/G/H/I)
12:30 – 13:30 Lunch break
13:30 – 14:00 IETS-Distinguished service award (Grand Sierra F/G/H/I)
14:00 – 14:45 IETS-Foundation Student Competition awards, CANDES & HASAC Updates (Grand Sierra F/G/H/I)
14:30 – 17:00 Commercial Exhibit Teardown (Grand Sierra A/B/C/D/E)
14:30 – 17:00 Poster Teardown (Grand Sierra A/B/C/D/E)
14:45 – 15:30 Session VI: Keynote address (Grand Sierra F/G/H/I)
15:30 – 15:45 Closing Ceremony (Grand Sierra F/G/H/I)
16:30 4th IETS Annual Running Competition

Wednesday, January 11, 2006
8:30 – 17:45 Post-conference Symposium: Realizing the Promise of IVF in Cattle: Optimizing Embryonic and Fetal Survival (Grand Sierra B)
12:00 The Center for Elephant Conservation Tour
12:30 – 16:00 Backstage Tour of Animal Kingdom Veterinary Facilities

Thursday, January 12, 2006
19:30 The Greatest Show on Earth - Ringling Bros. and Barnum & Bailey Circus
General Information

Meeting Room Directory
Main Conference Sessions  Grand Sierra F, G, H, I Ballroom
Exhibits  Grand Sierra A, B, C, D, E Ballroom
Poster Displays  Grand Sierra A, B, C, D, E Ballroom

Registration Desk Hours
Grand Sierra Registration North
Pick up of pre-registration packets only
  Friday, January 6  16:00 - 19:00
Onsite Registration Open
  Saturday, January 7  7:00 - 17:00
  Sunday, January 8  7:00 - 18:00
  Monday, January 9  8:00 - 16:00
  Tuesday, January 10  11:00 - 15:00

Register for the IETS Annual Conference, the pre-conference Satellite Symposia and/or the post-conference Satellite Symposium at the Registration Desk. Also, sale items such as the 3rd edition of the IETS Manual, educational slide sets and videotapes will be available for purchase.

Exhibit Information
Grand Sierra A, B, C, D, E Ballroom
Set-Up:  Saturday, January 7, 2006  14:00 – 18:00
Exhibits Open:  Sunday, January 8, 2006  9:00 – 17:00
  Monday, January 9, 2006  8:00 – 18:00
  Tuesday, January 10, 2006  8:00 – 14:30
Teardown:  Tuesday, January 10, 2006  14:30 – 17:00

Details on the exhibitors will be available in the Guide to Exhibits that will be included with the conference materials.

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

Carparking
Parking is available at the Caribe Royale Resort & Convention center for those staying at the hotel and attending the conference.

Currency
The US Dollar is the legal tender in the United States.
Message Board
Any messages received for conference delegates will be posted on the message board located near the Registration Desk.

Refreshments
Morning coffee and afternoon refreshments are included in your registration fee and are provided during the scheduled breaks in the Exhibition area (Grand Sierra A, B, C, D, E Ballroom).

Meals
For those that purchased lunch tickets, you lunch may be picked up LOCATION. Tickets are not available for onsite purchase. The Caribe Royale also offers three restaurants and a lounge onsite. For your dining pleasure, you can choose Montego’s for exquisite continental cuisine, Cafe Largo Pizzeria and Deli, or Calypso’s for casual food in the pool area.
Section Editors

Ken Bondioli, Student Competition
Barry Bavister, Artificial insemination
Irina Polejaeva, Cloning/NT
Stan Leibo, Cryopreservation
Charles Long, Developmental Biology
Peter Farin, Early Pregnancy
Rebecca Krisher, Embryo Culture
Eric Walters, Embryo Manipulation
Richard Fayrer-Hosken, Embryo Transfer
Jose Cibelli, Embryonic stem cells
Anthony Wrathall, Epidemiology/Diseases
Barbara Durrant, Exotic Species
Rabindranath De la Fuente, Folliculogenesis/Oogenesis
Jorge Piedrahita, Gene Expression
Richard Fayrer-Hosken, IVF/IVP
John Parks, Male Physiology
Allan King, Microstructural analysis
Silvia Beford-Guaus, Oocyte activation
John Dobrinsky, Oocyte maturation
Detlef Rath, Sexing
Katrin Hinrichs, Sperm injection
Gabriel Bo, Superovulation
Matt Wheeler, Tissue Culture
Carol Keefer, Transgenesis
Gregg Adams, Ultrasound

Manuscript and Abstract Reviewers

Gregg Adams
Gary Anderson
Birthe Avery
Herman Baldassare
Barry Ball
Ciro Barros
Claudia Baumann
Barry Bavister
Fuller Bazer
Sylvia Bedford-Guaus
Esmail Behboodi
Kurt Bernischke
Marcelo Bertolini
Dean Betts
Zeki Beyhan
Andrzej Bielanski

Gabriel Bo
Maurice Boland
Ken Bondioli
Daniel Bousquet
Gottfried Brem
Ryan Cabot
Keith Campbell
Elaine Carnevale
Vicki Chrostowski
Elizabeth Crichton
Bill Day
Nanke Den Daas
Richard Denniston
Paul DeSousa
Brad Didion
Andras Dinnyes

Gregg Adams
Gary Anderson
Birthe Avery
Herman Baldassare
Barry Ball
Ciro Barros
Claudia Baumann
Barry Bavister
Fuller Bazer
Sylvia Bedford-Guaus
Esmail Behboodi
Kurt Bernischke
Marcelo Bertolini
Dean Betts
Zeki Beyhan
Andrzej Bielanski

Gabriel Bo
Maurice Boland
Ken Bondioli
Daniel Bousquet
Gottfried Brem
Ryan Cabot
Keith Campbell
Elaine Carnevale
Vicki Chrostowski
Elizabeth Crichton
Bill Day
Nanke Den Daas
Richard Denniston
Paul DeSousa
Brad Didion
Andras Dinnyes

John Dobrinsky
Tanja Dominko
Dan Dumesic
Jens Ehmke
Gareth Evans
Char Farin
Peter Farin
Richard Fayrer-Hosken
Meri Firpo
Rafael Fissore
Erik Forsberg
Joanne Fortune
Hiroaki Funahashi
Cesare Galli
David Gardiner
John Gibbons

32nd Annual Conference
Main Scientific Program
Gametes to Fertilization – Impact of New Technology on Embryo Production

Sunday, January 8
10:30 Opening Comments and Welcome to the 32nd Annual Conference of the IETS.

Session I: New approaches to gamete preservation
Session Chair: Matt Wheeler, University of Illinois, USA
Session Co-Chair: Hannah Galatino-Homer, University of Pennsylvania, USA

10:45 Freeze-Drying of Sperm, Applications in Primates and Domestic Animals.
Stuart A. Meyers, DVM, PhD, Dip. ACT, University of California, Davis.

11:25 Preservation of Gonadal Tissue
Stefan Schlatt, PhD, School of Medicine, University of Pittsburgh, PA.

12:05 Porcine Blastocysts Derived From In Vitro-Matured Oocytes Injected Intracytoplasmically
With Sperm From Testicular Tissue Xenografted Into Nude Mice.
Ohnuma, and H. Kaneko. (Abstract #280)

12:20 Blastocyst Development From Domestic Cat Oocytes Injected With Dehydrated Spermatozoa.
(Abstract #356)

12:35 Vitrification Of Porcine Oocytes - A New Approach To Gamete Cryopreservation.

12:50 – 14:00 Lunch Break

IETS Foundation Student Competition
Session Chair: Ken Bondioli, Louisiana State University, USA

14:00 Aberrant DNA Methylation In Porcine In Vitro-, Parthenogenetic-, And Nuclear Transfer-
Produced Blastocysts.
A. Bonk*, M. Samuel, L. Lai, Y. Hao, R. Li, Z. Liu, C. Murphy, E. Antoniou, and R.
Prather. (Abstract #1)

14:15 Identification Of Genes Induced By The Conceptus In The Bovine Endometrium During
The Pre-Implantation Period.
C. Klein*, S. Bauersachs, B. S. Ulbrich, H. Meyer, S. Schmidt, H. Reichenbach, M.
Vermehren, H. Blum, F. Sinowatz, and E. Wolf. (Abstract #2)

14:30 Nuclear Reprogramming Of Porcine Fibroblast Cells By Xenopus Egg Extracts.
K. Miyamoto*, Y. Nagao, N. Minami, M. Yamada, K. Ohsumi, and H. Imai. (Abstract #3)

14:45 Gene Expression In Cultures Of Inner Cell Masses Isolated From In Vitro-Produced And In
Vivo-Derived Bovine Blastocysts.
D. Pant* and C. Keefer. (Abstract #4)

15:00 Assessment Of HSP70.1 Transcription Levels In Bovine Embryos After Cumulus Removal
By Different Techniques.
A. Reeder*, V. Schutzkus, J. Wiebelhaus-Finger, H. Khatib, R. L. Monson, M. B. Wheeler,
D. Beebe, and J. Rutledge. (Abstract #5)
15:15  Expression Profiling Of Single Bovine Embryos Reveals Significant Effects Of In Vitro Maturation, Fertilization And Culture.  

15:30 – 16:00  Coffee Break / Exhibition

**Session II: Manipulation of the male germ line**

*Session Chair: Esmail Behboodi, PharmAthene, Canada*  
*Session Co-Chair: Rahul Rathi, University of Pennsylvania, USA*

16:00  Male Germ Cell Transplantation in Livestock  
Jon Hill, DVM, PhD, Dip. ACT, CSIRO Livestock Industries F.D. McMaster Laboratory, Australia.

16:40  Sperm-Mediated Gene Transfer  
Marialuisa Lavitrano, PhD, University of Milano-Bicocca, Monza, Milano, Italy.

D. Rath* and S. Schulze, Institute for Animal Breeding, Mariensee, Neustadt, Germany, L.S. (Abstract #350)

17:35  Microinsemination Using Male Germ Cells From Epididymides And Testes Stored In Freezers Without Cryoprotectant.  

17:50  *In Vitro* Culture Of Cd9-Expressing Cells Enriched By Magnetic Cell Sorting From Testes Of Cryptorchid Adult And Pup In Mice.  

19:00 – 21:00  Poster session I (Student competition finalists and authors of odd numbered abstracts)

**Monday, January 9**

**Session III: Sperm, eggs and fertilization**

*Session Chair: Rebecca Krisher, Purdue University, USA*  
*Session Co-Chair: Jakob Scherzer, University of Georgia, USA*

8:30  Moving to the Beat: A Review of Mammalian Sperm Motility Regulation  
Regina Turner, VMD, PhD, Dip. ACT, University of Pennsylvania, Kennett Square.

9:10  ICSI, Calcium Release, Egg Activation – Applications in new Reproductive Technologies  
Rafael Fissore, DVM, PhD, University of Massachusetts, Amherst.

9:50  Regulation of Sperm-Egg Interactions During Fertilization  
Janice Evans, PhD, Johns Hopkins University School Public Health, Baltimore, MD.

10:30  Detection Of Caspase-3 And -7 In Normal And Slow Developing Bovine In Vitro Embryos.  
L. Vandaele*, B. Mateusen, D. Maes, and A. Van Soom. (Abstract #180)

10:45  Poor Embryo Development After ICSI With Domestic Cat Testicular Sperm Is Overcome By Centrosome And Midpiece Replacement.  
P. Comizzoli*, D. Wildt, and B. Pukazhenth. (Abstract #354)
11:00 – 11:30  Coffee Break / Exhibition
11:30 – 13:30  Poster session II (Authors of even numbered abstracts)
13:30 – 14:30  Lunch Break

**Session IV: Epigenetics and placental function**

*Session Chair: John McLaughlin, University of Pennsylvania, USA*

*Session Co-Chair: Carol Keefer, University of Maryland, USA*

14:30  Gamete Imprinting: Setting Epigenetic Patterns for the Next Generation
Jacquetta Trasler, MD, PhD, McGill University, Montreal, Quebec, Canada.

15:10  Placental Function in Development and Disease
James (Jay) Cross, DVM, PhD, University of Calgary Faculty of Medicine, Canada.

15:50  Demethylation Of Mammalian Somatic Dna By Xenopus Egg And Oocyte Extracts.
Y. Bian*, R. Alberio, A. Johnson, and K. Campbell. (Abstract #121)

16:05  Gene Expression Comparisons Between Bovine In Vivo And Cloned Embryos Produced By Three Different Methods.
N. Ruddock*, K. Wilson, M. Cooney, R. Tecirlioglu, V. Hall, A. French, and M. Holland. (Abstract #68)

16:20  Use Of Porcine Parthenotes And Gene Expression Profiling Using Microarrays For Identification Of Imprinted Genes.

16:35 – 17:00  Coffee Break/Exhibition

17:00 – 17:30  IETS-Pioneer Award Presentation

17:30 – 18:15  IETS Annual Business meeting

18:30 – 23:00  Dance at The Groove at Universal Orlando City Walk

19:00 – 21:00  Health And Safety Advisory Committee (HASAC) Open Meeting

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**Tuesday, January 10**

**Session V: Advances in biotechnology and species conservation**

*Session Chair: Richard Fayrer-Hosken, University of Georgia, USA*

*Session Co-Chair: Mats Troedsson, University of Florida, USA*

8:30  Emerging Technologies for Species Conservation
Budhan S. Pukazhenthi, DVM, PhD, Smithsonian’s National Zoological Park, Washington, DC.

9:10  Equine Cloning: Applications and Outcomes
Dirk K. Vanderwall, DVM, PhD, Dipl. ACT, University of Idaho, Moscow.

9:50  Birth Of A Foal Cloned By Adult Somatic Cell Nuclear Transfer With Roscovitine-Treated Donor Cells.
10:05  Use Of Virus Isolation And Quantitative Polymerase Chain-Reaction Techniques To Detect Bovine Viral Diarrhea Virus (BVDV) In Single Or Small Groups Of Pre-Implantation Bovine Embryos.  
J. Waldrop*, M. Givens, K. Riddell, P. Galik, and D. Stringfellow. (Abstract #214)

10:20  Production Of In Vitro- And In Vivo-Derived Cat Blastocysts For The Establishment Of Feline Embryonic Stem Cells.  
J. Kehler*, M. Roelke-Parker, B. Pukazhenthi, W. Swanson, C. Ware, I. Dobrinski, and S. O’Brien. (Abstract #197)

10:35 – 11:00  Coffee Break / Exhibition

11:00 – 12:30  **Practitioner Forum: The influence of sperm quality on *in vivo* and *in vitro* embryo production**  
*Moderators: Gabriel Bo, Argentina and Reuben Mapletoft, Canada*  
Panel Speakers:  
  - Jacob Thundathil, Canada  
  - Heriberto Rodriguez Martinez, Sweden  
  - Brad Stroud, USA

12:30 – 13:30  Lunch Break

13:30 – 14:00  IETS-Distinguished Service Award Presentation

14:00 – 14:45  IETS-Foundation Student Competition awards, CANDES & HASAC Updates

**Session VI: Keynote address**  
*Session Chair: Ina Dobrinski, University of Pennsylvania, USA*

14:45  Mammalian Diversity: Gametes, Embryos and Reproduction  
Richard Behringer, PhD, MD Anderson Cancer Center, Houston, TX.

15:30  Closing Remarks and invitation to 2007 Annual Conference

16:30  4th IETS Annual Running Competition
Poster Sessions
Grand Sierra A, B, C, D & E Ballroom

Posters are identified by the number corresponding to their abstract number in Reproduction, Fertility and Development 2006; 18(1,2). Numbering beings at 1 and ends at 382.

Setup:
Saturday, January 7, 2006 from 16:00 to 18:00
Sunday, January 8, 2006 from 8:00 to 12:00

Poster Session I:
Presentation by authors of ‘odd’ numbered abstracts in Reproduction, Fertility and Development 2006; 18(1,2) and the Student Competition finalist poster presentations

Presentation:
Sunday, January 8, 2006 from 19:00 to 21:00

Poster Session II:
Presentation by authors of ‘even’ numbered abstracts in Reproduction, Fertility and Development 2006; 18(1,2)

Presentation:
Monday, January 9, 2006 from 11:30 to 13:30

Teardown:
Tuesday, January 10, 2006 from 14:30 to 17:00

Authors of posters that are not put up during their designated time will be reported to the IETS President for possible disciplinary action. The posters must remain up for the duration of the meeting. Posters not removed by the designated time will be removed by the IETS Staff and may be destroyed.
Poster and Exhibit Room Layout

Grand Sierra A, B, C, D, E Ballroom
STUDENT COMPETITION
1. ABBERTAN DNA METHYLATION IN PORCINE IN VITRO-, PARTHENOGENETIC-, AND NUCLEAR TRANSFER-PRODUCED BLASTOCYSTS.

2. IDENTIFICATION OF GENES INDUCED BY THE CONCEPTUS IN THE BOVINE ENDOMETRIUM DURING THE PRE-IMPLANTATION PERIOD.

3. NUCLEAR REPROGRAMMING OF PORCINE FIBROBLAST CELLS BY XENOPUS EGG EXTRACTS.

4. GENE EXPRESSION IN CULTURES OF INNER CELL MASSES ISOLATED FROM IN VITRO-PRODUCED AND IN VIVO-DERIVED BOVINE BLASTOCYSTS.
   D. Pant and C. Keefer.

5. ASSESSMENT OF HSP70.1 TRANSCRIPTION LEVELS IN BOVINE EMBRYOS AFTER CUMULUS REMOVAL BY DIFFERENT TECHNIQUES.

6. EXPRESSION PROFILING OF SINGLE BOVINE EMBRYOS REVEALS SIGNIFICANT EFFECTS OF IN VITRO MATURATION, FERTILIZATION AND CULTURE.

ARTIFICIAL INSEMINATION
7. PLASMA PROGESTERONE CONCENTRATIONS IN OVARIECTOMIZED COWS WITH INTRAVAGINAL DEVICES CONTAINING DIFFERENT LEVELS OF PROGESTERONE.
   M. Aviles, L. Cutaia, I. Videla Dorna, M. Aba, and G. A. Bo.

8. EFFECT OF DURATION OF TREATMENT WITH PROGESTERONE VAGINAL DEVICES ON PREGNANCY RATES IN CROSS-BRED ZEBU CATTLE ARTIFICIALLY INSEMINATED AT A FIXED TIME.

9. USE OF SEXED SEMEN FOR ARTIFICIAL INSEMINATION IN HOLSTEIN HEIFERS IN MEXICO: PRELIMINARY RESULTS.
   A. Barba, Y. C. Ducolomb, and S. Romo.

10. PREGNANCY RATE IN DAIRY COWS CROSSBREED HOLSTEIN X CARORA, DURING TWO SEASONS OF THE YEAR UNDER TWO ESTRUS SYNCHRONIZATION PROGRAMS AND TROPICAL CONDITIONS IN VENEZUELA.

11. EFFECTS OF CIDR-BASED PRESYNCHRONIZATION AND eCG ON FERTILITY FOR A GnRH-BASED TIMED-AI PROTOCOL IN BEEF CATTLE.
THE EFFECT OF PROGESTERONE CONTENT IN A VAGINAL INSERT ON PREGNANCY RATES IN BEEF AND DAIRY CATTLE INSEMINATED AT FIXED TIME.

EFFECTS OF PLASMA PROGESTERONE CONCENTRATIONS ON LH RELEASE AND OVULATION IN BEEF CATTLE INSEMINATED AT FIXED TIME GIVEN GnRH.

SYNCHRONIZATION OF OVULATION IN ANESTROUS NELORE COWS TREATED WITH HORMONAL PROTOCOL WITHOUT PROGESTERONE OR PROGESTAGENS.

INCREASING ESTRUS DETECTION RATES WITHIN FOUR DAYS IN A PROSTAGLANDIN-BASED ESTRUS SYNCHRONIZATION PROGRAM IN BOS INDICUS BEEF (SISTANI) CATTLE.

OVULATION AND PREGNANCY RATES IN POSTPARTUM Bos indicus COWS TREATED WITH PROGESTERONE VAGINAL DEVICES AND ESTRADIOL BENZOATE, WITH OR WITHOUT eCG AND TEMPORARY WEANING.

FLOW CYTOMETRY ANALYSIS OF THE TURKEY SPERM GLYCOCALYX: EFFECTS OF NEURAMINIDASE TREATMENT.
J. Pelaez and J. Long.

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190 EFFECT OF THE PROPERTIES OF CERVICAL MUCUS ON PREGNANCY RATES IN HOLSTEIN HEIFERS AND COWS AFTER EMBRYO TRANSFER. T. Maekawa, S. Morita, O. Douchi, and H. Koyama.

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199 DIFFERENTIATION OF HIGHLY ENRICHED OLIGODENDROCYTE PRECURSORS AND MATURE OLIGODENDROCYTES FROM RhesUS MONKEY EMBRYONIC STEM CELLS. T. Li, Y. Xie, and W. Ji.


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297 BIRTH OF LIVE RATS THROUGH IN VITRO FERTILIZATION USING CRYOPRESERVED SPERMATOZOA: SPERM FERTILITY IMPROVED BY FREEZING AT -150°C.

298 SPERM CAPACITATED WITH CALCIUM IONOPHORE AS A VECTOR FOR IN VITRO PRODUCTION OF BOVINE TRANSGENIC EMBRYOS.

299 CONSEQUENCES OF REPEATED ULTRASOUND-GUIDED FOLLICLE ASPIRATION OF THE OVARIES OF GIR (BOS INDICUS) COWS.

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332 EMBRYONIC DEVELOPMENT AFTER SOMATIC CELL NUCLEAR TRANSFER OF PORCINE OOCYTES MEIOTICALLY INHIBITED WITH ROSCOVITINE. S. W. Kim, D. H. Kim, J. S. Seo, G. S. Im, B. C. Yang, H. S. Park, I. S. Hwang, H. T. Cheong, and B. S. Yang.


336 SHEEP OOCYTES MATURED IN A SIMPLEX MEDIUM (HECM-9), AN ANSWER TO IN VITRO FERTILIZATION. C. Navarro-Maldonado, Y. Ducolomb-Ramirez, A. Galindo-Rodriguez, and A. Rosado-Garcia.


340 In vitro maturation of prepubertal bovine oocytes on a granulosa cell monolayer from adult animals improves their developmental competence. S. Ponebsek, C. Wrenzycki, K.-G. Hadeler, D. Herrmann, K. Korsawe, and H. Niemann.


342 Development of pig oocytes matured and fertilized in chemically defined medium containing PVA, PVP, and PFF. H.-B. Seok and I.-D. Kim.


344 Pentose phosphate pathway activity controls nuclear maturation of porcine oocytes. L. Tubman, A. Peter, and R. Krisher.


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352 IMPROVING THE EFFICIENCY OF LAPAROSCOPIC INTRAVIDUCTAL INSEMINATION WITH SEX-SORTED BOAR SPERMATOZOA.

353 *IN VITRO* FERTILIZATION WITH FLOW-SORTED BUFFALO SPERM.

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354 POOR EMBRYO DEVELOPMENT AFTER ICSI WITH DOMESTIC CAT TESTICULAR SPERM IS OVERCOME BY CENTROSONE AND MIDPIECE REPLACEMENT.
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355 IMPROVEMENT OF CUMULUS-FREE *IN VITRO* MATURATION AND ITS APPLICATION TO MICRONINSEMINATION WITH PRIMARY SPERMATOCYTES IN MICE.
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356 BLASTOCYST DEVELOPMENT FROM DOMESTIC CAT OOCYTES INJECTED WITH DEHYDRATED SPERMATOZOA.

357 FERTILIZATION AND EMBRYONIC DEVELOPMENT OF PORCINE OOCYTES FOLLOWING INTRACYTOPLASMIC SPERM HEAD INJECTION ENHANCED BY ELECTRIC STIMULATION TO OOCYTES BUT NOT BY PRE-TREATMENT OF SPERMATOZOA WITH DITHIOOHERITOL.

358 MICRONINSEMINATION USING MALE GERM CELLS FROM EPIDIDYMIDES AND TESTICULAR SPERM STORED IN FREEZERS WITHOUT CRYOPROTECTANT.

359 ICSI AND ACTIVATION OF OOCYTES RECOVERED FROM TRANSITIONAL AND CYCLING MARES.
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360 THE EFFECTS OF PROGESTERONE AND PRESENCE OF CORPUS LUTEUM ON SUPEROVULATION IN BEEF CATTLE (*Bos taurus*).
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361 OVIDUCT CILIARY CURRENTS IN BOVINE AND BUFFALO AT DAY 1 AFTER OVULATION.

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Victor Michael Shille was born on February 8, 1933, in Belgrade, Yugoslavia. In 1950, Victor and his parents applied for immigration to the US and were accepted in April 1950. Arriving in New York on the 1st of May 1950 they eventually settled in Los Angeles, CA where Victor attended LA High School graduating in 1951. He applied and was accepted into the pre-veterinary program at University of California at Davis (UCD). Two years later he was accepted into the UCD School of Veterinary Medicine. He graduated in 1958 and joined the small animal practice of Dr. Neil Halpin in Santa Ana, CA. One year later, Dr. Halpin suffered a heart attack leaving the young graduate to fend for himself. It was a tough time, but Victor persevered and managed to find time to meet and successfully court a tall willowy maiden who became his bride. Becoming bored with spays and anal glands, he applied to the UCD graduate school and was awarded a NIH fellowship to study reproductive pathology, physiology and endocrinology of the domestic cat. By this time he was married and had three boys. His studies were interrupted by an assignment to an USDA team to negotiate with the Soviet Department of Agriculture a cooperative US/USSR study of Foot and Mouth disease. After completing his PhD research, he spent one year of post-doctoral studies at the Agricultural University in Uppsala Sweden where he worked on effects of prostaglandin in pigs. Upon return to the US in 1978 he interviewed at the University of Florida for the position of reproductive clinician for dogs and cats. He was appointed to the College of Veterinary Medicine. As associate professor in 1980, John Kendrick, the editor of Theriogenology, an international journal of animal reproduction, died, leaving Victor as editor. Victor saw the potential of the journal and instituted several rules designed to encourage submission of manuscripts without sacrificing quality. “We do not reject manuscripts for language problems rather we assist authors as long as it takes to produce a legible paper.” “We do not allow sarcastic reviews.” His efforts were rewarded. Today the journal thrives beautifully. Meanwhile Victor was progressing and branching out in his assigned duties. Starting with dogs and cats he soon advanced to wolves and tigers through the encouragement of Professor Elliott Jacobsen. Upon retirement from clinical and research duties in 1996, Victor devoted 100% of his time to the journal. He finally completely retired in 2000, but still reviews an occasional troublesome manuscript. He received the Norden Distinguished Teacher award, the Bartlet Award, and the Distinguished Service Award from the College of Veterinary Medicine. His guiding words are: The light of love to live by, The wine of friendship for sharing, The bread of peace to nourish heart and soul, For these I give thanks each day.
Special Events

Fourth Annual IETS Race

All participants of the IETS 2006 are cordially invited to participate in the IETS foot race, to be held on January 10, 2006 at 4:30 PM. We will gather outside the main entrance of the Caribe Royale Hotel. A map of the route is included with this message.

This is the 4th race held in conjunction with IETS – previous occasions were at the meetings at Auckland, Portland, and Copenhagen. According to our knowledge, the IETS is the only international scientific society with a foot race included into the official program of the annual meeting. We are very proud of this special achievement and want to continue the noble tradition.

After the icy roads of Portland and the dark park of Copenhagen (where one registered participant was lost and we still do not know about his fate...) we may have a much more inviting race course in Orlando around the hotel. The distance will be slightly shorter than usual, consisting of two rounds of 1.9 km, so please adjust your training plans accordingly.

Due to the increasing number of lady participants, we will provide separate gold, silver and bronze medals for women. The medals are provided through the generosity of Minitube of America. We certainly suppose that the previous Danish domination among men (Poul Maddox-Hyttel and twice Peter M. Kragh as winners) will be challenged this year by the Americans who will enjoy the benefits of the domestic atmosphere. We also hope that the (so far steady) increase of number of participant will increase and this year we will approach or maybe surpass the 50, surrounded by enthusiastic spectators as has happened always before.

We look forward to see you behind (or at least around) the startline in Orlando!”

Gabor Vajta
IETS Race Coordinator

1 Lap = 1.2 Miles
Come party in the hottest dance club with the latest in sound systems and special effects, plus three themed VIP lounges. Dance to the best in 70’s, 80’s, dance hits and Alternative Rock. Each night is a different experience!

The main social event for the meeting will be a dance on the evening of January 9 at Universal Studios City Walk. The dance itself will be held in the Groove, a hip dance club with the latest sound systems and special effects, plus three themed VIP lounges. There will also be time to explore City Walk, which is an exciting nighttime destination in Orlando with many interesting shops, restaurants, and entertainment venues. See http://themeparks.universalstudios.com/orlando/citywalk/index.html for an overview of City Walk.

Buses between the Caribe Royale Hotel and Universal City Walk will run continuously between 6:30 PM and 12:30 AM. The IETS has exclusive use of the Groove from 9:00 PM - 11:00 PM with a cash bar and with buffet stations available. Party passes to all the venues in Universal City Walk will also be provided. Dinner at the Universal City Walk is on your own. Tickets are $50.

**The Local Organizing Committee Will Be Waiting for You At The Groove!**

Disney’s Animal Kingdom has generously agreed to host a visit by IETS conference attendees to the veterinary hospital supporting Disney’s Animal Programs. Visitors will be given a tour of the Veterinary hospital, Animal Nutrition Center and the Wildlife Tracking Center and meet with Veterinarians for a description of Disney’s animal care procedures and wildlife research activities.

Attendees will leave by bus from the hotel main entrance at 12:30 PM and return to the hotel by bus at 4:00 PM. Note that the tour does not include admission to the park. Per Disney rules, no one under 16 years of age is allowed on the tour.

Attendance is limited to 100 persons with priority given to those who register first. Tickets, the proceeds of which are used for transportation, can be purchased for $20.00 as part of the registration process for the meeting.
Preconference Satellite Symposium

CHALLENGES AND OPPORTUNITIES FOR
IN VIVO EMBRYO PRODUCTION IN CATTLE
Caribe Royale Hotel, Orlando, Florida
Saturday, January 7, 2006
Bonaire 2/3/4

Sponsored by Bioniche Animal Health

Scientific Program

8:00 AM Opening remarks – Martin Warmelink, Bioniche Animal Health
8:15 AM Introductory comments - Dr. George Seidel, Moderator, Colorado State University
8:30 AM The Holstein cow in embryo transfer today as compared to 20 years ago
   Dr. John Hasler, Bioniche Animal Health USA, Inc.
9:15 AM Changes in reproductive physiology of lactating dairy cows due to elevated steroid metabo-
   lism
   Dr. Milo Wiltbank, University of Wisconsin, Madison
10:00 AM Coffee break
10:30 AM Strategies for improving fertility in the modern dairy cow
   Dr. Bill Thatcher, University of Florida, Gainesville
11:15 AM Manipulation and control of the estrous cycle in pasture-based dairy cows
   Dr. John Cavaleri, Australia
12:00 PM Lunch
1:30 PM Dissecting why superovulation and embryo transfer usually work on some farms and not
   others
   Dr. Brad Stroud, Stroud Veterinary Embryo Service, Weatherford, TX
2:15 PM Coffee Break
2:45 PM The timing of ovulation, and insemination schedules in superstimulated cattle
   Dr. Gabriel Bo, IRAC, Cordoba, Argentina
3:30 PM Superovulation and embryo transfer in Bos indicus cattle
   Dr. Pietro Baruselli, University of Sao Paulo, Brazil
4:15 PM Effects of hormonal stimulation on bovine follicular response and oocyte developmental
   competence in a commercial operation
   Dr. Jean Durocher, Boviteq, Quebec
5:00 PM General discussion
6:00 PM Cocktail and snacks

Included in the registration fee is an issue of Theriogenology with the published proceedings of both this
pre-conference and the post-conference symposium. Also included in registration are a coffee break mid
morning and a coffee break in the afternoon.
Preconference Satellite Symposium
Primate ART to ES Cells
Caribe Royale Hotel, Orlando, Florida
Saturday, January 7, 2006
Curacao 2/3/4

Program
8:30am  Opening Remarks and Welcome
        Don Wolf, Oregon National Primate Research Center, Beaverton, OR
8:45 - 09:30am  The PREGER resource for analysis of primate stem cells
                 Keith Latham, Temple University, Philadelphia, PA
9:30 – 10:15am  Genomic imprinting in non-human primate ES cells
                 Shoukhrat Mitalipov, OHSU/ONPRC, Beaverton, OR
10:15 – 10:35am  Break
10:35 – 11:20am  Microarray analysis of gene expression in monkey ES cells
                 Robert Norgren, University of Nebraska, Omaha
11:20 – 12:05pm  Parthenogenetic stem cells for treatment of neurological diseases
                 Jose Cibelli, Advanced Cell Technology, Worcester, MA
12:05 – 12:20pm  General discussion
12:20 – 1:30pm  Lunch
1:30 – 2:15pm  Toward feeder cell and serum free ES cell culture
                 Outi Hovatta, Karolinska Institute, Stockholm, Sweden
2:15 – 3:00pm  The mitochondrial contribution to stem cell biology
                 Barry Bavister, University of New Orleans, LA
3:00 – 3:20pm  Break
3:20 – 4:05pm  Opportunities and challenges in human embryonic stem cell research
                 Steve Stice, University of Georgia, Athens
4:05 – 4:50pm  Prospects for nuclear transfer production of stem cells for replacement therapies
                 Keith Campbell, University of Nottingham, Loughborough, United Kingdom
4:50 – 5:30pm  Summary and General Discussion
                 Don Wolf

Included in the registration fee are a coffee break mid morning, lunch and a coffee break in the afternoon.
Preconference Writer’s Workshop

Workshop for Authors
Publishing Scientific Papers
in English

Caribe Royale Hotel, Orlando, Florida
Saturday, January 7 and Sunday, January 8
Bonaire 5

Presented by
John P. Kastelic, DVM, PhD, Co-Editor-in-Chief, Theriogenology
Rose M. Kastelic, BA (French), MA

Many manuscripts are delayed or rejected due to poor experimental design, analysis and presentation of data, and writing. This workshop is an overview of how to plan and conduct research, analyze and present your data, write a paper, and interact with editors and reviewers. In addition to presentations of principles and common errors, there will be exercises and interactive discussions.

This workshop is primarily designed for those for whom English is a second language. Therefore, English syntax, grammar and punctuation will be reviewed. However, this workshop will also be valuable for those for whom English is their native language, especially students and young scientists.

This is a Pre-Conference workshop (in association with the 2006 IETS conference). The workshop will be held in the Caribe Royale (IETS conference hotel) in Orlando Florida on Saturday, 7 January (8:00 to 17:00) and Sunday, 8 January (8:00 to 12:00).

Class size is limited to the first 20 participants. Registration fees are payable to IETS via the registration form. The On-Site registration fee is US$150 for IETS members and US$250 for non-members (if space is available). Student registration is US$75, pre-paid or at the door. The registration fee does not include meals.
AGENDA

8:30 - 8:45 AM  P.J. Hansen, University of Florida. Welcome and overview of the situation.

Transferring a Better Embryo
Masashi Takahashi, National Agric. Research Center for Kyushu Okinawa Region, Chair
8:45 - 9:15 AM  Mark André Sirard, Laval Univ. Contribution of the oocyte to embryo quality.
10:15 - 10:45 AM BREAK

Errors in Embryonic and Fetal Development Contributing to Pregnancy Loss
Alan D. Ealy, University of Florida, Chair
10:45 - 11:15 AM W.A. King, Univ. of Guelph. Impact of chromosomal alterations on embryo development.
11:15 - 11:45 AM Peter Farin, North Carolina State University. Errors in fetal development.

Managing the Recipient to Increase Pregnancy Rate Following Transfer
Gabriel Bó, Instituto de Reproducción Animal Córdoba, Chair
1:15 - 1:45 PM J. Vasconcelos, Univ. Estadual de Sao Paulo, Botucatu. Factors potentially affecting fertility of recipient dairy cows.
2:15- 2:30 PM BREAK

The Importance of the Spermatozoan
Amir Niasari-Naslaji, University of Tehran, Chair
2:30 - 3:00 PM C.M. Barros. Univ. Estadual de Sao Paolo, Botucatu. Importance of sperm genotype (indicus vs taurus) for fertility and embryonic development at elevated temperatures.
3:00 - 3:30 PM Matthew B. Wheeler, University of Illinois. Application of sexed semen technology to in vitro embryo production in cattle.
3:45 - 4:00 PM BREAK

Cryopreservation
Andras Dinnyes, Hungarian Acad. of Sciences, Chair
4:00 - 4:30 PM George Seidel, Colorado State Univ. Modifying oocytes and embryos destined for cryopreservation.
4:30 - 5:00 PM Gabor Vajta, Danish Inst. Agric. Sci. Improving cryopreservation systems.

Panel - Where Do We Go From Here
5:00 - 5:45 PM - Don Bennink, North Florida Holsteins; Luis Ferre, Transova Genetics, Ricardo Mattos, Monsanto Corp.

Sponsor

Included in the registration fee is an issue of Theriogenology with the published proceedings of both this post-conference and the pre-conference symposium.
Post Conference Tour/Ticket Opportunities

Tour of The Center for Elephant Conservation
10:00 AM, Wednesday, January 11, 2006

Ringling Bros. And Barnum & Bailey has graciously agreed to host a tour of its Center for Elephant Conservation for a limited number of IETS attendees (see http://www.ringling.com/cec/).

To help preserve the Indian Elephant for future generations, Ringling Bros. and Barnum & Bailey® established in 1995 the 200-acre Center for Elephant Conservation (CEC) in central Florida. The $5-million state-of-the-art breeding and retirement facility is dedicated to the conservation, breeding, and study of the Asian elephant. As a global focal point for the worldwide study of the Asian elephant, the CEC is committed to share its knowledge with the rest of the scientific community.

Attendees will leave by van or car from the hotel main entrance at 10:00 AM and return to the hotel in the afternoon.

Attendance is limited to 20 persons. Priority will be given to those with interests in zoo animal reproduction. To make arrangements to attend, please contact Pete Hansen at Hansen@animal.ufl.edu.

See The Greatest Show on Earth®!
7:30 PM, Thursday, January 12, 2006

Ringling Bros. and Barnum & Bailey® has graciously agreed to provide up to 50 free tickets for IETS attendees to opening night of 136th Edition of the Ringling Bros. Circus at the Orlando Centroplex.

Packed full of surprises, this all-new Ringling Bros. breaks circus tradition with high-speed action, cutting-edge technology, and an interactive adventure that is sure to keep you talking for generations.


The number of tickets available is 50. Attendees will be responsible for their own transportation. To order tickets, please contact Pete Hansen at Hansen@animal.ufl.edu.
SAVE THE DATES

IETS 2007

JANUARY 6-10, 2007

KYOTO, JAPAN