



Photo Credit: Brian Gadbery/CTO

34th Annual Conference of the International Embryo Transfer Society

January 5-9, 2008

Hyatt Regency Denver, Denver, Colorado



IETS 2008 MEETING SPONSORS

BRONZE (\$2000-\$4999)



FRIEND (up to \$1999)



Purveyor of Quality Oocytes



PROGRAM BOOK

**THE 34TH ANNUAL CONFERENCE OF THE
INTERNATIONAL EMBRYO TRANSFER SOCIETY**

THEME: NEEDS



JANUARY 5–9, 2008

**HYATT REGENCY DENVER
DENVER, COLORADO**

**CO-CHAIRS OF THE SCIENTIFIC PROGRAM:
PAT LONERGAN AND GEORGE SEIDEL, JR.**

TABLE OF CONTENTS

2008 Preface and Acknowledgements	3
2007-2008 Board of Governors	3
2008 Recipient of the IETS Pioneer Award	4
Map of the Venue	5
Calendar of Events.....	6
General Information	8
Section Editors and Manuscript and Abstract Reviewers.....	10
Main Scientific Program	12
Poster Sessions	16
Poster and Exhibit Room Layout.....	16
Poster Session Order by Topics, Titles and Authors	17
Poster Session Author Index.....	37
2008 Recipient of the IETS Distinguished Service Award.....	45
Special Events	46
Exhibit Directory.....	48
Pre-Conference Satellite Symposium.....	50
Post-Conference Satellite Symposium.....	51
Pre-Conference Writer's Workshop.....	52

2008 PREFACE AND ACKNOWLEDGEMENTS

The 34th Annual Meeting of the International Embryo Transfer Society is being held at the Hyatt Regency Hotel in Denver, Colorado, January 6-8, 2008. This venue represents a return of IETS to its “roots”, as this meeting was held in the Denver area each of the first nine years that IETS existed, and returned to the area a number of times over the subsequent decade. The theme of this year’s program is “Needs”, needs of embryos, researchers, practitioners, students, etc. There are 10 invited speakers including Dr. David Albertini, whose keynote presentation concerns epigenetic aspects of the oocyte in the spirit of Waddington’s original broad definition of epigenetics, rather than the current narrow molecular definitions, such as methylation of cytosine in DNA. There are more than 300 contributed abstracts presented as posters; 15 of these also will be presented orally, six as student competition papers. These presentations from the students are real treats, representing some of the highest quality research presented at the meeting.

We must thank many individuals for their valuable contributions of time and effort in organizing this meeting. The main session speakers and their co-authors have provided excellent scientific material. We especially appreciate the timely help of the manuscript reviewers and are particularly grateful to all the section editors and abstract reviewers for their conscientious efforts within a short time frame. Special thanks go to the Chair of the Local Organizing Committee, Dr. Ed Squires and his extremely capable assistant, Ms. Sallie Varner, as well as student volunteers for the tremendous efforts in organizing the conference and the social events. The pre-IETS satellite symposium on Animal Models organized by George Seidel and Ed Squires, and the post-IETS satellite symposium on the Practice of Bovine Embryo Transfer, organized by Reuben Mapletoft and sponsored by Bioniche Animal Health represent special bonuses accruing from one set of travel plans. Our sincere appreciation also is extended to Jennifer Gavel, the Executive Secretary of IETS for her conscientious, Herculean efforts in making this meeting a success, and Dr. Jennifer Henry, Managing Editor of Reproduction, Fertility and Development for production of the conference proceedings. Finally, we thank all attendees for contributing to the conference, and hope that the meeting will be exceptionally rewarding.

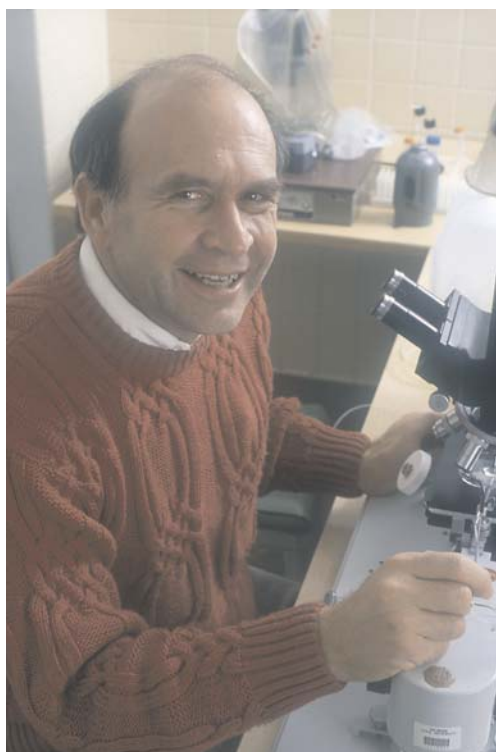
Pat Lonergan and George Seidel, Jr.
Program Co-Chairs

2007–2008 BOARD OF GOVERNORS

Takashi Nagai, Immediate Past President
Naida Loskutoff, President
Richard Fayrer-Hosken, Vice President and Secretary/Treasurer
Peter Farin, Governor
Rebecca Krisher, Governor
Pat Lonergan, Governor
Ed Squires, Governor
Ann Van Soom, Governor
Christine Wrenzycki, Governor

2008 RECIPIENT OF THE IETS PIONEER AWARD

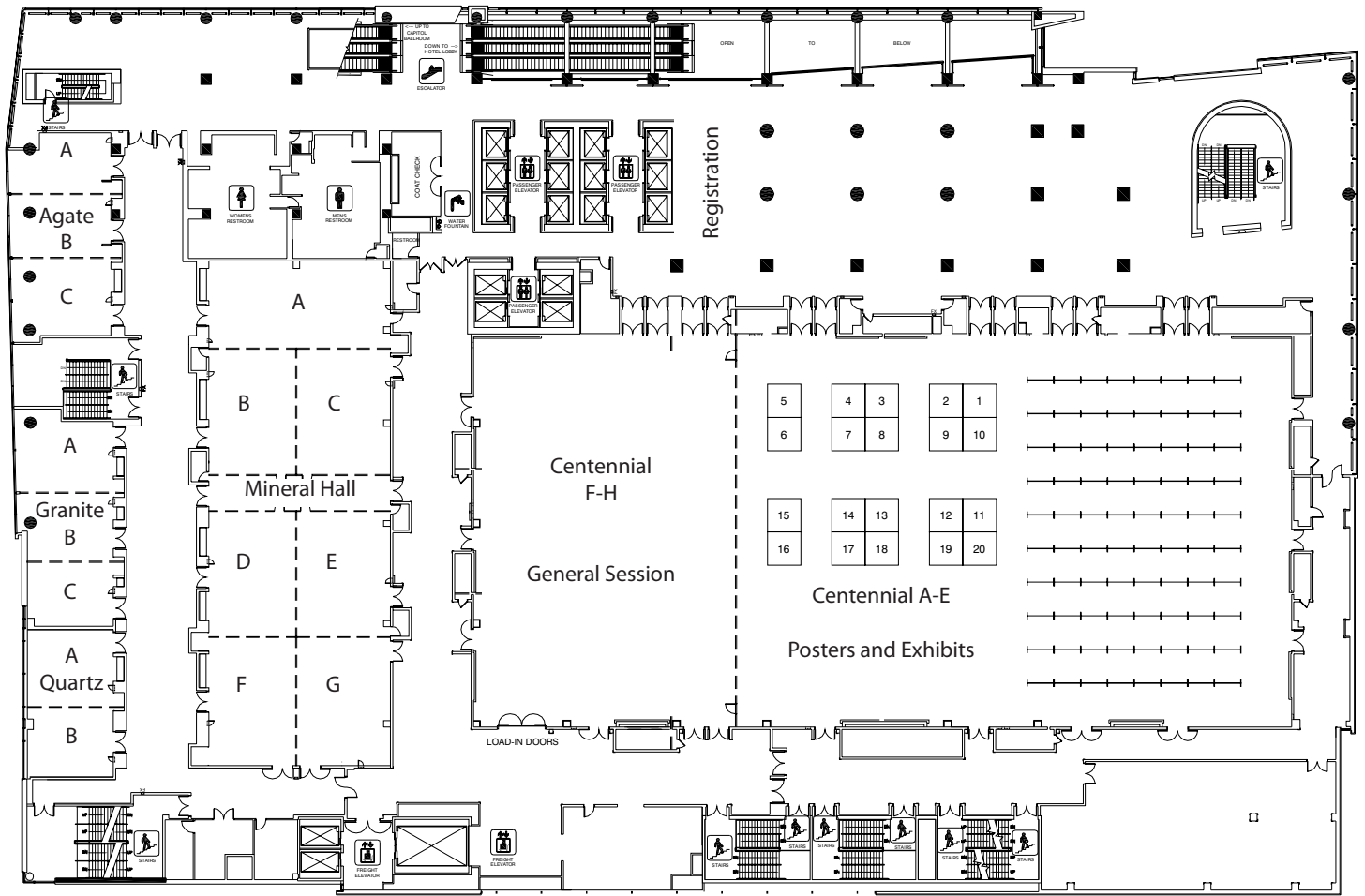
GEORGE SEIDEL, JR.



Award Presentation: Monday, January 7 at 15:50

PREVIOUS RECIPIENTS:

- A. Iritani (2007)
- D. Kraemer (2006)
- S. Willadsen (2005)
- B. Brackett (2004)
- K. Betteridge (2003)
- R.H. 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.G. Edwards (1993)
- R.L. Brinster (1992)
- A.K. Tarkowski (1991)
- J.D. Biggers (1990)
- C. Thibault (1989)
- A.L. McLaren and D. Michie (1988)
- E.J.C. Polge (1987)
- T.M. Sugie (1986)
- L.E.A. Rowson (1985)
- L.E. Casida (1984)
- M.C. Chang (1983)
- R.O. Berry (1982)



HYATT REGENCY DENVER

THIRD FLOOR

CALENDAR OF EVENTS

THURSDAY, JANUARY 3, 2008

9:00 - 17:00 IETS Board of Governors Meeting (Limestone)

FRIDAY, JANUARY 4, 2008

9:00 - 17:00 IETS Board of Governors Meeting (Limestone)

8:00 - 16:00 Health And Safety Advisory Committee (HASAC) - Research Subcommittee (Quartz)

16:00 - 19:00 Registration with pick up of pre-registrations only (Centennial Foyer)

SATURDAY, JANUARY 5, 2008

7:00 - 18:00 Registration (Centennial Foyer)

8:00 - 17:00 **Pre-Conference Workshop: Successful Publishing in an English Language Journal** (Granite)

8:00 - 17:00 **Pre-Conference Symposium: Modeling Reproductive Processes: Inter- and Intra-Species Considerations** (Centennial F)

13:00 - 18:00 Poster Setup (Centennial A-E)

13:00 - 18:00 Commercial Exhibit Setup (Centennial A-E)

17:00 - 18:30 W-1171 Research Group (Mineral Hall B)

14:00 - 17:00 Health And Safety Advisory Committee (HASAC) - Regulatory Subcommittee (Quartz)

18:00 - 20:00 Health And Safety Advisory Committee (HASAC) - Forms & Certificates Subcommittee (Quartz)

18:30 - 21:00 IETS Foundation Board of Trustees Meeting (Mineral Hall A)

SUNDAY, JANUARY 6, 2008

7:00 - 18:00 Registration (Centennial Foyer)

7:30 - 8:30 Past President's Breakfast (Mineral Hall DE)

7:30 - 8:30 Student Competition Breakfast with Foundation Education Committee (Mineral Hall A)

8:00 - 10:00 Health And Safety Advisory Committee (HASAC) - Food Safety Subcommittee (Quartz)

8:00 - 17:00 Commercial Exhibits (Centennial A-E)

8:00 - 12:00 Pre-Conference Workshop: Successful Publishing in an English Language Journal (Granite)

8:00 - 17:00 A/V Library/Speaker Preparation (Agate A)

8:30 - 10:00 W-1171 Research Group (Mineral Hall B)

8:30 - 10:00 IETS Foundation Education Committee (Mineral Hall A)

10:00 - 10:10 **Opening and Welcome** (Centennial F-H)

10:10 - 12:00 **Session I: Needs of the Embryo** (Centennial F-H)

12:00 - 13:15 Lunch Break

12:00 - 13:30 Theriogenology Editorial Board Luncheon (Quartz)

13:15 - 14:45 **Poster Session I** (Centennial A-E)

14:45 - 15:15 Coffee Break/Exhibition (Centennial A-E)

15:15 - 15:45 **Session II: Needs of Students** (Centennial F-H)

15:45 - 17:15 **IETS Foundation Student Competition Presentations** (Centennial F-H)

17:15 - 18:15 Health And Safety Advisory Committee (HASAC) Open Meeting (Centennial F-H)

18:15 - 19:15 Reception

All rooms are at the Hyatt Regency Denver, unless otherwise noted

MONDAY, JANUARY 7, 2008

- 7:30 - 16:00 Registration (Centennial Foyer)
- 8:00 - 18:00 Commercial Exhibits (Centennial A-E)
- 8:00 - 17:00 A/V Library/Speaker Preparation (Agate A)
- 8:00 - 10:05 **Session III: Research Needs for Work with Embryos** (Centennial F-H)
- 10:05 - 10:30 Coffee Break/Exhibition (Centennial A-E)
- 10:30 - 12:00 **Poster Session II** (Centennial A-E)
- 12:00 - 13:30 IETS Data Retrieval Committee Meeting (Mineral Hall A)
- 12:00 - 13:30 Lunch break
- 12:00 - 13:30 IETS Board Luncheon with Affiliate Society Representatives (Granite)
- 13:30 - 15:20 **Session IV: Cellular and Molecular Needs** (Centennial F-H)
- 15:20 - 15:50 Coffee Break/Exhibition (Centennial A-E)
- 15:50 - 16:20 **IETS Pioneer Award Presentation** (Centennial F-H)
- 16:20 - 17:00 **IETS Annual Business Meeting** (Centennial F-H)
- 17:00 - 18:00 Companion Animals, Non-Domestic & Endangered Species Committee (CANDES)
Open Meeting (Mineral Hall A)
- 17:00 - 18:00 Domestic Animal Biomedical Embryology Committee (DABE) Open Meeting (Granite)
- 18:00 - 23:00 Banquet at Stampede Mesquite Grill & Dance Emporium (transportation at 18:00)

TUESDAY, JANUARY 8, 2008

- 7:00 - 8:30 Organizational Meeting of the IETS Board of Governors (Mineral Hall A)
- 8:00 - 15:00 Registration (Centennial Foyer)
- 8:00 - 13:30 Commercial Exhibits (Centennial A-E)
- 8:00 - 17:00 A/V Library/Speaker Preparation (Agate A)
- 8:30 - 10:20 **Session V: Societal Needs** (Centennial F-H)
- 10:20 - 10:50 Coffee Break/Exhibition (Centennial A-E)
- 10:50 - 12:00 **Practitioner Forum: Regional Issues** (Centennial F-H)
- 12:00 - 13:30 Lunch break
- 13:30 - 17:00 Commercial Exhibit & Poster Teardown (Centennial A-E)
- 13:30 - 14:00 **IETS Distinguished Service Award Presentation** (Centennial F-H)
- 14:00 - 14:45 **IETS Foundation Student Competition Awards, CANDES & HASAC Updates** (Centennial F-H)
- 14:45 - 15:30 **Session VI: Keynote Address** (Centennial F-H)
- 15:30 - 15:45 **Closing Ceremony** (Centennial F-H)
- 15:45 - 16:45 6th IETS Annual Running Competition (meet in the registration area)
- 16:00 - 17:00 Organizational Meeting of the IETS Foundation (Mineral Hall A)

WEDNESDAY, JANUARY 9, 2008

- 8:00-18:00 **Post-Conference Symposium: Recent Developments in the Practice of Bovine Embryo Transfer** (Centennial A)

Post-Conference Tours

THURSDAY, JANUARY 10, 2008

Post-Conference Tours

All rooms are at the Hyatt Regency Denver, unless otherwise noted

INTERNATIONAL EMBRYO TRANSFER SOCIETY

GENERAL INFORMATION

MEETING ROOM DIRECTORY

Main Conference Sessions Centennial Hall F-H
Exhibits Centennial Hall A-E
Poster Displays Centennial Hall A-E

Please see the Calendar of Events for additional room assignments.

REGISTRATION DESK HOURS

The Registration Desk is located in the Foyer of the Centennial Hall A-E

Pick-up of pre-registration packets only

Friday, January 4 16:00–19:00

Onsite Registration Open

Saturday, January 5 07:00–18:00

Sunday, January 6 07:00–18:00

Monday, January 7 07:30–16:00

Tuesday, January 8 08:00–15:00

EXHIBIT INFORMATION

Centennial Hall A-E

Set-up

Saturday, January 5 13:00–18:00

Exhibits Open

Sunday, January 6 08:00–17:00

18:15 - 19:15 (Opening Reception-Optional)

Monday, January 7 08:00–18:00

Tuesday, January 8 08:00–13:30

Teardown

Tuesday, January 8 13:30–17:00

Details on the exhibitors can be found in the Exhibit Directory on page 49.

BADGES

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

CERTIFICATES OF ATTENDANCE/PRESENTATION

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

CURRENCY

The US Dollar is the legal tender in the United States. There are currency exchange centers located in Denver International Airport. For up to date currency exchange information check the Universal Currency Converter™ at <http://www.xe.net/ucc/>. International credit cards are accepted throughout the country and traveler's checks can be changed at banks, hotels, resorts and most city stores. All on-site transactions for the conference will be done in US Dollars drawn on a US Bank.

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 schedule break times in the Exhibition area located in Centennial Hall A-E.

MEALS

In addition to the Hyatt Regency restaurants and lounges, downtown Denver offers a large variety of options for lunch within a few blocks of the Hyatt Regency. A full restaurant listing and an easy to use map are available in your registration packet onsite.

Restaurants and Lounges in the Hyatt Regency

Altitude

Altitude serves up local favorites, traditional comfort foods and its own unique creations - prepared for your visual pleasure in our open, state-of-the-art kitchen including: Breakfast a la carte or buffet, Lunch a la carte (sandwiches, soups and refreshing salads) or buffet, and Dinner (a la carte).

Hours: BREAKFAST: 6am - 11am (mon-fri) / 6am - 12pm (sat-sun), LUNCH: 11am - 3pm (daily), DINNER: 5:30pm - 10pm (daily)

Perks Coffee & More

Perks, our 24-hour a day coffee and gift shop, is a favorite for hotel guests and locals alike. Stop in for a cup of aromatic Starbucks coffee to start the day, or for a pick-me-up in between meetings. No time for a sit-down lunch? Grab one of the delicious, ready-made sandwiches or snacks to go. Our adjoining gift shop carries a variety of local foods and other items you may need to make your stay a great one. Now you don't have to survive on airplane peanuts when you arrive in town late at night.

Hours: Open 24 hours

Strata Bar

Located on the main level, Strata Bar features an open and stylish cocktail area, bordered by a four-story glass wall with panoramic views of the Denver skyline and the Rocky Mountains. Strata Bar welcomes you with: Signature beverages, Creative beer and wine menu, and Light fare (appetizers to classic salads and sandwiches)

Hours: Open from 3:00PM Monday - Friday; Open from 12:00PM Saturday - Sunday

Peaks Lounge

Located at the top of the tower, this contemporary oasis provides the perfect backdrop for sophisticated gatherings and special occasions. Whether you are staying with us as a guest or live here in Denver, you will agree this unique locale adds just the right touch to your evening with: Innovative cocktails, Light appetizers, Delectable desserts and a Comprehensive wine and beer selections.

Hours: Sunday through Thursday - open from 4:00 p.m. ; Friday through Saturday - open from 3:00 p.m.

SECTION EDITORS AND REVIEWERS

SECTION EDITORS

Kenneth Bondioli, Student Competition
Heriberto Rodriguez-Martinez, Artificial Insemination
David Wells, Cloning/NT
Fuliang Du, Cryopreservation
Christine Wrenzycki , Developmental Biology
Thomas E. Spencer, Early Pregnancy/ Pregnancy Recognition
Dimitrios Rizos, Embryo Culture
Peter Farin, Embryo Manipulation
Richard Fayrer-Hosken, Embryo Transfer
Daniel Givens, Epidemiology/ Diseases
Naida Loskutoff, Exotic Species
Evelyn Telfer , Folliculogenesis/ Oogenesis
Erdogan Memili, Gene Expression
Pat Lonergan, IVF/IVP
Sherrie Clark, Male Physiology
Cindy Tian, Oocyte Activation
Dawit Tesfaye, Oocyte Maturation
Chis Maxwell, Sexing
Teruhiko Wakayama, Sperm Injection
Giovanna Lazzari , Stem Cells
Reuben Mapletoft, Superovulation
Carol Keefer, Transgenesis
Jaswant Singh, Ultrasound

MANUSCRIPT AND ABSTRACT REVIEWERS

Ahmed Abdoon
Gregg Adams
Gary Althouse
Jörg Aurich
Birthe Avery
Barry Bavister
Esmail Behboodi
Debbie Berg
Marcelo Bertolini
Jeff Betthausen
Zeki Beyhan
Andrzej Bielanski
Gabriel Bo
Peter Bols
Ken Bondioli

Tiziana Brevini
Vania Broccoli
Mia Buehr
Henrick Callesen
Marcos Colazo
Keith Campbell
Elaine Carnevale
Jeremy Chang
Pascale Chavatte-Palmer
Ri-Cheng Chian
Jose Cibelli
Sherrie Clark
Silvia Colleoni
David Cran
Beth Crichton

Phil Damiani
Aart de Kruif
Julio De la Fuente
Wendy Dean
Nanke Den Daas
Carmen Diez Monforte
Andras Dinnyes
John Dobrinsky
Tania Dominko
Betsy Dresser
Fuliang Du
Judith Eckert
J. Lannett Edwards
Kenneth J. Eilertsen
John Eppig

G. Evans
Trudee Fair
Charlotte Farin
Peter Farin
Richard Fayer-Hosken
Jean M. Feugang
Rafael Fissore
Elena Fulkova
Hiroaki Funahashi
Giorgi Gabor
Barend Gadella
Cesare Galli
Fulvio Gandolfi
Ron Gao
John Gibbons
Robert Godke
Enrique Gomez
Martha Gomez
Karen Goodrowe
Bernard Guerin
Alfonso Gutierrez-Adan
Frank Gwazdauskas
Pete Hansen
John Hasler
Wouter Hazeleger
Jason Herrick
Yvan Heyman
Jon Hill
Michael Hoelker
Bill Holt
Reed Holyoak
Patrice Humblot
Rajesh Jaiswal
Aloyzas Januskauskas
Lawrence Johnson
Omairma Kandil
John Kastelic
Mika Katayama
Carol Keefer
Kazuhiro Kikuchi
Alan King
Roy Kirkwood
Hiemke Knijn
Jason Knott
Duane Kraemer
Rebecca Krisher
Wilfred Kues

Cliff Lamb
Brigitte Le Guienne
Stan Leibo
Ann Lindberg
Lino Loi
Pasqualino Loi
Pat Lonergan
Charles Long
Naida Loskutoff
Zoltan Machaty
Poul Maddox-Hyttel
Reuben Mapletoft
Shonda Marley
Mario Matkovic
Chis Maxwell
Robert McCorkell
John McLaughlin
Jeremy Miles
Shoukhrat Mitalipov
Karen Moore
Satoru Moriyasu
Katherine Morton
Jan Motlik
Hiroshi Nagashima
Heiner Niemann
Bjorn Oback
Atsuo Ogura
Osamu Dochi
Eric Overstrom
Andre Palasz
Disha Pant
Damien Paris
Monique Paris
John Parrish
Fernando Peña Vega
Peter Pfeffer
Jorge Piedrahita
Irina Polejaeva
Earle Pope
Randall Prather
Giorgio Presicce
Vern Pursel
Detlef Rath
Olav Reksen
Jean-Paul Renard
Caird Rexroad
Don Rieger

Dimitrios Rizos
James Robl
Jordi Roca
Heriberto Rodriguez
Nelida Rodriguez-Osorio
Charles Rosenkrans
Karl Schellander
R. Dee Schramm
George Seidel
Allan Sheppard
Calvin R. Simerly
Jaswant Singh
Pritpal Singh Malhi
Marc-Andre Sirard
Lawrence Smith
Sadie Smith
Norah Spears
Thomas Spencer
Ed Squires
David Stringfellow
Brad Stroud
Qingyuan Sun
Evelyn Telfer
H. Robin Tervit
Dawit Tesfaye
Bill Thatcher
Michel Thibier
Jeremy Thompson
Xiuchun (Cindy) Tian
Ann Van Soom
Rita Vanessa
Paul Verma
Teru Wakayama
Simon Walker
Anneke Walters
W. S. Ward
David Wells
Mark Westhusin
Matt Wheeler
Ken White
Gemechu Wirtu
Don Wolf
Eckhard Wolf
Christine Wrenzycki
Tim Xiang
Jerry Yang
Curt Youngs

MAIN SCIENTIFIC PROGRAM

NEEDS

SUNDAY, JANUARY 6

10:00 Opening and Welcome.

SESSION I: NEEDS OF THE EMBRYO

SESSION CO-CHAIR: BARRY BAVISTER, UNIVERSITY OF NEW ORLEANS, USA

SESSION CO-CHAIR: ANN VAN SOOM, GHENT UNIVERSITY, BELGIUM

10:10 Female Reproductive Tract Fluids: Composition, Mechanism of Formation and Potential Role in the Developmental Origins of Health and Disease
Henry J. Leese, Department of Biology, University of York, York, UK

10:50 Dissection of Culture Media for Embryos - The Most Important/Less Important Components/ Characteristics
David Gardner, Department of Zoology, University of Melbourne, Victoria, Australia

11:30 Effect of Oxygen Tension on Individual *In Vitro* Bovine Embryo Development in Cumulus Cell Coculture
I. G. F. Goovaerts*, J. L. M. R. Leroy, S. Andries, J. B. P. De Clercq, and P. E. J. Bols (Abstract #128)

11:45 Effect of Osteopontin on *In Vitro* Embryo Development in Cattle
B. Gasparri*, E. Monaco, L. Boccia, A. De Rosa, L. Attanasio, and G. Killian (Abstract #202)

12:00–13:15 Lunch Break

13:15–14:45 Poster Session I (Student Competition finalists and authors of odd numbered abstracts)

14:45–15:15 Coffee Break/Exhibition
Sponsored by Estroject, ICP Bio, Pets, Inc., and Veterinary Concepts

SESSION II: NEEDS OF STUDENTS

SESSION CO-CHAIR: CHAR FARIN, NORTH CAROLINA STATE UNIVERSITY, USA

SESSION CO-CHAIR: REUBEN MAPLETOFT, UNIVERSITY OF SASKATCHEWAN, CANADA

15:15 Are Scientific Societies Serving the Needs of Graduate and Postdoctoral Students?
Janice Bahr, Department of Animal Sciences, University of Illinois, Urbana, IL, USA

IETS FOUNDATION STUDENT COMPETITION ORAL PRESENTATIONS

SESSION CHAIR: KEN BONDIOLI, LOUISIANA STATE UNIVERSITY, USA

15:45 Differences in Resumption of Oocyte Maturation in Young and Old Mares
L. F. Campos-Chillon*, C. M. Clay, J. L. Altermatt, G. J. Bouma, and E. M. Carnevale (Abstract #1)

16:00 Detection of Antisense to IGF2R (Air) RNA in Cattle
W. T. Farmer*, P. W. Farin, S. R. Bischoff, J. E. Alexander, J. A. Piedrahita, and C. E. Farin (Abstract #2)

16:15 *In Vitro* Maturation Alters Gene Expression in Mouse Oocytes
M. Paczkowski*, C. Bidwell, D. Spurlock, J. Waddell, and R. L. Krisher (Abstract #3)

- 16:30 Impaired Incretin Effect in Transgenic Pigs Expressing a Dominant Negative Receptor for Glucose-Dependent Insulinotropic Polypeptide in the Pancreatic Islets
S. Renner*, B. Keler, N. Herbach, D. C. Von Waldthausen, R. Wanke, A. Hofmann, A. Pfeifer, and E. Wolf (Abstract #4)
- 16:45 Transcriptional Profiling of Pig in *In Vivo*, *In Vitro*-Fertilized, and Nuclear Transfer-Derived Blastocysts and the Donor Somatic Cell Line
K. M. Whitworth*, L. D. Spate, R. Li, A. Rieke, D. M. Wax, P. Sutovsky, J. A. Green, and R. S. Prather (Abstract #5)
- 17:00 Lentiviral Transgenesis in Mice and Nonhuman Primates
S. Y. Yang*, P. C. Cheng, and A. W. S. Chan (Abstract #6)
- 17:15–18:15 Health And Safety Advisory Committee (HASAC)—Open Meeting
- 18:15–19:15 Opening Reception and Exhibitor Showcase

MONDAY, JANUARY 7

SESSION III: RESEARCH NEEDS FOR WORK WITH EMBRYOS

SESSION CO-CHAIR: PETE HANSEN, UNIVERSITY OF FLORIDA, USA

SESSION CO-CHAIR: DIMITRIOS RIZOS, INIA, SPAIN

- 8:00 To QC or Not To QC - The Key to a Consistent Laboratory?
Michelle Lane, Research Centre for Reproductive Health, Discipline of Obstetrics and Gynaecology, University of Adelaide, Adelaide, Australia; and Repromed, Adelaide Fertility Clinic, Dulwich, Australia
- 8:40 Experimental Design, Power, and Sample Size for Animal Reproduction Experiments
Phil Chapman, Department of Statistics, Colorado State University, Fort Collins, CO, USA.
- 9:20 Role of Glucose and Fatty Acid Metabolism in Porcine Early Embryo Development.
R. G. Sturmey* and H. J. Leese (Abstract #137)
- 9:35 Insemination of Ovum Pickup-Derived Dairy Cows Results in Offspring with Normal Birth Weight
E. Mullaart*, B. Landman, and J. S. Merton (Abstract #212)
- 9:50 Effect of Follicular Wave Synchronization and Superstimulation on In Vitro Embryo Production
K. Imai*, Y. Inaba, H. Yoshioka, Y. Aikawa, M. Ohtake, M. Suzuki, and S. Kobayashi (Abstract #206)
- 10:05–10:30 Refreshment Break/Exhibition
Sponsored by PETS, Inc.
- 10:30–12:00 Poster Session II (Authors of even numbered abstracts)
- 12:00–13:30 Lunch Break

SESSION IV: CELLULAR AND MOLECULAR NEEDS

SESSION CO-CHAIR: HIROSHI NAGASHIMA, MEIJI UNIVERSITY, JAPAN

SESSION CO-CHAIR: ECKHARD WOLF, GENE CENTER, UNIVERSITY MUNICH, GERMANY

- 13:30 Cytoplasmic and Nuclear Determinants of the Maternal-To-Embryonic Transition
George Smith, Laboratory of Mammalian Reproductive Biology and Genomics,
Departments of Animal Science and Physiology, Michigan State University, East Lansing,
MI, USA
- 14:10 Insights and Applications from Sequencing the Bovine Genome
David Adelson, Centre for Bioinformatics and Computational Genetics, School of Molecular
and Biomedical Science, School of Agriculture, Food and Wine, The University of Adelaide,
Adelaide, South Australia, Australia
- 14:50 Changes of Higher Order Chromatin Arrangements Correlate with Genome Activation
During Early Bovine Development
D. Koehler*, A. Brero, T. Cremer, E. Wolf, and V. Zakhartchenko (Abstract #107)
- 15:05 miRNA Levels During Bovine Preimplantation Embryonic Development
D. K. Berg*, S. E. Beaumont, and P. L. Pfeffer (Abstract #168)
- 15:20–15:50 Refreshment Break/Exhibition
Sponsored by Estroject, ICP Bio, Pets, Inc., and Veterinary Concepts
- 15:50 2008 IETS Pioneer Award Presentation
- 16:20 IETS Annual Business Meeting
- 17:00–18:00 Companion Animal, Non-Domestic & Endangered Species Committee (CANDES)—Open
Meeting
- 17:00–18:00 Domestic Animal Biomedical Embryology Committee (DABE)—Open Meeting
- 18:00–23:00 Banquet at Stampede Mesquite Grill & Dance Emporium (transportation at 18:00)

TUESDAY, JANUARY 8

SESSION V: SOCIETAL NEEDS

SESSION CO-CHAIR: RANDALL PRATHER, UNIVERSITY OF MISSOURI, USA

SESSION CO-CHAIR: PASCALE CHAVATTE-PALMER, INRA, FRANCE

- 8:30 Commercializing Genetically Modified Animal Products
Eddie J. Sullivan, Hematech, Inc., Sioux Falls, SD, USA
Sponsored by Hematech, Inc.
- 9:10 Current Ethical Issues in Animal Biotechnology
Paul Thompson, Michigan State University, East Lansing, MI, USA

- 9:50 Production of Pigs Transgenic for Human Hemeoxygenase-I by Somatic Nuclear Transfer
B. Petersen*, A. Lucas-Hahn, D. Herrmann, W. A. Kues, W. Ramackers, S. Bergmann, J. W. Carnwath, M. Winkler, and H. Niemann (Abstract #309)
- 10:05 Placental Development in a Bovine Heterosis Model
C. Fitzsimmons, Z. Kruk, D. Lines, C. Roberts, and S. Hiendleder (Abstract #101)
- 10:20–10:50 Refreshment Break / Exhibition
Sponsored by Estroject, ICP Bio, Pets, Inc., and Veterinary Concepts

PRACTITIONER'S FORUM: REGIONAL ISSUES

MODERATOR: CHARLES LOONEY, OVA GENIX, LP, USA

- 10:50–12:00 Differences in the Daily Practice of Bovine Embryo Transfer in Different Parts of the World
Panel Speakers:
- Gabriel Bo, Argentina, representing Latin America
 - Patrice Humblot, France, representing Europe
 - Gyu-Jin Rho, Korea, representing Oriental countries
- 12:00–13:30 Lunch Break
- 13:30 2007 IETS Distinguished Service Award Presentation
- 14:00 Presentation of the Student Competition Awards
- 14:15 CANDES Update
- 14:30 HASAC Update

SESSION IV: KEYNOTE ADDRESS

SESSION CO-CHAIR: POUL MADDOX-HYTTEL, UNIVERSITY OF COPENHAGEN, DENMARK

SESSION CO-CHAIR: CINDY TIAN, UNIVERSITY OF CONNECTICUT, USA

- 14:45 Epigenetic Regulation During Mammalian Oogenesis
David Albertini, Department of Molecular and Integrative Physiology, The Center for Reproductive Sciences, University of Kansas Medical Center, Kansas City, KS; and Marine Biological Laboratory, Woods Hole, MA, USA
- 15:30 Closing Ceremony
- 15:45 6th Annual Running Competition

POSTER SESSIONS

LOCATION

Posters are located in the Centennial Hall A-E of the Hyatt Regency Denver with the exhibitors. (See map on page 5)

POSTER NUMBERS

Posters are identified by the number corresponding to their abstract number in *Reproduction, Fertility and Development* 2008; 20 (1). Numbering begins at 1 and ends at 315.

SET-UP

Posters can be put up from 13:00-18:00 Saturday, January 5, 2008 and from 07:00-08:00 on Sunday, January 6, 2008. All posters must remain up throughout the meeting. Authors of posters that are not put up by 8:00 on Sunday will be reported to the IETS President for possible disciplinary action.

POSTER SESSION I

Presentation by authors of 'odd' numbered abstracts (i.e. 7, 9, 11, etc.) in *Reproduction, Fertility and Development* 2008; 20 (1) and the Student Competition finalist poster presentations will take place **Sunday, January 6, 2008 from 13:15 to 14:45.**

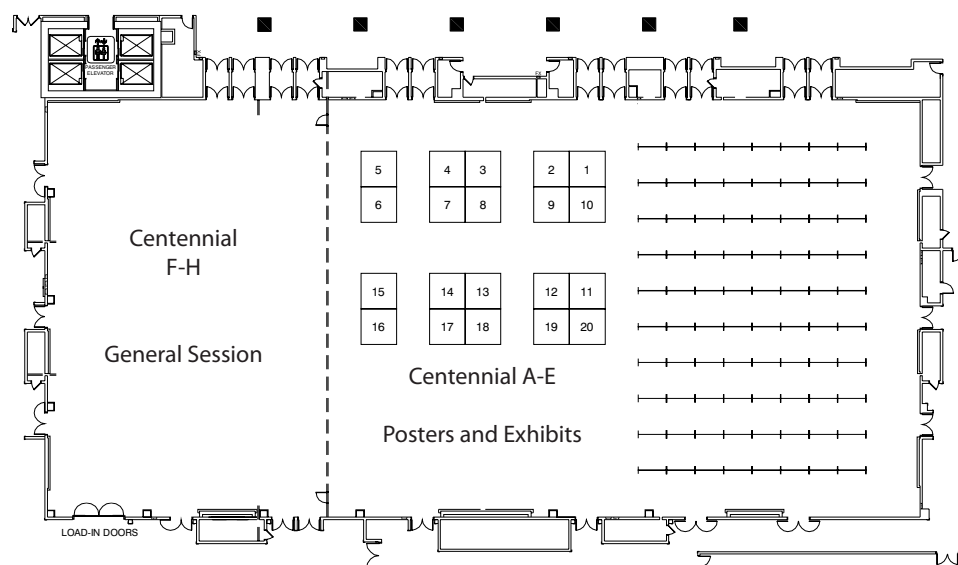
POSTER SESSION II

Presentation by authors of 'even' numbered abstracts (i.e. 8, 10, 12, etc.) in *Reproduction, Fertility and Development* 2008; 20 (1) will take place **Monday, January 7, 2008 from 10:30 to 12:00.**

TEARDOWN

Poster teardown must take place from 13:30 to 17:00 Tuesday afternoon (January 8, 2008). Posters that are not taken down by 17:00 on Tuesday will be taken down and thrown away.

POSTER AND EXHIBIT ROOM LAYOUT



POSTER SESSION ORDER BY TOPIC

POSTER NUMBER = ABSTRACT NUMBER IN REPRODUCTION, FERTILITY AND DEVELOPMENT 2008; 20 (1)

STUDENT COMPETITION FINALISTS

- 1 DIFFERENCES IN RESUMPTION OF OOCYTE MATURATION IN YOUNG AND OLD MARES.
L. F. Campos-Chillon, C. M. Clay, J. L. Altermatt, G. J. Bouma, and E. M. Carnevale.
- 2 DETECTION OF ANTISENSE TO IGF2R (AIR) RNA IN CATTLE.
W. T. Farmer, P. W. Farin, S. R. Bischoff, J. E. Alexander, J. A. Piedrahita, and C. E. Farin.
- 3 *IN VITRO* MATURATION ALTERS GENE EXPRESSION IN MOUSE OOCYTES.
M. Paczkowski, C. Bidwell, D. Spurlock, J. Waddell, and R. L. Krisher.
- 4 IMPAIRED INCRETIN EFFECT IN TRANSGENIC PIGS EXPRESSING A DOMINANT NEGATIVE RECEPTOR FOR GLUCOSE-DEPENDENT INSULINOTROPIC POLYPEPTIDE IN THE PANCREATIC ISLETS.
S. Renner, B. Keßler, N. Herbach, D. C. von Waldthausen, R. Wanke, A. Hofmann, A. Pfeifer, and E. Wolf.
- 5 TRANSCRIPTIONAL PROFILING OF PIG IN *IN VIVO*, *IN VITRO*-FERTILIZED, AND NUCLEAR TRANSFER-DERIVED BLASTOCYSTS AND THE DONOR SOMATIC CELL LINE.
K. M. Whitworth, L. D. Spate, R. Li, A. Rieke, D. M. Wax, P. Sutovsky, J. A. Green, and R. S. Prather.
- 6 LENTIVIRAL TRANSGENESIS IN MICE AND NONHUMAN PRIMATES.
S. Y. Yang, P. C. Cheng, and A. W. S. Chan.

ARTIFICIAL INSEMINATION

- 7 EFFECT OF DENSITY GRADIENT CENTRIFUGATION WITH TRYPSIN ON THE FERTILIZING CAPABILITY OF BOVINE SPERM.
B. A. Blevins, M. de la Rey, and N. M. Loskutoff.
- 8 FLOW CYTOMETRIC MONITORING OF CHOLERA TOXIN B SUBUNIT BINDING TO BOVINE SPERMATOZOA.
M. Boilard, M. Beaulieu, and P. Blondin.
- 9 COMPARATIVE EFFICACY OF AN 8-DAY CUE-MATE®/ESTRADIOL BENZOATE PROGRAM WITH OR WITHOUT INCLUSION OF EQUINE CHORIONIC GONADOTROPIN IN ANESTROUS DAIRY COWS.
M. A. Bryan, R. Emslie, and C. Heuer.
- 10 INOCULATION OF CULTURE-NEGATIVE PORCINE SEMEN WITH NOVEL BIOFILM-FORMING BACTERIA.
S. Clark, A. Ness, J. Baldrighi, L. Borst, C. Maddox, and B. Payne.
- 11 EVALUATION OF A CONTINUING EDUCATION PROGRAM FOR VETERINARIANS: OUTCOME ASSESSMENT OF APPLIED REPRODUCTIVE TECHNIQUES IN BEEF PRODUCTION.
F. A. Di Croce, P. H. Bergonzelli, A. L. Soraci, and G. M. Schuenemann.
- 12 COMPUTER-ASSISTED SPERM ANALYSIS OF FRESH EPIDIDYMAL CAT SPERMATOZOA AND THE IMPACT OF COOLED STORAGE (4°C) ON SPERM QUALITY.
M. Filliers, T. Rijsselaere, P. Bossaert, V. De Causmaecker, J. Dewulf, C. E. Pope, and A. Van Soom.
- 13 STRATEGIES TO INCREASE OVULATORY FOLLICLE SIZE AND REDUCE OVULATION TIME IN LACTATING DAIRY COWS.
J. O. Giordano, J. L. Edwards, G. M. Schuenemann, N. Rohrbach, and F. N. Schrick.
- 14 MORPHOLOGICAL AND FUNCTIONAL PARAMETERS OF ENDANGERED BERMEYA GOAT BREED SEMEN.
C. O. Hidalgo, A. Rodríguez, C. Díez, D. Martín, M. Carbajo, A. Martínez, J. de la Fuente, A. T. Palasz, J. M. Benito, and C. Tamargo.
- 15 HEAT SHOCK COGNATE 70 PROTEIN IMPROVES THE LONG-TERM SURVIVAL OF RAM SPERMATOZOA DURING STORAGE AT 17°C IN A COMMERCIAL EXTENDER.
R. E. Lloyd, P. F. Watson, and W. V. Holt.
- 16 COMPUTER-ASSISTED SPERM ANALYSIS SPERM PARAMETERS OF *BOS TAURUS CRIOLLOS* BULL SEMEN VS. THOSE OF OTHER *BOS TAURUS* BREEDS IN ARGENTINA.
M. G. Lüssenhoff, G. Larraburu, R. Cavia, A. Garcia Guerra, and G. M. Brogliatti.

- 17 INFLUENCE OF DIFFERENT CONCENTRATIONS OF PROGESTERONE DURING FIXED-TIME ARTIFICIAL INSEMINATION PROTOCOLS ON OVULATION AND PREGNANCY RATES IN NELORE HEIFERS.
M. F. Pegorer, R. L. Ereno, and C. M. Barros.
- 18 PREGNANCY RATES IN DUAL-PURPOSE CROSSBRED (*BOS TAURUS* × *BOS INDICUS*) HEIFERS TREATED WITH DIFFERENT OVSYNCH-BASED PROTOCOLS.
F. Perea-Ganchou, A. De Ondiz, C. Ramirez, R. Palomares-Naveda, H. J. Hernandez-Fonseca, and G. Portillo-Martinez.
- 19 THE EFFECT OF PROGESTERONE ON FOLLICULAR DEVELOPMENT AND PREGNANCY RATE IN BEEF CATTLE.
L. F. Pfeifer, R. Mapletoft, G. Adams, J. Kastelic, J. Small, F. Dias, and J. Singh.
- 20 ADMINISTRATION OF FOLLICLE-STIMULATING HORMONE AT CIDR REMOVAL DOES NOT AFFECT THE PREGNANCY RATE IN A CIDR-BASED, COSYNCH PROTOCOL IN LACTATING BEEF COWS.
J. Small, F. Dias, L. Pfeifer, K. Lightfoot, M. Colazo, J. Kastelic, and R. Mapletoft.
- 21 DEVELOPMENT OF A TIMED INSEMINATION PROGRAM IN DAIRY HEIFERS AS A PLATFORM TO DETERMINE IF FLUNIXIN MEGLUMINE IMPROVES PREGNANCY RATE AND EMBRYO SURVIVAL.
W. W. Thatcher, C. A. Risco, J. Larson, M. J. Thatcher, F. Lima, and S. A. Woodall.
- 22 PREGNANCY RATES IN DAIRY COWS TREATED WITH PROGESTERONE-RELEASING DEVICES AND DIFFERENT GONADOTROPIN-RELEASING HORMONE OR ESTRADIOL PLUS EQUINE CHORIONIC GONADOTROPIN FIXED-TIME ARTIFICIAL INSEMINATION PROTOCOLS.
G. Veneranda, L. Filippi, D. Racca, L. Cutaia, and G. A. Bo.

CLONING/NUCLEAR TRANSFER

- 23 PRODUCTION OF HANDMADE CLONED GOAT BLASTOCYSTS USING FETAL FIBROBLAST CELLS.
Y. S. Akshey, D. Malakar, and A. K. De.
- 24 DEVELOPMENT OF BOVINE CLONED EMBRYOS PRODUCED BY NUCLEAR TRANSFER OF EMBRYONIC CULTURED CELLS ISOLATED FROM SOMATIC CELL NUCLEAR TRANSFER BLASTOCYSTS.
X. J. Bai, J. L. Yu, M. Murakami, Y. Zhang, and Y. J. Dong.
- 25 CRYOPRESERVATION AND *IN VITRO* CULTURE AFFECT HISTONE ACETYLATION LEVELS OF BOVINE FIBROBLASTS.
L. Chacón, M. C. Gómez, J. A. Jenkins, G. Wirtu, B. L. Dresser, and C. E. Pope.
- 26 NUCLEAR REPROGRAMMING AND EMBRYONIC AND FETAL DEVELOPMENT OF CLONED OVINE EMBRYOS PRODUCED USING CAFFEINE-TREATED OOCYTES AS CYTOPLAST RECIPIENTS.
I. Choi, J.-H. Lee, P. Fisher, and K. H. S. Campbell.
- 27 EFFECT OF ACTIVATION METHODS AND BIOPSY SAMPLING ON NUCLEAR TRANSFER BLASTOCYST PRODUCTION AND CLONING EFFICIENCY IN A HORSE.
Y. H. Choi, D. L. Hartman, R. A. Fissore, S. J. Bedford, and K. Hinrichs.
- 28 HIGH HYDROSTATIC PRESSURE IMPROVED DEVELOPMENTAL COMPETENCE OF PORCINE OOCYTES FOR HANDMADE CLONING.
Y. Du, L. Lin, C. Pribenszky, M. Molnár, P. M. Kragh, J. Li, X. Zhang, H. Yang, A. M. Pedersen, K. Villemoes, L. Bolund, and G. Vajta.
- 29 EVALUATION OF DIFFERENT FUSION PARAMETERS IN THE RECONSTRUCTION OF SWINE HANDMADE CLONING EMBRYOS.
C. Feltrin, A. S. Lima, M. Monaco, S. M. Wilson, D. Kim, M. B. Wheeler, and J. L. Rodrigues.
- 30 INHIBITION OF DNA METHYLTRANSFERASE 1 EXPRESSION IN BOVINE FIBROBLAST CELLS FOR NUCLEAR TRANSFER.
A. M. Giraldo, J. W. Lynn, M. N. Purpera, R. A. Godke, and K. R. Bondioli.
- 31 ALTERED HYPOTHALAMIC-PITUITARY-ADRENAL AXIS RESPONSE IN WEANED CLONED CALVES.
M. P. Green, M. C. Berg, and R. S. F. Lee.
- 32 FIRST SHEEP CLONES BORN IN SOUTH AMERICA.
J. Gutierrez, J. Balladares, G. Suarez, M. Pugliese, F. Rigali, L. Cané, M. Panarace, and M. Medina.

- 33 PRE- AND POST-IMPLANTATION DEVELOPMENT OF EMBRYOS CLONED FROM PORCINE SKIN-DERIVED SPHERE STEM CELLS.
Y. H. Hao, D. Wax, Z. S. Zhong, C. N. Murphy, L. Spate, M. Samuel, A. Rieke, P. Dyce, J. L. Li, and R. S. Prather.
- 34 MEIOTIC RECOMBINATION IN SOMATIC CELL NUCLEAR TRANSFER BULLS AND THEIR OFFSPRING.
E. J. Hart, A. Pinton, A. Powell, R. Wall, and W. A. King.
- 35 *IN VITRO* DEVELOPMENT OF NUCLEAR TRANSFER EMBRYOS DERIVED FROM PORCINE EMBRYONIC GERM CELLS AND THEIR DESCENDENT NEURAL PRECURSOR CELLS.
S. Y. Heo, K. S. Ahn, D. C. Na, J. Y. Won, H. B. Seok, S. J. Choi, and H. Shim.
- 36 CLONED BEAGLE DOGS DERIVED FROM FETAL FIBROBLASTS BY NUCLEAR TRANSFER.
S. G. Hong, G. Jang, M. K. Kim, H. J. Oh, J. E. Park, S. K. Kang, D. Y. Kim, and B. C. Lee.
- 37 EFFECTS OF TRICHOSTATIN A TREATMENT ON BOVINE SOMATIC CELL NUCLEAR TRANSFER EMBRYOS.
A. E. Iager, Z. Beyhan, P. J. Ross, N. P. Ragina, K. Cunniff, R. M. Rodriguez, and J. B. Cibelli.
- 38 EFFECTS OF TRICHOSTATIN A ON DNA METHYLATION IN CLONED BOVINE EMBRYOS.
D. Iwamoto, S. Kishigami, S. Taniguchi, Y. Abe, T. Matsui, A. Kasamatsu, A. Tatemizo, T. Mitani, H. Kato, K. Matsumoto, Y. Hosoi, T. Wakayama, A. Iritani, and K. Saeki.
- 39 CLONAL OFFSPRING DERIVED FROM SEPARATED BLASTOMERES IN CYNOMOLGUS MONKEYS (*MACACA FASCICULARIS*).
C. Iwatani, J. Okahara-Narita, J. Yamasaki, H. Tsuchiya, and R. Torii.
- 40 EARLY DEVELOPMENT OF RECONSTRUCTED MOUSE EMBRYOS USING BONE MARROW CELLS FROZEN WITHOUT CRYOPROTECTANT.
H. Kato, A. Nakao, M. Nishiwaki, M. Anzai, T. Mitani, K. Matsumoto, K. Saeki, Y. Hosoi, and A. Iritani.
- 41 NUCLEAR REMODELING IS AFFECTED BY TREATMENT OF BOVINE OOCYTES WITH A PROTEASOME INHIBITOR BEFORE NUCLEAR TRANSFER.
D. Le Bourhis, L. Gall, S. Ruffini, Y. Heyman, and X. Vignon.
- 42 DEVELOPMENT OF PIG EMBRYOS CLONED FROM DONOR CELLS TREATED WITH TRICHOSTATIN A.
J. Li, Y. Du, P. M. Kragh, S. Purup, K. Villemoes, A. M. Pedersen, A. L. Jørgensen, L. Bolund, H. M. Yang, and G. Vajta.
- 43 PRODUCTION OF CLONED BLASTOCYSTS USING EPITHELIAL CELLS CULTURED FROM BOVINE SEMEN.
J. Liu, M. E. Westhusin, and D. C. Kraemer.
- 44 EFFECT OF CYTOPLAST VOLUME ON FERTILIZATION AND EMBRYO DEVELOPMENT IN PORCINE M-II OOCYTES RECONSTRUCTED WITH KARYOPLASTS AND CYTOPLASTS OBTAINED BY THE "CENTRI-FUSION" METHOD.
N. Maedomari, K. Kikuchi, M. Fahrudin, N. Nakai, M. Ozawa, T. Somfai, J. Ito, J. Noguchi, H. Kaneko, T. Nagai, and N. Kashiwazaki.
- 45 EFFECT OF TRICHOSTATIN A TREATMENT ON THE TERM DEVELOPMENT OF SOMATIC CELL NUCLEAR TRANSFER RABBIT EMBRYOS.
Q. Meng, Z. Polgar, J. Liu, and A. Dinnyes.
- 46 EXPRESSION OF TRANSCRIPTION FACTORS SPECIFIC TO THE TROPHOBLAST LINEAGE IN MOUSE SOMATIC NUCLEAR TRANSFER EMBRYOS.
T. Mitani, M. Nishiwaki, M. Anzai, H. Kato, Y. Hosoi, and A. Iritani.
- 47 SUCCESSFULLY PRODUCING CLONED MICE FROM SOMATIC CELLS OF AGED MICE VIA ESTABLISHED ntES CELL LINES.
E. Mizutani, T. Ono, L. Chong, and T. Wakayama.
- 48 THE AMOUNT OF TELOMERIC DNA IN LYMPHOCYTES OF DOG CLONES.
H. J. Oh, M. K. Kim, G. Jang, H. J. Kim, S. G. Hong, J. E. Park, S. H. Sohn, S. K. Kang, P. D. Ryu, and B. C. Lee.
- 49 EARLY ASPECTS OF NUCLEAR REPROGRAMMING FOLLOWING BOVINE SOMATIC CELL NUCLEAR TRANSFER.
I. Petrovicova, O. Svarcova, F. Strejcek, A. Lucas-Hahn, E. Lemme, H. Niemann, J. Laurincik, and P. Maddox-Hyttel.

- 50 EFFECT OF AGGREGATION OR FUSION ON DEVELOPMENT AND CELL NUMBER OF BOVINE EMBRYOS PRODUCED BY HANDMADE CLONING AND PARTHENOGENESIS.
E. S. Ribeiro, R. P. C. Gerger, L. U. Ohlweiler, I. Ortigari Jr., F. Forell, L. R. Bertolini, J. C. Mezzalira, J. L. Rodrigues, C. E. Ambrósio, M. A. Miglino, A. D. Vieira, A. Mezzalira, and M. Bertolini.
- 51 CHARACTERIZATION OF HISTONE H3 LYSINE 27 TRI-METHYLATION AND POLYCOMB GROUP GENE EXPRESSION IN BOVINE FERTILIZED, PARTHENOGENETIC, AND CLONED EMBRYOS.
P. J. Ross, N. Ragina, R. M. Rodriguez, K. Siripattarapavat, N. Lopez-Corrales, A. E. Lager, and J. B. Cibelli.
- 52 INITIATION OF PREGNANCIES IN SOUTH AFRICAN RIVERINE RABBIT (*BUNOLAGUS MONTICULARES*) BY INTERSPECIES NUCLEAR TRANSFER USING ADIPOSE-DERIVED SOMATIC CELLS.
M. J. Sansinena, D. Owiny, R. S. Denniston, D. Salamone, and D. Barry.
- 53 EFFECTS OF DEMECOLCINE ON MICROTUBULE COMPOSITION AND CHEMICALLY ASSISTED ENUCLEATION OF BOVINE OOCYTES.
N. Z. Saraiva, F. Perecin, S. C. Méo, C. R. Ferreira, T. A. D. Tetzner, C. S. Oliveira, and J. M. Garcia.
- 54 CHEMICAL ENUCLEATION OF *IN VITRO*-MATURED BUFFALO (*BUBALUS BUBALIS*) OOCYTES INDUCED BY DEMECOLCINE FOR HANDMADE SOMATIC CELL CLONING.
R. A. Shah, M. S. Chauhan, R. S. Manik, and S. K. Singla.
- 55 LIVE PLASMA MEMBRANE ANALYSIS OF EARLY APOPTOTIC CELL DEATH IN PORCINE ADULT DERMAL FIBROBLASTS PRIOR TO SOMATIC CELL CLONING.
M. Skrzyszowska and M. Samiec.
- 56 DEVELOPMENT OF INTERSPECIES CLONED EMBRYOS USING SOMATIC CELLS FROM VARIOUS SPECIES AND BOVINE CYTOPLASTS.
B. S. Song, J. S. Kim, X. L. Jin, Y. Y. Lee, Y. J. Cho, C. H. Kim, K. K. Lee, and D. B. Koo.
- 57 GENOME ACTIVATION IN MOUSE EMBRYOS OF DIFFERENT ORIGIN.
O. Svarcova, A. Dinnyes, Z. Polgar, S. Bodo, M. Adorjan, Q. Meng, R. Udupa, M. K. Wang, and P. Maddox-Hyttel.
- 58 PRODUCTION OF CLONED BOVINE EMBRYOS DERIVED FROM AMNIOTIC CELLS OF PREGNANT COWS.
S. Taniguchi, N. Hayashi, Y. Abe, D. Iwamoto, S. Kishigami, M. Kishi, H. Kato, T. Mitani, K. Matsumoto, Y. Hosoi, A. Iritani, Y. Nagao, and K. Saeki.
- 59 *IN VITRO* DEVELOPMENT OF FELINE CLONED EMBRYOS RECONSTRUCTED WITH PREADIPOCYTES.
R. Tomii, B. Ogawa, and H. Nagashima.
- 60 INFLUENCE OF HOECHST STAINING FOR NUCLEAR TRANSFER ON PARTHENOGENETIC EMBRYOS IN *CYNOMOLGUS* MONKEYS (*MACACA FASCICULARIS*).
H. Tsuchiya, C. Iwatani, J. Okahara-Narita, J. Yamasaki, and R. Torii.
- 61 BOVINE OOPLOSM PARTIALLY REMODELS CHIMPANZEE SOMATIC NUCLEI FOLLOWING SOMATIC CELL NUCLEAR TRANSFER.
K. Wang, Z. Beyhan, R. Rodriguez, P. J. Ross, A. Lager, G. Kaiser, Y. Chen, and J. B. Cibelli.
- 62 DIFFERENT EFFECT OF TRICHOSTATIN A ON *IN VITRO* DEVELOPMENT OF PORCINE TRANSGENIC SOMATIC CELL NUCLEAR TRANSFER AND PARTHENOGENETICALLY ACTIVATED EMBRYOS.
H. X. Wei, K. Zhang, Y. F. Ma, Y. Li, Q. Y. Li, Y. P. Dai, and N. Li.
- 63 PRODUCTION OF CLONED TRANSGENIC RED CATS.
X. J. Yin, H. S. Lee, X. F. Yu, E.G. Choi, B. C. Koo, M. S. Kwon, Y. S. Lee, S. J. Cho, G. Z. Jin, L. H. Kim, H. D. Shin, T. Kim, N. H. Kim, and I. K. Kong.
- 64 RECONSTRUCTION OF HETEROGENEOUS EMBRYOS BY HUMAN SOMATIC CELLS AND BOVINE ENUCLEATED OOCYTES AND ISOLATION OF PUTATIVE HUMAN EMBRYONIC STEM CELL CLONES.
D. Zhang and H. M. Zhou.
- 65 CLONED EMBRYOS FROM HORSE SOMATIC CELLS AND ENUCLEATED BOVINE AND OVINE OOCYTES AND THEIR DEVELOPMENTAL COMPETENCE.
H. M. Zhou, B. S. Li, and L. J. Zhang.

CRYOPRESERVATION/CRYOBIOLOGY

- 66 INDIRECT SOLID-SURFACE VITRIFICATION OF MURINE OVARIAN BIOPSIES AND ISOLATED FOLLICLES.
J. M. J. Aerts, J. B. P. De Clercq, S. Andries, J. L. M. R. Leroy, and P. E. J. Bols.
- 67 DELIVERING CHOLESTANOL OR DESMOSTEROL TO BULL SPERM MEMBRANES IMPROVES CRYOSURVIVAL.
E. A. M. Amorim, J. K. Graham, M. Meyers, and B. Spizziri.
- 68 EFFECT OF CO-CULTURE DURING FERTILIZATION OF BUFFALO (*BUBALUS BUBALIS*) *IN VITRO*-MATURED DENUDED OOCYTES VITRIFIED BY CRYOTOP.
L. Attanasio, A. De Rosa, L. Boccia, R. Di Palo, G. Campanile, and B. Gasparri.
- 69 REMOVAL OF CUMULUS CELLS AND PRE-INCUBATION IN CYTOCHALASIN B IMPROVE SURVIVAL OF IMMATURE CAT OOCYTES DURING VITRIFICATION.
P. Comizzoli, D. E. Wildt, and B. S. Pukazhenth.
- 70 EFFECT OF CRYOPROTECTANT CONCENTRATION ON THE *IN VITRO* SURVIVAL AND CELL PROLIFERATION OF PORCINE BLASTOCYSTS VITRIFIED USING THE OPEN PULLED STRAW SYSTEM.
C. Cuello, J. Sanchez-Osorio, C. Almiñana, M. A. Gil, I. Caballero, X. Lucas, M. L. Perals, J. M. Vazquez, J. Roca, and E. A. Martinez.
- 71 VITRIFICATION OF BOVINE OOCYTES IN MEDIA WITH GLYCEROL + ETHYLENE GLYCOL BEFORE AND AFTER *IN VITRO* MATURATION.
L. G. Devito, C. B. Fernandes, H. N. Ferreira, and F. C. Landim-Alvarenga.
- 72 PRESERVATION OF PORCINE GONOCYTES AT 4°C AND IN LIQUID NITROGEN—A PRESERVATION MODEL OF GENETIC RESOURCES IN DOMESTIC ANIMALS AND IN ENDANGERED SPECIES.
M. Fujihara, S. Goel, Y. Kimura, N. Minami, M. Yamada, and H. Imai.
- 73 SUPPLEMENTATION OF FROZEN BOAR SEMEN WITH β -MERCAPTOETHANOL INCREASES THE INCIDENCE OF INTACT CELLS AFTER THAWING.
H. Funahashi, S. Yamaguchi, W. Fujii, and T. Murakami.
- 74 *IN VIVO* SURVIVAL OF DOMESTIC CAT OOCYTES AFTER VITRIFICATION, INTRACITOPLASMIC SPERM INJECTION, AND TRANSFER TO RECIPIENTS.
M. C. Gómez, N. Kagawa, C. E. Pope, M. Kuwayama, S. P. Leibo, and B. L. Dresser.
- 75 EFFECT OF PHENAZINE ETHOSULFATE ON PORCINE BLASTOCYST DEVELOPMENT, APOPTOSIS, AND CRYOTOLERANCE AFTER OPEN PULLED STRAW VITRIFICATION.
B. Gajda, Z. Smorag, and M. Bryla.
- 76 COMPUTER-ASSISTED SPERM ANALYSIS OF FROZEN SPERM MOTILITY AFTER DIFFERENT TIMES OF EXPOSURE AT 15°C.
A. Garcia Guerra, M. P. Etcheverry, D. Rodriguez, G. Larraburu, and G. M. Brogliatti.
- 77 EFFECT OF SUGAR SUPPLEMENTATION ON THE CRYOPRESERVATION OF BOAR SPERMATOZOA.
M. Hernandez, T. Cremades, J. M. Vazquez, E. A. Martinez, and J. Roca.
- 78 CRYOPRESERVATION OF FROG (*RANA PIPIENS*) SPERM CELLS COLLECTED BY NON-LETHAL METHODS.
B. K. Hopkins and C. Herr.
- 79 DEVELOPMENT TO TERM OF RAT ZYGOTES DERIVED FROM CRYOPRESERVED MATURE OOCYTES AND SPERM THROUGH INTRACITOPLASMIC SPERM INJECTION.
N. Kashiwazaki, D. Sano, Y. Seita, S. Sugio, C. Suzukamo, M. Nakata, A. Furugaichi, M. Hoshina, T. Inomata, and J. Ito.
- 80 EFFECT OF PRE-EQUILIBRATION TIME ON THE SURVIVAL RATE OF *IN VITRO*-FERTILIZED BOVINE EMBRYOS AFTER VITRIFICATION.
H. Koyama, A. H. Sugulle, and O. Dochi.
- 81 INDUCED BLASTOCOEL COLLAPSE IMPROVES SURVIVAL RATES OF PORCINE BLASTOCYSTS AFTER VITRIFICATION.
L. Lin, Y. Du, P. M. Kragh, J. Li, L. Bolund, H. Yang, X. Zhang, M. Kuwayama, and G. Vajta.

- 82 VITRIFICATION OF IMMATURE OVINE OOCYTES WITH CRYOLOOP™: EFFECT ON MEIOTIC MATURATION.
A. R. Moawad and K. H. S. Campbell.
- 83 DEVELOPMENT OF BOVINE *IN VITRO*-PRODUCED BLASTOCYSTS AFTER CRYOPRESERVATION IN CHEMICALLY
DEFINED SOLUTIONS AND ONE-STEP DILUTION.
M. Murakami, T. Otoi, X. J. Bai, Y. J. Dong, and T. Suzuki.
- 84 PRODUCTION OF CLONED PIGLETS FROM NUCLEAR TRANSFER EMBRYOS AFTER VITRIFICATION.
N. Nakayama, R. Tomii, S. Ueno, H. Matsunari, H. Saito, B. Ogawa, and H. Nagashima.
- 85 VITRIFICATION OF *IN VITRO*-MATURED PORCINE OOCYTES AT THE METAPHASE-II STAGE.
B. Ogawa, S. Ueno, N. Nakayama, H. Matsunari, Y. Ikeda, T. Tohi, H. Saito, and H. Nagashima.
- 86 EFFECTS OF THREE CRYOPRESERVATION SYSTEMS ON LONGEVITY OF STALLION SPERM AFTER THAWING.
D. F. Pasquini, H. N. Ferreira, F. O. Papa, J. A. Dell’Aqua, Jr., and M. A. Alvarenga.
- 87 OSMOTIC SENSITIVITY OF OKAPI SPERMATOZOA AND DEVELOPMENT OF CRYOPRESERVATION PROTOCOLS
USING CRYOMICROSCOPY.
L. M. Penfold.
- 88 SELECTION OF A CRYOSURVIVAL SPERM POPULATION DOES NOT IMPROVE THE *IN VITRO* PENETRATING
ABILITY OF FROZEN–THAWED BOAR SPERMATOZOA.
M. L. Perals, M. A. Gil, E. M. Garcia, J. Sanchez-Osorio, J. M. Vázquez, E. A. Martinez, and J. Roca.
- 89 IMPROVED POST-WARMING DEVELOPMENTAL COMPETENCE OF OPEN PULLED STRAW-VITRIFIED *IN*
VITRO-PRODUCED BOVINE BLASTOCYSTS BY SUBLETHAL HYDROSTATIC PRESSURE PRETREATMENT.
C. Pribenszky, F. E. Siqueira, M. Molnár, A. Harnos, and R. Rumpf.
- 90 THE EFFECT OF LIPID SEGREGATION WITH OR WITHOUT ZONA PELLUCIDA LASER DRILLING ON POST-THAW
EMBRYO DEVELOPMENT OF *IN VITRO*-PRODUCED BOVINE EMBRYOS.
J. H. Pryor, C. R. Looney, S. Romo, D. C. Kraemer, and C. R. Long.
- 91 A NOVEL TECHNIQUE FOR EVALUATION OF THE LIPID CONTENT IN PIG EMBRYOS.
M. Romek, B. Gajda, E. Krzysztofowicz, and Z. Smorag.
- 92 PROCESSING OF POSTMORTEM BOVINE EPIDIDYMAL SPERM AFTER COOLING THE TESTES FOR 24 HOURS.
J. R. Saenz, C. A. Guerrero, D. Paccamonti, B. Eilts, K. R. Bondioli, and R. A. Godke.
- 93 PRODUCTION OF LIVE PIGLETS BY CRYOPRESERVATION OF *IN VITRO*-PRODUCED PORCINE ZYGOTES.
T. Somfai, N. Kashiwazaki, M. Ozawa, J. Noguchi, H. Kaneko, M. Nakai, N. Maedomari, T. Nagai, and K. Kikuchi.
- 94 CRYOPRESERVATION OF HONEY BEE SPERMATOZOA.
M. Stucky, B. K. Hopkins, and C. Herr.
- 95 EFFICACY OF FIVE DIFFERENT SEMEN EXTENDERS FOR THE CRYOPRESERVATION OF BULL SEMEN.
B. Szczesniak-Fabianczyk, M. Bochenek, A. T. Palasz, J. De la Fuente, and Z. Smorag.
- 96 EFFECT OF DIETARY SUPPLEMENTATION WITH TUNA OIL ON THE LIPID COMPOSITION OF BOAR
SPERMATOZOA AND CHARACTERISTICS OF SEMEN.
C. A. A. Torres, E. A. M. Amorim, L. S. Amorim, J. K. Graham, and M. Meyers.
- 97 COMPARISON OF MOTILITY AND ACROSOMAL INTEGRITY OF ELECTRO-EJACULATED AND EPIDIDYMAL
RAM SPERM AFTER EXPOSURE TO VARIOUS ANISOSMOTIC SOLUTIONS, CRYOPROTECTIVE AGENTS,
AND TEMPERATURES.
O. Varisli, C. Uguz, C. Agca, J. Green, and Y. Agca.
- 98 VITRIFICATION OF ZYGOTES SUPPORTS FULL-TERM DEVELOPMENT IN RABBITS.
J. Xu, J. Zhang, Y. Chen, M. Cater, X. Yang, and F. Du.

DEVELOPMENTAL BIOLOGY

- 99 EFFECT OF VASCULAR ENDOTHELIAL GROWTH FACTOR ON *IN VITRO*-PRODUCED PORCINE OOCYTES AND
THEIR SUBSEQUENT DEVELOPMENT: A PARTHENOGENETIC STUDY.
D. Biswas, J. H. Lee, E. B. Jeung, E. S. Lee, and S. H. Hyun.

- 100 PROTEOME OF BULL SPERMATOZOA.
J. M. Feugang, C. Rozanas, A. Kaya, E. Topper, and E. Memili.
- 101 PLACENTAL DEVELOPMENT IN A BOVINE HETEROZIS MODEL.
C. Fitzsimmons, Z. Kruk, D. Lines, C. Roberts, and S. Hiendleder.
- 102 IDENTIFICATION OF CONTRASTED PHENOTYPES IN THE BOVINE FROM REPEATED *IN VIVO* AND *IN VITRO* EMBRYO PRODUCTION FOLLOWING SUPEROVULATION.
C. Guyader-Joly, S. Ponchon, C. Gonzalez, B. Marquant-Le Guienne, L. Clément, R. Dalbiès-Tran, P. Mermillod, and P. Humblot.
- 103 ECTOPIC EXPRESSION OF TELOMERASE IN BOVINE PREIMPLANTATION EMBRYOS.
K. Iqbal, W. A. Kues, and H. Niemann.
- 104 ASYMMETRICAL DISTRIBUTION OF MITOCHONDRIAL DNA INTO BLASTOMERES OF TWO- AND FOUR-CELL MOUSE EMBRYOS.
Y. Kameyama, G. Shimoi, H. Ohnishi, R. Hashizume, and M. Ito.
- 105 THE Oct4/Cdx2 EXPRESSION AND CELL FATE OF INDIVIDUAL TWO-CELL BLASTOMERES IN TWO MOUSE STRAINS.
M. Katayama and R. M. Roberts.
- 106 EXPRESSION PATTERNS OF PROTEIN KINASE A SUBUNITS DURING MEIOTIC MATURATION OF PORCINE OOCYTES.
J. S. Kim, Y. S. Cho, B. S. Song, X. L. Jin, K. K. Lee, and D. B. Koo.
- 107 CHANGES OF HIGHER ORDER CHROMATIN ARRANGEMENTS CORRELATE WITH GENOME ACTIVATION DURING EARLY BOVINE DEVELOPMENT.
D. Koehler, A. Brero, T. Cremer, E. Wolf, and V. Zakhartchenko.
- 108 CALYCULIN-A INDUCES CHROMOSOME CONDENSATION FOR CYTOGENETIC ANALYSIS IN BOVINE AND MURINE BLASTOMERES.
J. M. Kramer, A. Evans, K. Drury, and K. Moore.
- 109 THE ROLE OF FOLLISTATIN IN BOVINE EARLY EMBRYONIC DEVELOPMENT.
K. B. Lee, A. Bettegowda, J. J. Ireland, and G. W. Smith.
- 110 COMPARATIVE ANALYSIS OF DNA AND HISTONE H3 METHYLATION REPROGRAMMING IN MOUSE, BOVINE, AND RABBIT ZYGOTES.
K. Lepikhov, V. Zakhartchenko, F. Yang, C. Wrenzycki, E. Wolf, and J. Walter.
- 111 CHARACTERIZATION OF BOVINE TELOMERASE REVERSE TRANSCRIPTASE DURING PREIMPLANTATION EMBRYOGENESIS.
P. Madan, W. A. King, and D. H. Betts.
- 112 BIRC6/APOLLON INVOLVED IN BOVINE PREIMPLANTATION EMBRYO DEVELOPMENT.
D. Salilew Wondim, F. Rings, M. Hölker, C. Phatsara, K. Schellander, and D. Tesfaye.
- 113 CHARACTERIZATION OF THE BOVINE EMBRYO-DERIVED CT-1 CELL LINE FOR STUDYING REGULATION OF TRANSCRIPTION FACTORS EXPRESSED WITHIN THE BOVINE TROPHECTODERM.
A. T. Schiffmacher and C. L. Keefer.
- 114 SPECIFIC AMINO ACIDS INFLUENCE LINEAGE DIFFERENTIATION IN MOUSE BLASTOCYSTS AND OUTGROWTHS.
R. Sihota, S. Brooks, C. Tong, I. T. Cameron, T. P. Fleming, and J. J. Eckert.
- EARLY PREGNANCY/PREGNANCY RECOGNITION**
- 115 RAT EPIDERMAL GROWTH FACTOR GENE EXPRESSION CONTROLLED BY PROGESTERONE DURING PREGNANCY.
H.-S. Byun, S.-H. Ko, G.-S. Lee, S.-H. Hyun, and E.-B. Jeung.
- 116 EFFECTS OF EARLY PREGNANCY DIAGNOSIS USING ULTRASONOGRAPHY ON THE SUBSEQUENT EMBRYO AND FETAL LOSS IN DAIRY COWS.
I. H. Kim, J. I. Lee, U. H. Kim, and H. G. Kang.

- 117 THE REGULATOR OF THE UTERINE *TRPV6* GENE DURING PREGNANCY IN RODENTS.
B.-M. Lee, G.-S. Lee, and E.-B. Jeung.
- 118 DEVELOPMENT AND EVALUATION OF A TIME-RESOLVED FLUORESCENCE IMMUNOASSAY FOR ESTRONE-1-SULFATE IN URINE AS A TOOL FOR DIAGNOSIS OF EARLY PREGNANCY IN SWINE.
Y. S. Park, S. H. Yang, S. M. Park, S. J. Kim, and J. B. Kim.
- 119 ENDOMETRIAL CO-CULTURE MODELS FOR THE *IN VITRO* INVESTIGATION OF EARLY EMBRYO–MATERNAL CROSSTALK IN CATTLE.
K. Zitta, S. Ulbrich, E. Wolf, and M. Boelhaue.

EMBRYO CULTURE

- 120 EFFECTS OF BOVINE PLASMA LIPOPROTEINS ON ACCUMULATION OF CYTOPLASMIC LIPID DROPLETS AND MITOCHONDRIAL MORPHOLOGY IN BOVINE EMBRYOS.
H. Abe, R. Sata, H. Tsujii, and H. Hoshi.
- 121 DEVELOPMENT OF *IN VITRO*-PRODUCED BOVINE EMBRYOS CULTURED IN SEQUENTIAL OR CONTINUOUS MEDIA.
L. S. Amorim, D. J. Walker, and G. E. Seidel Jr.
- 122 EFFECTS OF EMBRYO SEX AND GLUCOSE OR FRUCTOSE IN CULTURE MEDIA ON BOVINE EMBRYO DEVELOPMENT.
M. Barceló-Fimbres and G. E. Seidel Jr.
- 123 OPTIMIZATION OF CULTURE CONDITIONS FOR *IN-VITRO*-PRODUCED BOVINE EMBRYOS TO ENHANCE BLASTOCYST YIELD AND SURVIVAL FOLLOWING VITRIFICATION.
J. Block, L. Bonilla, and P. J. Hansen.
- 124 A THREE-DIMENSIONAL *IN VITRO* IMPLANTATION MODEL WITH NONHUMAN PRIMATE EMBRYOS AND EXTRACELLULAR MATRIX UNDER VARIOUS CULTURE CONDITIONS.
T. Chang, G. I. Bondarenko, M. Durning, K. Vielhuber, M. A. Garthwaite, and T. G. Golos.
- 125 EXAMINING CRITERIA FOR EXTENDING BOVINE BLASTOCYST SURVIVAL *IN VITRO*.
F. N. T. Cooke, T. M. Rodina, P. J. Hansen, and A. D. Ealy.
- 126 EFFECT OF ASSISTED HATCHING ON THE SURVIVAL AND THE DEVELOPMENT OF BOVINE EMBRYOS PRODUCED *IN VITRO* AFTER CRYOPRESERVATION.
J. Fukuhara, T. Takuma, S. Kasa, and K. Imai.
- 127 DEVELOPMENT AND QUALITY OF BOVINE MORULAE CULTURED IN SERUM-FREE MEDIUM WITH RETINOIC RECEPTOR SPECIFIC AGONISTS.
E. Gómez, J. N. Caamaño, M. Muñoz, A. Rodríguez, N. Facal, and C. Díez.
- 128 EFFECT OF OXYGEN TENSION ON INDIVIDUAL *IN VITRO* BOVINE EMBRYO DEVELOPMENT IN CUMULUS CELL COCULTURE.
I. G. F. Goovaerts, J. L. M. R. Leroy, S. Andries, J. B. P. De Clercq, and P. E. J. Bols.
- 129 *IN VITRO* PRODUCTION OF EQUINE EMBRYOS FROM YOUNG AND OLD MARES BY INTRACYTOPLASMIC SPERM INJECTION.
C. Herrera, M. Revora, L. Vivani, M. H. Miragaya, C. Quintans, R. S. Pasqualini, and L. Losinno.
- 130 PREDICTION OF PARTHENOGENETIC DEVELOPMENTAL POTENTIAL BY POLAR BODY EXTRUSION AND FIRST CLEAVAGE ON *IN VITRO* MATURATION AND DEVELOPMENT OF PORCINE FOLLICULAR OOCYTES.
H. J. Kim, S. R. Cho, C. Y. Choe, S. H. Choi, D. S. Son, S. J. Kim, B. D. Sang, M. H. Han, I. S. Ryu, I. C. Kim, I. H. Kim, and K. S. Im.
- 131 CHARACTERISTICS OF PREGNANCIES AND OFFSPRING FOLLOWING TRANSFER OF BOVINE *IN VIVO* EMBRYOS ASSESSED BY NANORESPIROMETRY.
A. S. Lopes, S. E. Madsen, T. Greve, and H. Callesen.
- 132 POST-HATCHING BOVINE EMBRYO DEVELOPMENT *IN VITRO*: RELATIONSHIP BETWEEN SEX AND SIZE.
G. M. Machado, C. R. Laender, M. M. Franco, L. O. Leme, R. Rumpf, and M. A. N. Dode.

- 133 EFFECTS OF ACTIVIN A ON mRNA EXPRESSION IN *IN VITRO* FERTILIZED BOVINE EMBRYOS CULTURED FROM CHEMICALLY DEFINED TWO-STEP CULTURE MEDIUM.
J. E. Park, G. Jang, H. J. Oh, S. G. Hong, I. S. Yang, S. K. Kang, and B. C. Lee.
- 134 EFFECT OF ELEVATED CIRCULATING PROGESTERONE CONCENTRATION ON DEVELOPMENT OF *IN VITRO* PRODUCED BOVINE ZYGOTES *IN VIVO*.
F. Rings, F. Carter, M. Hölker, A. Kuzmany, U. Besenfelder, V. Havlicek, D. Tesfaye, K. Schellander, and P. Lonergan.
- 135 *IN VITRO* DEVELOPMENT OF *IN VIVO* PRODUCED EMBRYOS FROZEN AT MORULA OR BLASTOCYST STAGES.
R. Sartori, G. M. Machado, M. M. Guardieiro, M. R. Bastos, L. Leme, E. Siqueira Filho, R. Rumpf, and M. A. N. Dode.
- 136 ADDITION OF LOW DENSITY LIPOPROTEIN TO CHEMICALLY DEFINED PORCINE EMBRYO CULTURE MEDIUM CAN PARTIALLY REPLACE BOVINE SERUM ALBUMIN.
L. D. Spate, K. A Walker, C. E. McHughes, and R. S. Prather.
- 137 ROLE OF GLUCOSE AND FATTY ACID METABOLISM IN PORCINE EARLY EMBRYO DEVELOPMENT.
R. G. Sturmeay and H. J. Leese.

EMBRYO MANIPULATION

- 138 CELL INTEGRITY OF HOLSTEIN AND JERSEY EMBRYOS: COMPARISON OF TWO FREEZING METHODS.
R. Dupras, J. Dupras, and Y. Chorfi.
- 139 INTRACELLULAR GLUTATHIONE CONCENTRATION AND *IN VITRO* DEVELOPMENT OF BOVINE OOCYTES SELECTED BY BRILLIANT CRESYL BLUE.
H. S. Lee, D. B. Koo, K. K. Lee, X. J. Yin, and I. K. Kong.
- 140 UTILIZATION OF LASER-ASSISTED HATCHING TO IMPROVE THE PREGNANCY RATE OF *IN VITRO*-FERTILIZED BOVINE EMBRYOS.
S. Menges, H. Wei, D. Faber, D. Kraemer, and C. Long.
- 141 BIOPSY TECHNIQUE IN BOVINE EMBRYOS PRODUCED *IN VITRO* AT EARLY STAGES OF DEVELOPMENT: EVALUATION OF QUALITY AND DEVELOPMENT CAPACITY.
J. Polissen, M. O. Guerra, R. V. Serapião, M. M. Pereira, I. M. Folhadella, W. F. Sá, L. S. A. Camargo, J. H. M. Viana, L. T. Iguma, M. C. Boite, and V. M. Peters.
- 142 DONOR CONTRIBUTION HAS A LARGER IMPACT ON HSP70.1 EXPRESSION IN BOVINE EMBRYOS THAN THE CUMULUS REMOVAL TECHNIQUE.
A. L. Reeder, R. L. Monson, J. J. Watters, and J. J. Rutledge.

EMBRYO TRANSFER

- 143 IMPROVEMENT OF A SUPERSTIMULATORY PROTOCOL IN NELORE COWS: REPLACING THE LAST TWO DOSES OF pFSH BY eCG.
C. M. Barros, A. C. Z. Barcelos, L. M. Gouvêa, M. Meneghel, D. S. Barcelos, L. N. Barcelos, and L. A. Trinca.
- 144 UTILITY OF RECIPIENT CATTLE AFTER HYDROPS PREGNANCY TERMINATION.
M. C. Berg, D. N. Wells, and R. S. F. Lee.
- 145 REESTABLISHMENT OF AN EXTINCT STRAIN OF SHEEP UTILIZING ASSISTED REPRODUCTIVE TECHNOLOGIES.
C. Bormann, C. Long, S. Menges, C. Hanna, G. Foxworth, M. Westhusin, V. Pliska, G. Stranzinger, H. Joerg, H. Glimp, L. Millsap, C. Porada, G. Almedia-Porada, and D. Kraemer.
- 146 DETRIMENTAL EFFECTS OF PROSTAGLANDIN F_{2α} ON *IN VITRO* EMBRYO DEVELOPMENT IN BOVINE ARE INHIBITED BY A RECEPTOR ANTAGONIST.
F. N. Scenna, J. L. Edwards, and F. N. Schrick.
- 147 PREGNANCY RATES OF RECIPIENT ANIMALS FOLLOWING APPLICATION OF A SELECTIVE PROSTAGLANDIN F_{2α} RECEPTOR ANTAGONIST DURING EMBRYO RECOVERY.
F. N. Scenna, J. L. Edwards, G. M. Schuenemann, D. A. Roper, and F. N. Schrick.
- 148 PRODUCTION OF PUPS BY OVARIAN TRANSFER IN THE SYRIAN HAMSTER.
O. Suzuki, M. Koura, K. Takano, Y. Noguchi, K. Uchio-Yamada, and J. Matsuda.

- 149 LAPAROSCOPIC EMBRYO TRANSFER IN PIGS.
S. L. Terlouw, S. Ewerling, B. A. Didion, and J. R. Dobrinsky.
- 150 EXAMINATION OF ESTRUS SYNCHRONIZATION USING A PRID® + PROSTAGLANDIN F_{2α} AND PREGNANCY RATE AFTER ARTIFICIAL INSEMINATION FOLLOWING TRANSFER OF *IN VITRO*-PRODUCED EMBRYOS IN REPEAT-BREEDING COWS.
M. Urakawa, A. Ideta, K. Hayama, K. Tsuchiya, and Y. Aoyagi.
- 151 EFFECT OF RECIPIENT CATEGORY ON PREGNANCY RATES ON A BOVINE EMBRYO TRANSFER PROGRAM IN PATAGONIA, ARGENTINA.
J. Villarreal, A. Garcia Guerra, and G. M. Brogliatti.

EPIDEMIOLOGY/DISEASES

- 152 TRANSMISSION OF BOVINE VIRAL DIARRHEA VIRUS BY *IN VITRO*-FERTILIZED EMBRYOS UNDER EXPERIMENTAL CONDITIONS.
A. Bielanski, J. Algire, and A. Lalonde.
- 153 EFFECTS OF OVINE INTERFERON- τ ON REPLICATION OF BOVINE VIRAL DIARRHEA VIRUS AND BOVINE HERPESVIRUS-1.
P. K. Galik, J. A. Gard, T. S. Spencer, M. S. Marley, D. A. Stringfellow, M. D. Givens, and M. A. Edmondson.
- 154 THE QUANTITY OF BOVINE VIRAL DIARRHEA VIRUS ASSOCIATED WITH SINGLE ZONA PELLUCIDA-INTACT *IN VITRO*-PRODUCED BOVINE EMBRYOS FOLLOWING ARTIFICIAL EXPOSURE.
J. A. Gard, M. D. Givens, P. K. Galik, K. P. Riddell, M. S. D. Marley, D. A. Stringfellow, M. A. Edmondson, and B. K. Whitlock.
- 155 EMBRYO TRANSFER SUCCESS DURING CONCURRENT CONTAGIOUS EQUINE METRITIS INFECTION.
J. H. Hayna, C. M. Syverson, and J. R. Dobrinsky.
- 156 INVESTIGATION OF BOVINE HERPESVIRUS IN CUMULUS–OOCYTE COMPLEXES AND FOLLICULAR FLUID.
A. P. Oliveira, R. C. Leite, M. B. Heinmam, L. G. B. Siqueira, A. Maciel, and J. H. M. Viana.
- 157 VIRAL RISK ASSESSMENT OF BOVINE OOCYTES HARVESTED FROM ABATTOIR ORIGIN.
J. Pommer, M. Nichols, P. Kasinathan, E. Sullivan, J. Robl, J. Griffin, P. Boerma, and C. Vos.

EXOTIC SPECIES

- 158 PRODUCTION OF RECOMBINANT LH FOR USE IN TIGER (*TIGRIS ALTAICA*) ASSISTED REPRODUCTION: A PRELIMINARY REPORT.
J. T. Aaltonen, E. Bedows, K. A. Estes, V. Y. Butnev, G. Bousfield, and N. M. Loskutoff.
- 159 TECHNIQUES FOR OVUM PICK-UP IN GONADOTROPIN-TREATED ALPACAS.
G. Gamarra, A. Gallegos, E. Alvarado, M. Asparrin, and W. Vivanco.
- 160 PREGNANCY RATES AFTER USING THE CIDR-G DEVICE AND FIXED-TIMED ARTIFICIAL INSEMINATION IN WHITE-TAIL DEER.
G. T. Gentry, Jr., J. Saenz, W. Forbes, K. Whitehead, D. Sanders, B. Olcott, J. Chenevert, K. R. Bondioli, and R. A. Godke.
- 161 SUCCESSFUL INTERSPECIFIC PREGNANCY AFTER TRANSFER OF *IN VITRO*-PRODUCED SIKA DEER (*CERVUS NIPPON NIPPON*) EMBRYO IN RED DEER (*CERVUS ELAPHUS HIPPELAPHUS*) SURROGATE HIND.
Y. Locatelli, J.-C. Vallet, G. Baril, J.-L. Touzé, A. Hendricks, X. Legendre, M. Verdier, and P. Mermillod.
- 162 FREEZING OF SEMEN FROM ENDANGERED ASTURIANA DE LA MONTAÑA BULLS IN ZWITTERONIC LIPIDS-BASED EXTENDERS.
C. Tamargo Miguel, S. S. Pérez-Garnelo, P. Beltrán Breña, A. T. Palasz, J. De la Fuente, A. Rodriguez, and C. O. Hidalgo.

FOLLICULOGENESIS/OOGENESIS

- 163 SEARCH FOR GENES OF WHICH THE AMOUNTS OF TRANSCRIPTS OSCILLATE EVERY 24 H IN THE MOUSE OVARY.
T. Amano, Y. Hatanaka, K. Saeki, Y. Hosoi, A. Iritani, and K. Matsumoto.
- 164 EFFECT OF OVULATION-INDUCING FACTOR (OIF) ON OVARIAN FUNCTION IN CATTLE.
M. D. Van Steelandt, V. M. Tanco, M. H. Ratto, and G. P. Adams.

GENE EXPRESSION

- 165 EXPRESSION OF OCT-4 IN BUFFALO (*BUBALUS BUBALIS*) EMBRYOS GENERATED THROUGH *IN VITRO* FERTILIZATION OR PARTHENOGENETIC ACTIVATION.
D. Kumar, T. Anand, K. P. Singh, M. S. Chauhan, P. Palta, and R. S. Manik.
- 166 EXPRESSION OF PLURIPOTENCY-DETERMINING FACTORS IN *IN VITRO*-PRODUCED BUFFALO EMBRYOS.
T. Anand, D. Kumar, M. K. Singh, M. S. Chauhan, R. S. Manik, and P. Palta.
- 167 EXPRESSION PATTERN OF GAP JUNCTIONAL CONNEXINS DURING *IN VITRO* AND *IN VIVO* PREIMPLANTATION EMBRYO DEVELOPMENT IN BOVINE.
S. Balasubramanian, W. J. Son, B. Mohana Kumar, Y. I. Yang, B. J. Jeon, S. Y. Choe, and G. J. Rho.
- 168 miRNA LEVELS DURING BOVINE PREIMPLANTATION EMBRYONIC DEVELOPMENT.
D. K. Berg, S. E. Beaumont, and P. L. Pfeffer.
- 169 AN OPTIMIZED PROTOCOL FOR EXTRACTING RNA FROM SINGLE BOVINE OOCYTES AND BLASTOMERES.
M. Boelhauve, T. Guengoer, K. Zitta, V. Zakhartchenko, and E. Wolf.
- 170 EXPRESSION PATTERN OF THE Sox2 GENE IN BOVINE OOCYTES AND *IN VITRO*-DERIVED EMBRYOS.
T. A. L. Brevini, S. Antonini, F. Cillo, G. Pennarossa, S. Colleoni, G. Lazzari, C. Galli, and F. Gandolfi.
- 171 THE EFFECT OF TRICHOSTATIN A ON THE DEVELOPMENT AND THE GLOBAL GENE EXPRESSION PATTERNS IN MOUSE EMBRYOS DEVELOPING *IN VITRO*.
X. S. Cui, X. Y. Li, T. Kim, and N.-H. Kim.
- 172 *IN VITRO* EXPOSURE TO XENOESTROGENS INDUCES GROWTH HORMONE TRANSCRIPTION AND RELEASE VIA AN ESTROGEN RECEPTOR-DEPENDENT PATHWAY IN RAT PITUITARY GH3 CELLS.
V.-H. Dang and E.-B. Jeung.
- 173 SIMULTANEOUS QUANTIFICATION OF MULTIPLE PROTEINS IN PORCINE PARTHENOTES BY MULTIPLE SELECTED REACTION MONITORING.
M. K. Gupta, J. M. Jang, J. W. Jung, S. J. Uhm, K. P. Kim, and H. T. Lee.
- 174 EPIDERMAL GROWTH FACTORS AND CALBINDIN-D9K GENE EXPRESSIONS DURING PREGANCY IN THE PORCINE UTERUS.
Y.-J. Kim, E.-M. Jung, G.-S. Lee, S.-H. Hyun, and E.-B. Jeung.
- 175 TRANSCRIPTOME ANALYSIS OF BOVINE DAY 150 FETAL LIVER AND COTYLEDON REVEALS GENES INVOLVED IN FETAL GROWTH.
S. Krebs, S. Bauersachs, H.D. Reichenbach, M. Weppert, S. Hiendleder, H. Blum, and E. Wolf.
- 176 DOXYCYCLINE-INDUCIBLE EXPRESSION OF THE hEPO GENE IN A RETROVIRUS VECTOR.
M. S. Kwon, B. C. Koo, B. R. Choi, H. Lee, and T. Kim.
- 177 EXPRESSION PROFILING OF HISTONE-MODIFYING GENES IN BOVINE PREIMPLANTATION EMBRYOS.
G. D. Linger, C. L. Bormann, M. Peoples, M. C. Golding, and C. R. Long.
- 178 RELATIVE ABUNDANCE OF Oct-4, Nanog, AND Sox-2 TRANSCRIPTS IN PORCINE OOCYTES AND CLEAVAGE-STAGE EMBRYOS PRODUCED VIA FERTILIZATION *IN VITRO* OR PARTHENOGENESIS.
L. Magnani and R. Cabot.
- 179 MODULATION OF RHOPHILIN-2 MAY REGULATE THE PROGRESSION OF CELL DIVISION IN FERTILIZED MOUSE EGGS.
T. Matsuoka, M. Tokoro, S. Shin, T. Amano, Y. Hosoi, K. Saeki, A. Iritani, and K. Matsumoto.

- 180 IDENTIFICATION AND QUANTIFICATION OF DIFFERENTIALLY REPRESENTED TRANSCRIPTS IN PREIMPLANTATION BOVINE EMBRYOS.
C. E. McHughes, G. K. Springer, L. D. Spate, R. Li, R. J. Woods, M. P. Green, S. W. Korte, C. N. Murphy, J. A. Green, and R. S. Prather.
- 181 MESSENGER RNA PROFILING OF BOVINE ENDOMETRIUM DURING THE ESTROUS CYCLE USING A CUSTOM-MADE cDNA ARRAY.
K. Mitko, H. Blum, E. Wolf, and S. Bauersachs.
- 182 OSTEOPONTIN GENE EXPRESSION IN IMMATURE AND MATURE SWINE CUMULUS CELLS AND OOCYTES.
E. Monaco, A. Lima, S. Wilson, D. Kim, M. Bionaz, W. L. Hurley, and M. B. Wheeler.
- 183 THE EFFECT OF BOVINE EMBRYO CULTURE WITHOUT ANY PROTEIN SOURCES UNTIL DAY 4 ON TRANSCRIPTION OF HYALURONAN SYNTHASES AND RECEPTORS AND mtDNA CONTENT.
A. T. Palasz, P. Beltrán Breña, J. De la Fuente, and A. Gutiérrez-Adán.
- 184 INHIBITION OF HUMAN COMPLEMENT-MEDIATED CYTOTOXICITY IN MINIPIG CELLS BY EXPRESSION OF hCD59.
K. W. Park, E. J. Kim, K. M. Choi, S. P. Hong, G. S. Han, J. Y. Yoo, S. H. Kim, Y. C. Park, and J. G. Seol.
- 185 EXPRESSION AND LOCALIZATION OF μ -OPIOID RECEPTOR IN CANINE OOCYTES.
L. Pavone, M. Albrizio, and R. Minoia.
- 186 TOTAL RNA AND TRANSCRIPT ABUNDANCE IN HEAT-STRESSED BOVINE OOCYTES AND SURROUNDING CUMULUS.
R. R. Payton, L. A. Rispoli, and J. L. Edwards.
- 187 IMPRINTED GENE EXPRESSION IN *IN VIVO*- AND *IN VITRO*-PRODUCED BOVINE FETUSES AND PLACENTAS.
F. Perecin, S. C. Méo, W. Yamazaki, C. R. Ferreira, F. H. Biase, G. K. F. Merighe, F. V. Meirelles, and J. M. Garcia.
- 188 EFFECTS OF CULTURE MEDIUM AND PROTEIN SUPPLEMENTATION ON mRNA EXPRESSION OF *IN VITRO*-PRODUCED PREIMPLANTATION BOVINE EMBRYOS.
M. N. Purpera, C. B. Ballard, A. M. Giraldo, D. Hylan, R. A. Godke, and K. R. Bondioli.
- 189 microRNA EXPRESSION PROFILING DURING BOVINE OOCYTE MATURATION.
D. Tesfaye, D. Worku, D. Salilew-Wondim, M. Hoelker, F. Rings, C. Un, and K. Schellander.
- 190 SUPPRESSION OF A TRANSCRIPTION FACTOR MSX1 GENE IN BOVINE PREIMPLANTATION EMBRYOS AND ITS EFFECT ON MRNA, PROTEIN, AND EXPRESSION OF DOWNSTREAM GENES.
D. Tesfaye, A. Regassa, M. Hoelker, F. Rings, C. Phatsara, and K. Schellander.
- 191 ESTROGEN REGULATES THE LOCALIZATION AND EXPRESSION OF CALBINDIN-D9K IN THE PITUITARY GLAND OF IMMATURE MALE RATS VIA THE ESTROGEN RECEPTOR ALPHA PATHWAY.
P. Tinnanooru and E.-B. Jeung.
- 192 AMINO ACID TRANSPORTER EXPRESSION IN BOVINE OVIDUCT EPITHELIAL CELLS.
S. L. Whitear and H. J. Leese.
- 193 HUMAN CYTOMEGALOVIRUS PROTEIN US11 DOWN-REGULATES THE EXPRESSION OF SWINE LEUKOCYTE ANTIGEN-I IN MINIPIG CELLS.
J. Y. Yoo, K. M. Choi, S. P. Hong, G. S. Han, E. J. Kim, S. H. Kim, Y. C. Park, J. G. Seol, and K. W. Park.
- 194 EXPRESSION OF microRNA-15a, 16, AND 21 AND THEIR POSSIBLE ROLES IN MOUSE EMBRYOS DEVELOPING *IN VITRO*.
D. X. Zhang, X. H. Shen, X. S. Cui, and N.-H. Kim.

IVF/IVP

- 195 CORRELATION BETWEEN SPERM PENETRATION ASSAY AND *IN VITRO* FERTILIZATION USING HAMSTER AND HUMAN OOCYTES.
S. Al-Anssari, A. Taiyeb, M. Ridha-Albarzanchi, Z. Qurjia, S. Al-Atraqchi, A. Al-Jabar, and Z. Kanan.
- 196 COMPARING OOCYTE LIPID CONTENT WITH CIRCULATING CHOLESTEROL AND TRIGLYCERIDE LEVELS OF *BOS TAURUS* AND *BOS INDICUS* DONOR COWS.
C. B. Ballard, C. R. Looney, B. R. Lindsey, J. H. Pryor, J. W. Lynn, K. R. Bondioli, and R. A. Godke.

- 197 DOES DURATION OF BOVINE OOCYTE MATURATION *IN VITRO* AFFECT THE SPEED OF EMBRYO DEVELOPMENT *IN VITRO* AND SEX RATIO AT THE TWO-CELL OR BLASTOCYST STAGE?
P. Bermejo-Álvarez, A. Gutiérrez-Adán, P. Lonergan, and D. Rizos.
- 198 FUNCTIONAL EVIDENCE FOR THE EXISTENCE OF AN OVIDUCTAL FACTOR THAT INDUCES ZONA PELLUCIDA HARDENING AND REGULATES POLYSPERMY IN THE PIG AND COW.
S. Cánovas, L. Grullón, R. Romar, C. Matás, M. Avilés, and P. Coy.
- 199 EFFECT OF HEPARIN CONCENTRATION ON BOVINE PREIMPLANTATIONAL DEVELOPMENT *IN VITRO* USING SEX-SORTED SPERM.
S. A. Chaubal, T. L. Nedambale, J. Xu, C. Shaffer, T. Kilmer, A. Shefler, X. Yang, X. C. Tian, and F. Du.
- 200 EFFECT OF EXOGENOUS PROGESTERONE DURING *IN VITRO* CULTURE ON EARLY EMBRYO DEVELOPMENT IN CATTLE.
M. Clemente, P. Lonergan, C. Borque, J. de La Fuente, and D. Rizos.
- 201 LIVER AND KIDNEY FUNCTION IN BOVINE FETUSES FROM EMBRYOS PRODUCED *IN VIVO* OR *IN VITRO*.
P. W. Farin, D. E. Malarkey, J. E. Alexander, and C. E. Farin.
- 202 EFFECT OF OSTEOPONTIN ON *IN VITRO* EMBRYO DEVELOPMENT IN CATTLE.
B. Gasparri, E. Monaco, L. Boccia, A. De Rosa, L. Attanasio, and G. Killian.
- 203 PRETREATMENT OF BOVINE SPERM OR OOCYTE WITH ANTIBODY TO LIPOCALIN-TYPE PROSTAGLANDIN D SYNTHASE INHIBITS FERTILIZATION.
R. F. Gonçalves, V. H. Barnabe, and G. J. Killian.
- 204 AMINO-REACTIVE CROSSLINKER BIS(SULFOSUCCINIMIDYL)SUBERATE INDUCES ZONA PELLUCIDA HARDENING AND REDUCES PENETRATION IN PIG *IN VITRO* FERTILIZATION.
L. Grullón, S. Cánovas, C. Matás, R. Romar, and P. Coy.
- 205 CAPACITATION OF STALLION SPERMATOZOA EVALUATED BY FERTILIZATION OF BOVINE OOCYTES.
M. R. Hudson, G. E. Seidel Jr., E. L. Squires, B. E. Spizziri, D. J. Walker, and J. K. Graham.
- 206 EFFECT OF FOLLICULAR WAVE SYNCHRONIZATION AND SUPERSTIMULATION ON *IN VITRO* EMBRYO PRODUCTION.
K. Imai, Y. Inaba, H. Yoshioka, Y. Aikawa, M. Ohtake, M. Suzuki, and S. Kobayashi.
- 207 *IN VITRO* MATURATION TREATMENT AFFECTS DEVELOPMENTAL COMPETENCE OF LAPAROSCOPIC OVUM PICKUP-DERIVED OOCYTES IN FOLLICLE-STIMULATING HORMONE-STIMULATED GOATS.
Y. Locatelli, N. Poulin, G. Baril, J.-L. Touzé, A. Fatet, J.-F. Beckers, and P. Mermillod.
- 208 EFFECT OF GRANULOCYTE-MACROPHAGE COLONY-STIMULATING FACTOR ON BLASTOCYST DEVELOPMENT AND POST-TRANSFER SURVIVAL OF *IN VITRO*-PRODUCED BOVINE EMBRYOS.
B. Loureiro, L. Bonilla, G. Entrican, and P. J. Hansen.
- 209 PRODUCTION OF *IN VITRO*-FERTILIZED INTERSPECIES BLASTOCYSTS BETWEEN SHEEP OOCYTES AND GOAT SPERMATOZOA.
D. Malakar, A. K. De, and Y. S. Akshey.
- 210 COMPARISON OF A RECOMBINANT TRYPSIN VERSUS THE PIG PANCREATIC EXTRACT ON *IN VITRO*-PRODUCED BOVINE EMBRYOS.
K. J. Mattson, B. R. Devlin, and N. M. Loskutoff.
- 211 INTRODUCING NEW GENETICS INTO A CLOSED BIOSECURE HERD OF DAIRY GOATS.
D. Melican, S. Blash, and W. Gavin.
- 212 INSEMINATION OF OVUM PICKUP-DERIVED DAIRY COWS RESULTS IN OFFSPRING WITH NORMAL BIRTH WEIGHT.
E. Mullaart, B. Landman, and J. S. Merton.
- 213 *IN VITRO* DEVELOPMENT OF BOVINE EMBRYOS IN THE PRESENCE OF GROWTH HORMONE, INSULIN-LIKE GROWTH FACTOR-1, AND INSULIN IN OOCYTE MATURATION AND EMBRYO CULTURE MEDIA.
C. B. Ponchiroli-Schneider, C. P. Freitas, and F. C. Landim-Alvarenga.

- 214 INFLUENCE OF THE BREED OF BULL (GIR *v.* HOLSTEIN) ON THE RESISTANCE OF BOVINE EMBRYOS TO HEAT SHOCK AT EARLY STAGES OF *IN VITRO* DEVELOPMENT.
D. Y. Saito, R. A. Satrapa, R. M. Romão, T. Nabhan, R. A. L. Simões, and C. M. Barros.
- 215 APPLICATION OF A MICROFLUIDIC SPERM SORTER TO THE *IN VITRO* FERTILIZATION OF PORCINE OOCYTES.
H. Sano, K. Matsuura, K. Naruse, and H. Funahashi.
- 216 *IN VITRO* CAPACITATION OF FROZEN/THAWED STALLION SPERM.
B. E. Spizziri, J. K. Graham, E. L. Squires, and M. R. Hudson.
- 217 EFFECT OF PRE-EQUILIBRATION TIME ON THE SURVIVAL RATE OF MATURED BOVINE OOCYTES AFTER VITRIFICATION AND ON SUBSEQUENT EMBRYO DEVELOPMENT.
A. H. Sugulle, O. Dochi, and H. Koyama.
- 218 DEVELOPMENT OF EVENLY AND UNEVENLY CLEAVED TWO-CELL PORCINE EMBRYOS.
D. N. Q. Thanh, K. Kikuchi, T. Somfai, M. Ozawa, M. Nakai, N. Maedomari, B. X. Nguyen, and T. Nagai.
- 219 RETROSPECTIVE ANALYSIS OF CUMULUS-OOCYTE COMPLEX YIELD IN A GYR (*BOS TAURUS INDICUS*) HERD UNDERGOING TRANSVAGINAL ULTRASOUND-GUIDED FOLLICLE ASPIRATION.
J. H. M. Viana, L. S. A. Camargo, J. F. Fonseca, A. P. Oliveira, E. K. N. Arashiro, C. Freitas, and C. A. C. Fernandes.

MALE PHYSIOLOGY

- 220 EFFECTS OF FOLLICLE-STIMULATING HORMONE AND 6-N-PROPYL-2-THIOURACIL ON BOAR SPERMATOGENESIS.
J. Baldrighi, W. Averhart, M. Mello, J. Ford, L. Franca, K. Carnes, R. Hess, and S. Clark.
- 221 PREPUBERTAL MOUSE BIOASSAY FOR OVULATION-INDUCING FACTOR IN SEMINAL PLASMA.
O. A. Bogle, M. H. Ratto, and G. P. Adams.
- 222 SPECIES SPECIFICITY OF PORCINE SPERM MOTILITY REDUCTION BY A HIGH MOLECULAR WEIGHT FRACTION OF OVIDUCTAL FLUID.
P. Coy, R. Lloyd, R. Romar, and W. V. Holt.
- 223 ENZYMATIC ACTIVITY LEVEL OF DIFFERENT GLYCOSIDASES IN INTACT AND ACROSOME-REACTED PORCINE SPERM.
A. De Ondiz, M. Avilés, F. A. García-Vázquez, C. Carrasco, L. Grullón, and S. Ruiz.
- 224 A COMPARATIVE STUDY BETWEEN WOOD AND PLAINS BISON.
C. Lessard, J. Danielson, J. Thundatil, M. Woodbury, and R. McCorkell.
- 225 DOES THE SUPPLEMENTATION OF THE BOAR SEMEN EXTENDER WITH CARNOSINE, L-HISTIDINE, AND TAURINE PRESERVE SPERM FUNCTION DURING STORAGE?
C. Matás, J. C. Gardón, F. A. Garcia-Vazquez, S. Pacchini, and M. Ducci.
- 226 DAY LENGTH DOES NOT AFFECT LIVE SPERM NUCLEAR SHAPE IN THE STALLION.
J. J. Parrish, C. Mueller, E. Ludwig, and J. L. Susko-Parrish.
- 227 PHOSPHOINOSITIDE-3-KINASE SIGNALING AND THE CONTROL OF SPERM MOTILITY IN THE PORCINE OVIDUCT.
N. Satake, P. F. Watson, and W. V. Holt.
- 228 RECIPIENT PREPARATION FOR SPERMATOGONIAL STEM CELL TRANSPLANTATION: ALTERATION IN TESTICULAR CELL COMPONENTS FOLLOWING TRANSIENTLY INDUCED ISCHEMIA.
G. M. Schuenemann, S. M. L. C. Mendis-Handagama, T. M. Prado, H. S. Adair, and F. N. Schrick.
- 229 EFFECTS OF NONYLPHENOL ON MOTILITY, ACROSOMAL INTEGRITY, AND MITOCHONDRAL MEMBRANE POTENTIAL OF EPIDIDYMAL RAT SPERM.
C. Uguz, O. Varisli, C. Agca, and Y. Agca.

OOCYTE ACTIVATION

- 230 ACTIVATION OF *IN VITRO*-MATURED BOVINE OOCYTES WITH IONOMYCIN AND ROSCOVITINE AFTER INTRACYTOPLASMIC SPERM INJECTION.
C. B. Fernandes, L. G. Devito, L. R. Martins, T. S. Rascado, and F. C. Landim-Alvarenga.

- 231 STAGE-DEPENDENT CHANGES OF IP₃R1 PHOSPHORYLATION DURING *IN VITRO* MATURATION AND DEVELOPMENT IN PIG OOCYTES.
J. Ito, C. Suzukamo, T. Mochida, A. Furugaichi, N. Nakajima, R. A. Fissore, and N. Kashiwazaki.
- 232 PARTHENOGENETIC DEVELOPMENT AND PLOIDY OF BOVINE OOCYTES FOLLOWING VARIOUS CHEMICAL ACTIVATION REGIMENS.
S.-A. Ock and G.-J. Rho.
- 233 STUDY OF CORTICAL GRANULE CONTENT IN *IN VITRO*-MATURED PORCINE OOCYTES BY MEANS OF PNA LECTIN PRECIPITATION.
M. D. Saavedra, M. Avilés, P. Coy, and R. Romar.
- 234 PARTHENOGENETIC ACTIVATION OF DOMESTIC CAT OOCYTES USING STRONTIUM.
C. Wang, K. Lee, S. Koh, and Z. Machaty.
- 235 DEVELOPMENT OF CAMEL (*CAMELUS DROMEDARIUS*) OOCYTES AFTER CHEMICAL ACTIVATION.
N. A. Wani.
- 236 PARTHENOGENETIC ACTIVATION OF *IN VITRO*-MATURED OVINE OOCYTES WITH STRONTIUM.
J. Zhu and K. H. S. Campbell.

Oocyte Maturation

- 237 EXPRESSION OF THE GENES *HSP 70.1*, *ZAR-1*, AND *MATER* IN BOVINE OOCYTES SUBMITTED TO PREMATURE AND/OR *IN VITRO* MATURATION.
P. R. Adona, F. H. Biase, F. C. Braga, T. H. C. De Bem, R. Rochetti, and C. L. V. Leal.
- 238 EFFECTS OF LEPTIN SUPPLEMENTATION ON NUCLEAR AND CYTOPLASMIC *IN VITRO* MATURATION OF RABBIT OOCYTES.
M. Arias-Alvarez, R. M. Garcia-Garcia, L. Revuelta, P. G. Rebollar, and P. L. Lorenzo.
- 239 OOCYTE MATURATION *IN VITRO*: PROTEOME ALTERATIONS ANALYZED BY ULTRA-SENSITIVE FLUOROCHROME LABELING AND NANO-ESI-MS-MS.
F. Berendt, T. Froehlich, M. Boelhauve, T. Guengoer, E. Wolf, and G. J. Arnold.
- 240 DEVELOPMENT, DIFFERENTIATION, AND TRK EXPRESSION IN PARTHENOGENETIC BOVINE BLASTOCYSTS.
J. N. Caamaño, M. Muñoz, M. Álvarez-Viejo, C. Díez, C. de Frutos, A. Rodríguez, N. Facal, J. Otero, and E. Gómez.
- 241 STRATEGIES TO IMPROVE GLUTATHIONE CONTENT OF *IN VITRO*-MATURED BOVINE OOCYTES.
E. C. Curnow, J. Ryan, D. Saunders, and E. S. Hayes.
- 242 USE OF BRAIN-DERIVED NEUROTROPHIC FACTOR IN *IN VITRO* PREMATURE OF BOVINE OOCYTES SUBJECTED TO PARTHENOGENETIC ACTIVATION.
T. H. C. De Bem, R. Rochetti, P. R. L. Pires, F. F. Bressan, P. R. Adona, and C. L. V. Leal.
- 243 NUCLEOSIDES REDUCE THE POTENTIAL OF THE MITOCHONDRIAL INNER MEMBRANE AND THE DEVELOPMENTAL COMPETENCE OF MOUSE OOCYTES DURING *IN VITRO* MATURATION.
W. Fujii and H. Funahashi.
- 244 AMPHIREGULIN CAN ASSIST IMMATURE PORCINE OOCYTES TO DEVELOP IN AN *IN VITRO* SYSTEM.
S. H. Jeong, J. H. Lee, E. B. Jeung, E. S. Lee, and S. H. Hyun.
- 245 EFFECTS OF MELATONIN ON THE *IN VITRO* OOCYTE MATURATION OF PORCINE CUMULUS-OOCYTE COMPLEXES.
J. K. Kang, O. J. Koo, D. K. Kwon, G. Jang, S. K. Kang, D. Y. Kim, and B. C. Lee.
- 246 FUNCTIONAL ANALYSIS OF Sebox DURING OOCYTE MATURATION AND EARLY EMBRYOGENESIS BY RNAi.
K. H. Kim, E. Y. Kim, H. S. Lee, and K. A. Lee.
- 247 EFFECTS OF CYSTEINE IN IVM MEDIA ON *IN VITRO* MATURATION UNDER LOW OXYGEN TENSION, *IN VITRO* FERTILIZATION, AND *IN VITRO* CULTURE OF PORCINE OOCYTES.
N. V. Linh, D. N. Q. Thanh, M. Ozawa, B. X. Nguyen, K. Kikuchi, and T. Nagai.

- 248 OPTIMAL *IN VITRO* MATURATION TIME DEPENDS ON MORPHOLOGICAL CHARACTERISTICS OF BOVINE CUMULUS–OOCYTE COMPLEXES.
F. Morales-Pliego, M. Barceló-Fimbres, L. S. Amorim, and G. E. Seidel Jr.
- 249 FOLLICLE-STIMULATING HORMONE AND DIBUTYRYL cAMP TREATMENTS DURING *IN VITRO* MATURATION IMPROVE THE DEVELOPMENTAL COMPETENCE OF MOUSE OOCYTES.
R. Oishi, Y. Isaji, H. Imai, and M. Yamada.
- 250 CYTOPLASMIC DYNEIN INTERMEDIATE CHAIN AND DYNACTIN P150^{Glued} EXHIBIT DISTINCT SPATIAL AND TEMPORAL MICROTUBULE ASSOCIATIONS DURING BOVINE *IN VITRO* MATURATION AND ARE AFFECTED BY FOLLICLE SIZE.
S. E. Racedo, M. C. Branzini, D. Salamone, V. Y. Rawe, and H. Niemann.
- 251 DEVELOPMENT OF A TECHNIQUE FOR STAINING CHROMOSOME AND SPINDLE OF MI AND MII BABOON OOCYTES.
M. Ridha-Albarzanchi, S. Alanssari, A. Taiyeb, K. Dunkin, K. Beifuss, B. Chowdhary, C. Eddy, L. Liu, L. Bernstein, and D. Kraemer.
- 252 VITRIFICATION OF BOVINE BLASTOCYSTS PRODUCED AFTER OOCYTE MATURATION IN MEDIA CONTAINING FATTY ACIDS.
M. A. Shehab-El-Deen, J. L. M. R. Leroy, D. Maes, and A. Van Soom.
- 253 LACK OF ABILITY TO REGULATE KINASE ACTIVITIES MAY BE RESPONSIBLE FOR MEIOTIC INCOMPETENCE IN THE DOG OOCYTE.
N. Songsasen, P. Stein, R. M. Schultz, A. J. Travis, D. E. Wildt, and B. P. Pukazhenth.
- 254 MOLECULAR AND SUBCELLULAR CHARACTERIZATION OF OOCYTES SCREENED FOR THEIR DEVELOPMENTAL COMPETENCE BASED ON G6PDH ACTIVITY.
H. Torner, N. Ghanem, C. Ambros, M. Hoelker, W. Tomek, C. Phatsara, H. Alm, W. Kanitz, M. A. Sirard, K. Schellander, and D. Tesfaye.
- 255 PREIMPLANTATION DEVELOPMENT AND EXPRESSION OF BAX AND HSP-70 GENES IN BOVINE EMBRYOS PRODUCED FROM OOCYTES MATURED IN CHEMICALLY DEFINED IVM MEDIUM WITHOUT GONADOTROPHINS.
A. A. Vireque, L. S. A. Camargo, R. V. Serapião, E. M. Ferreira, P. A. A. S. Navarro, A. A. M. Rosa e Silva, and R. A. Ferriani.
- 256 EFFECT OF EPIDERMAL GROWTH FACTOR ON *IN VITRO* MATURATION OF CYNOMOLGUS MONKEY (*MACACA FASCICULARIS*) OOCYTES.
J. Yamasaki, J. Okahara-Narita, C. Iwatani, H. Tsuchiya, S. Nakamura, N. Sakuragawa, and R. Torii.
- 257 THE PRESENCE OF AMMONIUM IN CHEMICALLY DEFINED MATURATION MEDIUM INHIBITS PORCINE OOCYTE NUCLEAR MATURATION AND SUBSEQUENT EMBRYONIC DEVELOPMENT *IN VITRO*.
Y. Yuan and R. L. Krisher.

SEXING

- 258 THE EFFECT OF A PLANT PROTEIN COMPONENT OF MEDIA USED FOR BULL SPERM SEXING ON SPERM MEMBRANE STATUS.
M. Bochenek and Z. Smorag.
- 259 ADDITION OF CHOLESTEROL TO FLOW-SORTED BULL SPERMATOZOA TO ENHANCE CRYOSURVIVAL DOES NOT AFFECT THE ACROSOME REACTION.
E. G. Crichton, J. K. Graham, and J. L. Schenk.
- 260 EFFECTIVENESS OF A COMMERCIALY AVAILABLE POST-THAW BOVINE SEMEN SEXING KIT IN BOTH MULTIPLE- AND SINGLE-OVULATING COWS.
E. Curry, S. L. Pratt, D. Lapin, and J. R. Gibbons.
- 261 LABELING SEX-SPECIFIC DNA SEQUENCES IN MAMMALIAN SPERM.
B. A. Didion and R. Bleher.
- 262 THE EFFECT OF TRIS and BOTU-BOV® FOR BOVINE SEXED SPERM CRYOPRESERVATION.
C. P. Freitas, J. A. Dell'Aqua, Jr., F. O. Papa, M. A. Alvarenga, A. M. Crespilho, and F. C. Landim-Alvarenga.

- 263 EVALUATION OF ALTERNATIVE CRYOPROTECTANTS AND CHOLESTEROL-LOADED CYCLODEXTRINS FOR INCREASING CRYOSURVIVAL OF SEXED REFROZEN STALLION SPERMATOZOA.
J. K. Graham, M. A. Meyers, E. L. Squires, and J. L. Schenk.
- 264 SUITABILITY OF BOVINE SEXING PRIMERS FOR SEX DETERMINATION OF CAPRINE CELLS.
C. Herr, C. Valentin, and K. Greeson.
- 265 DIFFERENTIATING X- AND Y-BEARING SPERMATOZOA ASSOCIATED WITH THE ZONA PELLUCIDA AT THE TIME OF FERTILIZATION.
J. Mao, A. M. Davis, E. D. Fountain, R. M. Roberts, and C. S. Rosenfeld.
- 266 BIRTH OF CANINE OFFSPRING FOLLOWING INSEMINATION OF A BITCH WITH FLOW-SORTED SPERMATOZOA.
M. A. Meyers, G. Burns, D. Arn, and J. L. Schenk.
- 267 BIRTH OF DOMESTIC CAT KITTENS OF PREDETERMINED SEX AFTER TRANSFER OF EMBRYOS PRODUCED BY *IN VITRO* FERTILIZATION OF OOCYTES WITH FLOW-SORTED SPERMATOZOA.
C. E. Pope, E. B. Crichton, M. C. Gómez, C. Dumas, and B. Dresser.
- 268 TIMED INSEMINATION OF HEIFERS WITH SEXED SPERM.
J. L. Schenk and G. E. Seidel, Jr.
- 269 THE ENHANCEMENT OF THE SENSITIVITY OF A PCR-BASED AVIAN SEX DETERMINATION ASSAY.
C. Valentin, R. West, and C. Herr.
- 270 STILL GLOWING AFTER ALL THESE YEARS: STORAGE LIFE OF A COMPLETE BOVINE SEXING PCR MIX.
R. West, C. Valentin, and C. Herr.

SPERM INJECTION

- 271 EFFECT OF MARE AGE ON OOCYTE MORPHOLOGY AND DEVELOPMENTAL COMPETENCE AFTER INTRACYTOPLASMIC SPERM INJECTION.
J. L. Altermatt, T. K. Suh, J. E. Stokes, L. F. Campos-Chillon, and E. M. Carnevale.
- 272 BIRTH OF A CALF AFTER INTRACYTOPLASMIC SPERM INJECTION WITH FROZEN-THAWED EPIDIDYMAL SPERM FROM A POSTMORTEM BULL.
C. A. Guerrero, J. Smith, J. W. Lynn, K. R. Bondioli, and R. A. Godke.
- 273 REMOVAL OF ACROSOME FROM SPERM HEADS IMPROVES DEVELOPMENT OF RAT ZYGOTES THROUGH INTRACYTOPLASMIC SPERM INJECTION.
Y. Seita, S. Sugio, D. Sano, M. Nakada, M. Hoshina, Y. Okuda, J. Ito, and N. Kashiwazaki.
- 274 LYSOLECITHIN TREATMENT OF ELAND, BONGO, AND BOVINE SPERMATOZOA AND CLEAVAGE OF BOVINE OOCYTES AFTER INTERSPECIES INTRACYTOPLASMIC SPERM INJECTION.
G. Wirtu, C. E. Pope, M. C. Gomez, R. A. MacLean, D. L. Paccamonti, and B. L. Dresser.

STEM CELLS

- 275 *IN VITRO* DIFFERENTIATION OF PORCINE MESENCHYMAL STEM CELLS INTO NEURON-LIKE CELLS.
B. Mohana Kumar, H. J. Song, E. J. Kang, M. K. Kim, S. A. Ock, S. Balasubramanian, and G. J. Rho.
- 276 CHARACTERIZATION OF BOVINE EPIBLAST OUTGROWTH COLONIES DERIVED FROM DAY 12 BLASTOCYSTS.
E. Østrup, K. Schausser, J. O. Gjørret, and P. Maddox-Hyttel.
- 277 ESTABLISHMENT OF EMBRYONIC STEM CELL LINES DERIVED FROM A EGFP-TRANSGENIC MOUSE AND THEIR SURVIVAL IN THE COCHLEA OF C57BL/6 MICE.
K. S. Ahn, S. J. Jeon, J. Y. Jung, T. Choi, S. J. Choi, and H. Shim.
- 278 DIRECTED NEURONAL DIFFERENTIATION OF PLURIPOTENT CELL LINES DERIVED FROM PIG PARTHENOGENETIC EMBRYOS.
T. A. L. Brevini, G. Pennarossa, S. Antonini, F. Cillo, V. Tosetti, and F. Gandolfi.
- 279 COMPARISON OF DIFFERENT METHODS OF ISOLATION OF EMBRYONIC STEM CELL-LIKE CELLS FROM *IN VITRO*-PRODUCED GOAT BLASTOCYSTS.
A. K. De, D. Malakar, and Y. S. Akshey.

- 280 ISOLATION, PRESERVATION, AND CHARACTERIZATION OF EQUINE UMBILICAL CORD BLOOD STEM CELLS.
C. De Schauwer, S. Piepers, M. K. Hoogewijs, J. L. J. Govaere, T. Rijsselaere, K. Demeyere, E. Meyer, and A. Van Soom.
- 281 USE OF MESENCHYMAL STEM CELLS COLLECTED FROM BONE MARROW OF ADULT DOGS FOR THE TREATMENT OF NON-UNION BONE FRACTURES.
C. B. Dores, J. F. Lima-Neto, O. C. M. Pereira-Junior, T. S. Rascado, D. Passarelli, S. E. R. S. Lorena, S. C. Rahal, and F. C. Landim-Alvarenga.
- 282 CHARACTERIZATION OF THE DEVELOPMENTAL POTENTIAL OF FETAL SOMATIC STEM CELLS ISOLATED FROM DIFFERENT TISSUES.
N. Hornen, W. A. Kues, and H. Niemann.
- 283 EXPRESSION OF TRANSCRIPTION FACTORS AND MESENCHYMAL DIFFERENTIATION OF STEM CELLS DERIVED FROM WHARTON'S JELLY OF PORCINE UMBILICAL CORD.
E. J. Kang, B. Mohana Kumar, H. J. Song, M. K. Kim, S. A. Ock, B. J. Jeon, S. Balasubramanian, and G. J. Rho.
- 284 HIGH-THROUGHPUT MICROFLUIDIC TECHNOLOGIES FOR STEM CELL RESEARCH.
D. Kim, E. Monaco, A. Lima, W. L. Hurley, and M. B. Wheeler.
- 285 VIABILITY AND GENE EXPRESSION OF MESENCHYMAL STEM CELLS CRYOPRESERVED WITH DIFFERENT CRYOPROTECTANTS.
M. K. Kim, S. A. Ock, B. G. Jeon, J. H. Cho, and G. J. Rho.
- 286 OSTEOGENIC DIFFERENTIATION *IN VITRO* OF PORCINE ADULT MESENCHYMAL STEM CELLS.
A. Lima, E. Monaco, S. Wilson, D. Kim, C. Feltrin, S. Lane, M. Bionaz, W. L. Hurley, and M. B. Wheeler.
- 287 ACTIVE MITOCHONDRIA ARE PRESENT IN MOUSE AND MONKEY EMBRYONIC STEM CELL LINES.
T. Lonergan, A. Harvey, J. Zhao, B. Bavister, and C. Brenner.
- 288 THE EXPRESSION PATTERN OF ACETYLATED ALPHA-TUBULIN IS CONSERVED IN PORCINE AND MURINE SPERMATOGONIAL STEM CELLS.
J. Luo, S. Megee, and I. Dobrinski.
- 289 TARGETING EFFICIENCIES AND CALCIUM-BINDING PROTEIN PROFILES OF TWO MOUSE EMBRYONIC STEM CELL LINES.
S. Mamo, J. Kobolak, S. Becker, M. Horsch, J. Beckers, and A. Dinnyes.
- 290 A CYNOMOLGUS MONKEY EMBRYONIC STEM CELL LINE DERIVED FROM A SINGLE BLASTOMERE.
J. Okahara-Narita, J. Yamasaki, C. Iwatani, H. Tsuchiya, K. Wakimoto, Y. Kondo, T. Wakayama, and R. Torii.
- 291 ENRICHMENT OF CARDIOMYOCYTES DERIVED FROM MURINE EMBRYONIC STEM CELLS TRANSFECTED OR NOT WITH BOVINE GROWTH HORMONE GENE (bGH).
C. S. Oliveira, N. Z. Saraiva, R. Vantini, M. V. Resende, T. A. D. Tetzner, and J. M. Garcia.
- 292 MULTILINEAGE POTENTIAL OF CANINE MESENCHYMAL STEM CELLS DERIVED FROM BONE MARROW.
H. J. Song, E. J. Kang, B. G. Jeon, and G. J. Rho.
- 293 EMBRYONIC STEM-LIKE CELLS DERIVED FROM PORCINE INNER CELL MASS CELLS ISOLATED BY DIFFERENT METHODS.
X. A. Wolf, M. A. Rasmussen, K. Schausser, and P. Maddox-Hyttel.

SUPEROVULATION

- 294 SUPERSTIMULATION IN THE FIRST FOLLICULAR WAVE, WITHOUT THE USE OF ESTRADIOL IN BONSMARA CATTLE.
D. Carballo Guerrero, A. Tribulo, R. Tribulo, H. Tribulo, and G. A. Bo.
- 295 SUPEROVULATORY RESPONSE IN COWS FOLLOWING SYNCHRONIZATION OF FOLLICLE WAVE EMERGENCE WITH ESTRADIOL AT DIFFERENT STAGES OF THE ESTROUS CYCLE.
A. Garcia Guerra, G. A. Bó, J. Villarreal, and G. M. Brogliatti.

- 296 FREQUENT RECTAL PALPATIONS FOLLOWING SUPEROVULATORY TREATMENT AFFECT SEX RATIO OF EMBRYOS RECOVERED FROM HOLSTEIN HEIFERS.
A. Ideta, K. Hayama, M. Urakawa, and Y. Aoyagi.
- 297 EFFECT OF GONADOTROPIN-RELEASING HORMONE COMPARED WITH ESTRADIOL-17 β AT THE BEGINNING OF A SUPERSTIMULATION PROTOCOL ON SUPEROVULATORY RESPONSE AND EMBRYO QUALITY.
J. M. Wock, L. M. Lyle, and M. E. Hockett.
- 298 EFFECT OF TWO DIFFERENT DOSES OF FOLLICLE-STIMULATING HORMONE IN ALUMINUM HYDROXIDE GEL BY A SINGLE INJECTION ON ESTRUS AND SUPEROVULATORY RESPONSE IN HOLSTEIN CATTLE.
H. Yoshioka, Y. Inaba, H. Matsuda, S. Matoba, K. Kimura, and K. Imai.

TRANSGENESIS

- 299 DEVELOPMENTAL COMPETENCE OF TRANSGENIC BOVINE EMBRYOS RECONSTRUCTED BY NUCLEAR TRANSFER USING MEIOSIS-BLOCKED OOCYTES.
F. F. Bressan, M. Miranda, P. R. Adona, T. H. C. De Bem, F. V. Meirelles, F. T. V. Pereira, M. Binelli, and C. L. V. Leal.
- 300 HEMIZYGOUS PRION PROTEIN GENE (PRNP) KNOCKOUT IN CATTLE FIBROBLASTS.
D. Brunetti, G. Rossi, I. Lagutina, R. Duchi, S. Colleoni, M. Catania, C. Viscomi, D. Piga, M. Zeviani, G. Lazzari, F. Tagliavini, and C. Galli.
- 301 EVALUATION OF THE SPERM-MEDIATED GENE TRANSFER (SMGT) TECHNIQUE BY *IN VITRO* FERTILIZATION IN PIGS USING RecA PROTEIN.
F. A. García-Vázquez, A. Gutiérrez-Adán, and J. Gadea.
- 302 INHIBITION OF HUMAN NATURAL KILLER (NK) CELL-MEDIATED CYTOTOXICITY IN MINIPIG CELLS BY KAPOSÍ'S SARCOMA-ASSOCIATED HERPESVIRUS K5 PROTEIN.
G. S. Han, K. M. Choi, S. P. Hong, J. Y. Yoo, E. J. Kim, S. H. Kim, Y. C. Park, J. G. Seol, and K. W. Park.
- 303 ESTABLISHMENT OF PREGNANCIES WITH HANDMADE CLONING PORCINE EMBRYOS RECONSTRUCTED WITH FIBROBLASTS CONTAINING AN ALZHEIMER'S DISEASE GENE.
P. M. Kragh, J. Li, Y. Du, L. Lin, M. Schmidt, I.B. Boegh, L. Bolund, A. L. Nielsen, I. E. Holm, A. L. Joergensen, and G. Vajta.
- 304 HUMAN AUGMENTER OF LIVER REGENERATION TRANSGENIC OVINE EMBRYO DERIVED FROM SOMATIC CELL NUCLEAR TRANSFER.
Y. Ma, P. Zhou, D. Liu, G. Xia, and S. Bou.
- 305 TRANSGENIC CLONED PIGS EXPRESSING ORANGE FLUORESCENT PROTEIN KUSABIRA-ORANGE.
H. Matsunari, M. Onodera, N. Tada, H. Mochizuki, E. Haruyama, B. Ogawa, Y. Ikeda, Y. Tohi, N. Nakayama, H. Saito, S. Ueno, M. Kurome, and H. Nagashima.
- 306 GENERATION OF HUMAN A20 GENE-TRANSGENIC PORCINE FETAL FIBROBLASTS FOR SOMATIC CELL NUCLEAR TRANSFER.
M. Oropeza, B. Petersen, N. Hornen, D. Herrmann, and H. Niemann.
- 307 TRANSGENESIS MEDIATED BY INTRACYTOPLASMIC SPERM INJECTION (ICSI) ASSISTED BY CHEMICAL ACTIVATION IN DIFFERENT DOMESTIC SPECIES.
F. Pereyra-Bonnet, R. Fernández-Martín, R. Olivera, J. Jarazo, G. Vichera, A. Gibbons, and D. Salamone.
- 308 INFLUENCE OF A MATRIX ATTACHMENT REGION ON THE EXPRESSION OF BICISTRONIC VECTORS TRANSFECTED IN MAMMALIAN CELLS CULTURED *IN VITRO*.
A. Perota, D. Brunetti, M. Lizier, F. Lucchini, and C. Galli.
- 309 PRODUCTION OF PIGS TRANSGENIC FOR HUMAN HEMEOXYGENASE-I BY SOMATIC NUCLEAR TRANSFER.
B. Petersen, A. Lucas-Hahn, D. Herrmann, W. A. Kues, W. Ramackers, S. Bergmann, J. W. Carnwath, M. Winkler, and H. Niemann.
- 310 PRODUCTION OF TRANSGENIC CLONED PORCINE EMBRYOS EXPRESSING EGFP OR LACZ GENE THROUGH REPLICATION DEFECTIVE RETROVIRAL VECTOR.
S. J. Uhm, M. K. Gupta, T. Kim, and H. T. Lee.

- 311 RISK ASSESSMENT OF α -LACTALBUMIN TRANSGENIC PIGS.
M. B. Wheeler, W. L. Hurley, S. J. Lane, G. E. Bressner, T. VanEtten, D. Kim, A. S. Lima, E. Monaco, and S. M. Wilson.

ULTRASONOGRAPHY

- 312 LUTEAL MORPHOMETRIC PARAMETERS AND SONOGRAPHIC ECHOTEXTURE DURING LUTEOGENESIS PERIOD IN PREGNANT GOATS.
E. K. N. Arashiro, J. H. M. Viana, J. F. Fonseca, L. G. B. Siqueira, J. H. Bruschi, L. S. Camargo, C. A. C. Fernandes, and F. Z. Brandão.
- 313 EVALUATION OF COLOR DOPPLER ULTRASONOGRAPHY OF THE PERIFOLLICULAR BLOOD FLOW TO PREDICT THE DEVELOPMENTAL COMPETENCE OF BOVINE CUMULUS-OOCYTE COMPLEXES COLLECTED DURING REPEATED OVUM PICK-UP SESSIONS.
A. Hanstedt, K. Höffmann, Ä. Honnens, H. Bollwein, and C. Wrenzycki.
- 314 ULTRASONOGRAPHIC ASSESSMENT OF FETAL DEVELOPMENT IN AI AND ET SHEEP FETUSES.
M. Panarace, G. Jauregui, J. Smith, D. Ferguson, J. Hill, and M. J. Medina.
- 315 CORPORA LUTEA MORPHOLOGICAL AND ECHOTEXTURAL ATTRIBUTES RELATED TO PLASMA PROGESTERONE CONCENTRATION IN HEIFERS.
L. G. B. Siqueira, J. H. M. Viana, C. A. A. Torres, E. D. Souza, L. S. Amorim, J. F. Fonseca, L. S. A. Camargo, and P. L. J. Monteiro, Jr.

POSTER SESSION AUTHOR INDEX

AUTHOR, POSTER NUMBER = ABSTRACT NUMBER IN REPRODUCTION, FERTILITY AND DEVELOPMENT 2008; 20 (1)

A

Aaltonen, J. T., 158
Abe, H., 120
Abe, Y., 38, 58
Adair, H. S., 228
Adams, G. P., 19, 164, 221
Adona, P. R., 237, 242, 299
Adorjan, M., 57
Aerts, J. M. J., 66
Agca, C., 97, 229
Agca, Y., 97, 229
Ahn, K. S., 35, 277
Aikawa, Y., 206
Akshey, Y. S., 23, 209, 279
Alanssari, S., 251
Al-Anssari, S., 195
Al-Atraqchi, S., 195
Albrizio, M., 185
Alexander, J. E., 2, 201
Algire, J., 152
Al-Jabar, A., 195
Alm, H., 254
Almedia-Porada, G., 145
Almiñana, C., 70
Altermatt, J. L., 1, 271
Alvarado, E., 159
Alvarenga, M. A., 86, 262
Álvarez-Viejo, M., 240
Amano, T., 163, 179
Ambrósio, C. E., 50
Ambros, C., 254
Amorim, E. A. M., 67, 96
Amorim, L. S., 96, 121, 248, 315
Anand, T., 165, 166
Andries, S., 66, 128
Antonini, S., 170, 278
Anzai, M., 40, 46
Aoyagi, Y., 150, 296
Arashiro, E. K. N., 219, 312
Arias-Alvarez, M., 238
Arn, D., 266
Arnold, G. J., 239
Asparrin, M., 159
Attanasio, L., 68, 202
Averhart, W., 220
Avilés, M., 198, 223, 233

B

Bai, X. J., 24, 83
Balasubramanian, S., 167, 275, 283
Baldighi, J., 10, 220
Balladares, J., 32
Ballard, C. B., 188, 196
Barceló-Fimbres, M., 122, 248
Barcelos, A. C. Z., 143
Barcelos, D. S., 143
Barcelos, L. N., 143
Baril, G., 161, 207
Barnabe, V. H., 203
Barros, C. M., 17, 143, 214
Barry, D., 52
Bastos, M. R., 135
Bauersachs, S., 175, 181
Bavister, B., 287
Beaulieu, M., 8
Beaumont, S. E., 168
Becker, S., 289
Beckers, J., 289
Beckers, J.-F., 207
Bedford, S. J., 27
Bedows, E., 158
Beifuss, K., 251
Beltrán Breña, P., 162, 183
Benito, J. M., 14
Berendt, F., 239
Berg, D. K., 168
Berg, M. C., 31, 144
Bergmann, S., 309
Bergonzelli, P. H., 11
Bermejo-Álvarez, P., 197
Bernstein, L., 251
Bertolini, L. R., 50
Bertolini, M., 50
Besenfelder, U., 134
Bettegowda, A., 109
Betts, D. H., 111
Beyhan, Z., 37, 61
Biase, F. H., 187, 237
Bidwell, C., 3
Bielanski, A., 152
Binelli, M., 299
Bionaz, M., 182, 286
Bischoff, S. R., 2
Biswas, D., 99

Blash, S., 211
Bleher, R., 261
Blevins, B. A., 7
Block, J., 123
Blondin, P., 8
Blum, H., 175, 181
Bó, G. A., 22, 294, 295
Boccia, L., 68, 202
Bochenek, M., 95, 258
Bodo, S., 57
Boegh, I.B., 303
Boelhauve, M., 119, 169, 239
Boerma, P., 157
Bogle, O. A., 221
Boilard, M., 8
Boite, M. C., 141
Bollwein, H., 313
Bols, P. E. J., 66, 128
Bolund, L., 28, 42, 81, 303
Bondarenko, G. I., 124
Bondioli, K. R., 30, 92, 160, 188,
196, 272
Bonilla, L., 123, 208
Bormann, C. L., 145, 177
Borquet, C., 200
Borst, L., 10
Bossart, P., 12
Bou, S., 304
Bouma, G. J., 1
Bousfield, G., 158
Braga, F. C., 237
Brandão, F. Z., 312
Branzini, M. C., 250
Brenner, C., 287
Brero, A., 107
Bressan, F. F., 242, 299
Bressner, G. E., 311
Brevini, T. A. L., 170, 278
Brogliatti, G. M., 16, 76, 151, 295
Brooks, S., 114
Brunetti, D., 300, 308
Bruschi, J. H., 312
Bryan, M. A., 9
Bryla, M., 75
Burns, G., 266
Butnev, V. Y., 158
Byun, H.-S., 115

C

Caamaño, J. N., 127, 240
Caballero, I., 70
Cabot, R., 178
Callesen, H., 131
Camargo, L. S. A., 141, 219, 255,
312, 315
Cameron, I. T., 114
Campanile, G., 68
Campbell, K. H. S., 26, 82, 236
Campos-Chillon, L. F., 1, 271
Cané, L., 32
Cánovas, S., 198, 204
Carbajo, M., 14
Carballo Guerrero, D., 294
Carnes, K., 220
Carnevale, E. M., 1, 271
Carnwath, J. W., 309
Carrasco, C., 223
Carter, F., 134
Catania, M., 300
Cater, M., 98
Cavia, R., 16
Chacón, L., 25
Chan, A. W. S., 6
Chang, T., 124
Chaubal, S. A., 199
Chauhan, M. S., 54, 165, 166
Chen, Y., 61, 98
Chenevert, J., 160
Cheng, P. C., 6
Cho, J. H., 285
Cho, S. J., 63
Cho, S. R., 130
Cho, Y. J., 56
Cho, Y. S., 106
Choe, C. Y., 130
Choe, S. Y., 167
Choi, B. R., 176
Choi, E.G., 63
Choi, I., 26
Choi, K. M., 184, 193, 302
Choi, S. H., 130
Choi, S. J., 35, 277
Choi, T., 277
Choi, Y. H., 27
Chong, L., 47
Chorfi, Y., 138
Chowdhary, B., 251
Cibelli, J. B., 37, 51, 61
Cillo, F., 170, 278

Clément, L., 102
Clark, S., 10, 220
Clay, C. M., 1
Clemente, M., 200
Colazo, M., 20
Colleoni, S., 170, 300
Comizzoli, P., 69
Cooke, F. N. T., 125
Coy, P., 198, 204, 222, 233
Cremades, T., 77
Cremer, T., 107
Crespilho, A. M., 262
Crichton, E. B., 267
Crichton, E. G., 259
Cuello, C., 70
Cui, X. S., 171, 194
Cunniff, K., 37
Curnow, E. C., 241
Curry, E., 260
Cutaia, L., 22

D

Dai, Y. P., 62
Dalbiès-Tran, R., 102
Dang, V.-H., 172
Danielson, J., 224
Davis, A. M., 265
De, A. K., 23, 209, 279
De Bem, T. H. C., 237, 242, 299
De Causmaecker, V., 12
De Clercq, J. B. P., 66, 128
de Frutos, C., 240
de la Fuente, J., 14, 95, 162, 183, 200
de la Rey, M., 7
De Ondiz, A., 18, 223
De Rosa, A., 68, 202
De Schauwer, C., 280
Dell'Aqua, Jr., J. A., 86, 262
Demeyere, K., 280
Denniston, R. S., 52
Devito, L. G., 71, 230
Devlin, B. R., 210
Dewulf, J., 12
Di Croce, F. A., 11
Di Palo, R., 68
Dias, F., 19, 20
Didion, B. A., 149, 261
Díez, C., 14, 127, 240
Dinnyes, A., 45, 57, 289
Dobriniski, I., 288
Dobrinisky, J. R., 149, 155

Dochi, O., 80, 217
Dode, M. A. N., 132, 135
Dong, Y. J., 24, 83
Dores, C. B., 281
Dresser, B. L., 25, 74, 267, 274
Drury, K., 108
Du, F., 98, 199
Du, Y., 28, 42, 81, 303
Ducci, M., 225
Duchi, R., 300
Dumas, C., 267
Dunkin, K., 251
Dupras, J., 138
Dupras, R., 138
Durning, M., 124
Dyce, P., 33

E

Ealy, A. D., 125
Eckert, J. J., 114
Eddy, C., 251
Edmondson, M. A., 153, 154
Edwards, J. L., 13, 146, 147, 186
Eilts, B., 92
Emslie, R., 9
Entrican, G., 208
Ereno, R. L., 17
Estes, K. A., 158
Etcheverry, M. P., 76
Evans, A., 108
Ewerling, S., 149

F

Faber, D., 140
Facal, N., 127, 240
Fahrudin, M., 44
Farin, C. E., 2, 201
Farin, P. W., 2, 201
Farmer, W. T., 2
Fatet, A., 207
Feltrin, C., 29, 286
Ferguson, D., 314
Fernandes, C. A. C., 219, 312
Fernandes, C. B., 71, 230
Fernández-Martín, R., 307
Ferreira, C. R., 53, 187
Ferreira, E. M., 255
Ferreira, H. N., 71, 86
Ferriani, R. A., 255
Feugang, J. M., 100
Filippi, L., 22
Filliers, M., 12

Fisher, P., 26
Fissore, R. A., 27, 231
Fitzsimmons, C., 101
Fleming, T. P., 114
Folhadella, I. M., 141
Fonseca, J. F., 219, 312, 315
Forbes, W., 160
Ford, J., 220
Forell, F., 50
Fountain, E. D., 265
Foxworth, G., 145
Franca, L., 220
Franco, M. M., 132
Freitas, C. P., 213, 219, 262
Froehlich, T., 239
Fujihara, M., 72
Fujii, W., 73, 243
Fukuhara, J., 126
Funahashi, H., 73, 215, 243
Furugaichi, A., 79, 231

G

Gadea, J., 301
Gajda, B., 75, 91
Galik, P. K., 153, 154
Gall, L., 41
Gallegos, A., 159
Galli, C., 170, 300, 308
Gamarra, G., 159
Gandolfi, F., 170, 278
Garcia, E. M., 88
Garcia, J. M., 53, 187, 291
Garcia Guerra, A., 16, 76, 151, 295
Garcia-Garcia, R. M., 238
García-Vázquez, F. A., 223, 225, 301
Gard, J. A., 153, 154
Gardón, J. C., 225
Garthwaite, M. A., 124
Gasparrini, B., 68, 202
Gavin, W., 211
Gentry, Jr., G. T., 160
Gerger, R. P. C., 50
Ghanem, N., 254
Gibbons, A., 307
Gibbons, J. R., 260
Gil, M. A., 70, 88
Giordano, J. O., 13
Giraldo, A. M., 30, 188
Givens, M. D., 153, 154
Gjørret, J. O., 276
Glimp, H., 145

Godke, R. A., 30, 92, 160, 188,
196, 272
Goel, S., 72
Golding, M. C., 177
Golos, T. G., 124
Gómez, E., 127, 240
Gómez, M. C., 25, 74, 267, 274
Gonçalves, R. F., 203
Gonzalez, C., 102
Goovaerts, I. G. F., 128
Gouvêa, L. M., 143
Govaere, J. L. J., 280
Graham, J. K., 67, 96, 205, 216,
259, 263
Green, J., 97
Green, J. A., 5, 180
Green, M. P., 31, 180
Greeson, K., 264
Greve, T., 131
Griffin, J., 157
Grullón, L., 198, 204, 223
Guardieiro, M. M., 135
Guengoer, T., 169, 239
Guerra, M. O., 141
Guerrero, C. A., 92, 272
Gupta, M. K., 173, 310
Gutiérrez-Adán, A., 183, 197, 301
Gutierrez, J., 32
Guyader-Joly, C., 102

H

Han, G. S., 184, 193, 302
Han, M. H., 130
Hanna, C., 145
Hansen, P. J., 123, 125, 208
Hanstedt, A., 313
Hao, Y. H., 33
Harnos, A., 89
Hart, E. J., 34
Hartman, D. L., 27
Haruyama, E., 305
Harvey, A., 287
Hashizume, R., 104
Hatanaka, Y., 163
Havlicek, V., 134
Hayama, K., 150, 296
Hayashi, N., 58
Hayes, E. S., 241
Hayna, J. H., 155
Heinmam, M. B., 156
Hendricks, A., 161

Heo, S. Y., 35
Herbach, N., 4
Hernandez, M., 77
Hernandez-Fonseca, H. J., 18
Herr, C., 78, 94, 264, 269, 270
Herrera, C., 129
Herrmann, D., 306, 309
Hess, R., 220
Heuer, C., 9
Heyman, Y., 41
Hidalgo, C. O., 14, 162
Hiendleder, S., 101, 175
Hill, J., 314
Hinrichs, K., 27
Hockett, M. E., 297
Hoelker, M., 189, 190, 254
Höffmann, K., 313
Hofmann, A., 4
Hölker, M., 112, 134
Holm, I. E., 303
Holt, W. V., 15, 222, 227
Hong, S. G., 36, 48, 133
Hong, S. P., 184, 193, 302
Honnens, Ä., 313
Hoogewijs, M. K., 280
Hopkins, B. K., 78, 94
Hornen, N., 282, 306
Horsch, M., 289
Hoshi, H., 120
Hoshina, M., 79, 273
Hosoi, Y., 38, 40, 46, 58, 163, 179
Hudson, M. R., 205, 216
Humblot, P., 102
Hurley, W. L., 182, 284, 286, 311
Hylan, D., 188
Hyun, S. H., 99, 244
Hyun, S.-H., 115, 174

I

Iager, A. E., 37, 51, 61
Ideta, A., 150, 296
Iguma, L. T., 141
Ikeda, Y., 85, 305
Im, K. S., 130
Imai, H., 72, 249
Imai, K., 126, 206, 298
Inaba, Y., 206, 298
Inomata, T., 79
Iqbal, K., 103
Ireland, J. J., 109
Iritani, A., 38, 40, 46, 58, 163, 179

Isaji, Y., 249
Ito, J., 44, 79, 231, 273
Ito, M., 104
Iwamoto, D., 38, 58
Iwatani, C., 39, 60, 256, 290

J

Jang, G., 36, 48, 133, 245
Jang, J. M., 173
Jarazo, J., 307
Jauregui, G., 314
Jenkins, J. A., 25
Jeon, B. G., 285, 292
Jeon, B. J., 167, 283
Jeon, S. J., 277
Jeong, S. H., 244
Jeung, E.-B., 99, 115, 117, 172,
174, 191, 244
Jin, G. Z., 63
Jin, X. L., 56, 106
Joerg, H., 145
Jørgensen, A. L., 42, 303
Jung, E.-M., 174
Jung, J. W., 173
Jung, J. Y., 277

K

Kagawa, N., 74
Kaiser, G., 61
Kameyama, Y., 104
Kanan, Z., 195
Kaneko, H., 44, 93
Kang, E. J., 275, 283, 292
Kang, H. G., 116
Kang, J. K., 245
Kang, S. K., 36, 48, 133, 245
Kanitz, W., 254
Kasa, S., 126
Kasamatsu, A., 38
Kashiwazaki, N., 44, 79, 93, 231,
273
Kasinathan, P., 157
Kastelic, J., 19, 20
Katayama, M., 105
Kato, H., 38, 40, 46, 58
Kaya, A., 100
Keefer, C. L., 113
Keler, B., 4
Kikuchi, K., 44, 93, 218, 247
Killian, G., 202
Killian, G. J., 203
Kilmer, T., 199

Kim, C. H., 56
Kim, D., 29, 182, 284, 286, 311
Kim, D. Y., 36, 245
Kim, E. J., 184, 193, 302
Kim, E. Y., 246
Kim, H. J., 48, 130
Kim, I. C., 130
Kim, I. H., 116, 130
Kim, J. B., 118
Kim, J. S., 56, 106
Kim, K. H., 246
Kim, K. P., 173
Kim, L. H., 63
Kim, M. K., 36, 48, 275, 283, 285
Kim, N.-H., 63, 171, 194
Kim, S. H., 184, 193, 302
Kim, S. J., 118, 130
Kim, T., 63, 171, 176, 310
Kim, U. H., 116
Kim, Y.-J., 174
Kimura, K., 298
Kimura, Y., 72
King, W. A., 34, 111
Kishi, M., 58
Kishigami, S., 38, 58
Ko, S.-H., 115
Kobayashi, S., 206
Kobolak, J., 289
Koehler, D., 107
Koh, S., 234
Kondo, Y., 290
Kong, I. K., 63, 139
Koo, B. C., 63, 176
Koo, D. B., 56, 106, 139
Koo, O. J., 245
Korte, S. W., 180
Koura, M., 148
Koyama, H., 80, 217
Kraemer, D. C., 43, 90, 140, 145, 251
Kragh, P. M., 28, 42, 81, 303
Kramer, J. M., 108
Krebs, S., 175
Krisher, R. L., 3, 257
Kruk, Z., 101
Krzysztofowicz, E., 91
Kues, W. A., 103, 282, 309
Kumar, D., 165, 166
Kurome, M., 305
Kuwayama, M., 74, 81
Kuzmany, A., 134
Kwon, D. K., 245

Kwon, M. S., 63, 176

L

Laender, C. R., 132
Lagutina, I., 300
Lalonde, A., 152
Landim-Alvarenga, F. C., 71, 213,
230, 262, 281
Landman, B., 212
Lane, S., 286
Lane, S. J., 311
Lapin, D., 260
Larraburu, G., 16, 76
Larson, J., 21
Laurincik, J., 49
Lazzari, G., 170, 300
Le Bourhis, D., 41
Leal, C. L. V., 237, 242, 299
Lee, B. C., 36, 48, 133, 245
Lee, B.-M., 117
Lee, E. S., 99, 244
Lee, G.-S., 115, 117, 174
Lee, H., 176
Lee, H. S., 63, 139, 246
Lee, H. T., 173, 310
Lee, J.-H., 26, 99, 244
Lee, J. I., 116
Lee, K., 234
Lee, K. A., 246
Lee, K. B., 109
Lee, K. K., 56, 106, 139
Lee, R. S. F., 31, 144
Lee, Y. S., 63
Lee, Y. Y., 56
Leese, H. J., 137, 192
Legendre, X., 161
Leibo, S. P., 74
Leite, R. C., 156
Leme, L. O., 132, 135
Lemme, E., 49
Lepikhov, K., 110
Leroy, J. L. M. R., 66, 128, 252
Lessard, C., 224
Li, B. S., 65
Li, J., 28, 42, 81, 303
Li, J. L., 33
Li, N., 62
Li, Q. Y., 62
Li, R., 5, 180
Li, X. Y., 171
Li, Y., 62

- Lightfoot, K., 20
Lima, A., 29, 182, 284, 286, 311
Lima, F., 21
Lima-Neto, J. F., 281
Lin, L., 28, 81, 303
Lindsey, B. R., 196
Lines, D., 101
Linger, G. D., 177
Linh, N. V., 247
Liu, D., 304
Liu, J., 43, 45
Liu, L., 251
Lizier, M., 308
Lloyd, R. E., 15, 222
Locatelli, Y., 161, 207
Lonergan, P., 134, 197, 200
Lonergan, T., 287
Long, C. R., 90, 140, 145, 177
Looney, C. R., 90, 196
Lopes, A. S., 131
Lopez-Corrales, N., 51
Lorena, S. E. R. S., 281
Lorenzo, P. L., 238
Losinno, L., 129
Loskutoff, N. M., 7, 158, 210
Loureiro, B., 208
Lucas, X., 70
Lucas-Hahn, A., 49, 309
Lucchini, F., 308
Ludwig, E., 226
Luo, J., 288
Lüssenhoff, M. G., 16
Lyle, L. M., 297
Lynn, J. W., 30, 196, 272
- M**
- Ma, Y., 304
Ma, Y. F., 62
Machado, G. M., 132, 135
Machaty, Z., 234
Maciel, A., 156
MacLean, R. A., 274
Madan, P., 111
Maddox, C., 10
Maddox-Hyttel, P., 49, 57, 276, 293
Madsen, S. E., 131
Maedomari, N., 44, 93, 218
Maes, D., 252
Magnani, L., 178
Malakar, D., 23, 209, 279
Malarkey, D. E., 201
Mamo, S., 289
Manik, R. S., 54, 165, 166
Mao, J., 265
Mapletoft, R., 19, 20
Marley, M. S., 153
Marley, M. S. D., 154
Marquant-Le Guienne, B., 102
Martín, D., 14
Martínez, A., 14
Martinez, E. A., 70, 77, 88
Martins, L. R., 230
Matás, C., 198, 204, 225
Matoba, S., 298
Matsuda, H., 298
Matsuda, J., 148
Matsui, T., 38
Matsumoto, K., 38, 40, 58, 163, 179
Matsunari, H., 84, 85, 305
Matsuoka, T., 179
Matsuura, K., 215
Mattson, K. J., 210
McCorkell, R., 224
McHughes, C. E., 136, 180
Medina, M. J., 32, 314
Megee, S., 288
Meirelles, F. V., 187, 299
Melican, D., 211
Mello, M., 220
Memili, E., 100
Mendis-Handagama, S. M. L. C., 228
Meneghel, M., 143
Meng, Q., 45, 57
Menges, S., 140, 145
Méo, S. C., 53, 187
Merighe, G. K. F., 187
Mermillod, P., 102, 161, 207
Merton, J. S., 212
Meyer, E., 280
Meyers, M. A., 67, 96, 263, 266
Mezzalira, A., 50
Mezzalira, J. C., 50
Miglino, M. A., 50
Millsap, L., 145
Minami, N., 72
Minoia, R., 185
Miragaya, M. H., 129
Miranda, M., 299
Mitani, T., 38, 40, 46, 58
Mitko, K., 181
Mizutani, E., 47
Moawad, A. R., 82
Mochida, T., 231
Mochizuki, H., 305
Mohana Kumar, B., 167, 275, 283
Molnár, M., 28, 89
Monaco, E., 182, 202, 284, 286, 311
Monaco, M., 29
Monson, R. L., 142
Monteiro, Jr., P. L. J., 315
Moore, K., 108
Morales-Pliego, F., 248
Mueller, C., 226
Mullaart, E., 212
Muñoz, M., 127, 240
Murakami, M., 24, 83
Murakami, T., 73
Murphy, C. N., 33, 180
- N**
- Na, D. C., 35
Nabhan, T., 214
Nagai, T., 44, 93, 218, 247
Nagao, Y., 58
Nagashima, H., 59, 84, 85, 305
Nakada, M., 273
Nakai, M., 93, 218
Nakai, N., 44
Nakajima, N., 231
Nakamura, S., 256
Nakao, A., 40
Nakata, M., 79
Nakayama, N., 84, 85, 305
Naruse, K., 215
Navarro, P. A. A. S., 255
Nedambale, T. L., 199
Ness, A., 10
Nguyen, B. X., 218, 247
Nichols, M., 157
Nielsen, A. L., 303
Niemann, H., 49, 103, 250, 282, 306, 309
Nishiwaki, M., 40, 46
Noguchi, J., 44, 93
Noguchi, Y., 148
- O**
- Ock, S.-A., 232, 275, 283, 285
Ogawa, B., 59, 84, 85, 305
Oh, H. J., 36, 48, 133
Ohlweiler, L. U., 50
Ohnishi, H., 104
Ohtake, M., 206

Oishi, R., 249
Okahara-Narita, J., 39, 60, 256, 290
Okuda, Y., 273
Olcott, B., 160
Oliveira, A. P., 156, 219
Oliveira, C. S., 53, 291
Olivera, R., 307
Ono, T., 47
Onodera, M., 305
Oropeza, M., 306
Ortigari, Jr., I., 50
Østrup, E., 276
Otero, J., 240
Otoi, T., 83
Owiny, D., 52
Ozawa, M., 44, 93, 218, 247

P

Paccamonti, D. L., 92, 274
Pacchini, S., 225
Paczkowski, M., 3
Palasz, A. T., 14, 95, 162, 183
Palomares-Naveda, R., 18
Palta, P., 165, 166
Panarace, M., 32, 314
Papa, F. O., 86, 262
Park, J. E., 36, 48, 133
Park, K. W., 184, 193, 302
Park, S. M., 118
Park, Y. C., 184, 193, 302
Park, Y. S., 118
Parrish, J. J., 226
Pasqualini, R. S., 129
Pasquini, D. F., 86
Passarelli, D., 281
Pavone, L., 185
Payne, B., 10
Payton, R. R., 186
Pedersen, A. M., 28, 42
Pegorer, M. F., 17
Penfold, L. M., 87
Pennarossa, G., 170, 278
Peoples, M., 177
Perals, M. L., 70, 88
Perea-Ganchou, F., 18
Perecin, F., 53, 187
Pereira, F. T. V., 299
Pereira, M. M., 141
Pereira-Junior, O. C. M., 281
Pereyra-Bonnet, F., 307
Pérez-Garnelo, S. S., 162
Perota, A., 308

Peters, V. M., 141
Petersen, B., 306, 309
Petrovicova, I., 49
Pfeffer, P. L., 168
Pfeifer, A., 4
Pfeifer, L. F., 19, 20
Phatsara, C., 112, 190, 254
Piedrahita, J. A., 2
Piepers, S., 280
Piga, D., 300
Pinton, A., 34
Pires, P. R. L., 242
Pliska, V., 145
Polgar, Z., 45, 57
Polisseni, J., 141
Pommer, J., 157
Ponchirolli-Schneider, C. B., 213
Ponchon, S., 102
Pope, C. E., 12, 25, 74, 267, 274
Porada, C., 145
Portillo-Martinez, G., 18
Poulin, N., 207
Powell, A., 34
Prado, T. M., 228
Prather, R. S., 5, 33, 136, 180
Pratt, S. L., 260
Pribenszky, C., 28, 89
Pryor, J. H., 90, 196
Pugliese, M., 32
Pukazhenth, B. P., 253
Pukazhenth, B. S., 69
Purpera, M. N., 30, 188
Purup, S., 42

Q

Quintans, C., 129
Qurjia, Z., 195

R

Racca, D., 22
Racedo, S. E., 250
Ragina, N. P., 37, 51
Rahal, S. C., 281
Ramackers, W., 309
Ramirez, C., 18
Rascado, T. S., 230, 281
Rasmussen, M. A., 293
Ratto, M. H., 164, 221
Rawe, V. Y., 250
Rebollar, P. G., 238
Reeder, A. L., 142
Regassa, A., 190

Reichenbach, H.D., 175
Renner, S., 4
Resende, M. V., 291
Revora, M., 129
Revuelta, L., 238
Rho, G. J., 167, 232, 275, 283,
285, 292
Ribeiro, E. S., 50
Riddell, K. P., 154
Ridha-Albarzanchi, M., 195, 251
Rieke, A., 5, 33
Rigali, F., 32
Rijsselaere, T., 12, 280
Rings, F., 112, 134, 189, 190
Risco, C. A., 21
Rispoli, L. A., 186
Rizos, D., 197, 200
Roberts, C., 101
Roberts, R. M., 105, 265
Robl, J., 157
Roca, J., 70, 77, 88
Rochetti, R., 237, 242
Rodina, T. M., 125
Rodrigues, J. L., 29, 50
Rodriguez, A., 14, 127, 162, 240
Rodriguez, D., 76
Rodriguez, R., 61
Rodriguez, R. M., 37, 51
Rohrbach, N., 13
Romão, R. M., 214
Romar, R., 198, 204, 222, 233
Romek, M., 91
Romo, S., 90
Roper, D. A., 147
Rosa e Silva, A. A. M., 255
Rosenfeld, C. S., 265
Ross, P. J., 37, 51, 61
Rossi, G., 300
Rozanas, C., 100
Ruffini, S., 41
Ruiz, S., 223
Rumpf, R., 89, 132, 135
Rutledge, J. J., 142
Ryan, J., 241
Ryu, I. S., 130
Ryu, P. D., 48

S

Sá, W. F., 141
Saavedra, M. D., 233
Saeki, K., 38, 40, 58, 163, 179
Saenz, J. R., 92, 160

- Saito, D. Y., 214
 Saito, H., 84, 85, 305
 Sakuragawa, N., 256
 Salamone, D., 52, 250, 307
 Salilew-Wondim, D., 112, 189
 Samiec, M., 55
 Samuel, M., 33
 Sanchez-Osorio, J., 70, 88
 Sanders, D., 160
 Sang, B. D., 130
 Sano, D., 79, 273
 Sano, H., 215
 Sansinena, M. J., 52
 Saraiva, N. Z., 53, 291
 Sartori, R., 135
 Sata, R., 120
 Satake, N., 227
 Satrapa, R. A., 214
 Saunders, D., 241
 Scenna, F. N., 146, 147
 Schauser, K., 276, 293
 Schellander, K., 112, 134, 189, 190, 254
 Schenk, J. L., 259, 263, 266, 268
 Schiffmacher, A. T., 113
 Schmidt, M., 303
 Schrick, F. N., 13, 146, 147, 228
 Schuenemann, G. M., 11, 13, 147, 228
 Schultz, R. M., 253
 Seidel, Jr., G. E., 121, 122, 205, 248, 268
 Seita, Y., 79, 273
 Seok, H. B., 35
 Seol, J. G., 184, 193, 302
 Serapião, R. V., 141, 255
 Shaffer, C., 199
 Shah, R. A., 54
 Shefler, A., 199
 Shehab-El-Deen, M. A., 252
 Shen, X. H., 194
 Shim, H., 35, 277
 Shimoi, G., 104
 Shin, H. D., 63
 Shin, S., 179
 Sihota, R., 114
 Simões, R. A. L., 214
 Singh, J., 19
 Singh, K. P., 165
 Singh, M. K., 166
 Singla, S. K., 54
 Siqueira, F. E., 89
 Siqueira, L. G. B., 156, 312, 315
 Siqueira Filho, E., 135
 Sirard, M. A., 254
 Siripattaraprat, K., 51
 Skrzyszowska, M., 55
 Small, J., 19, 20
 Smith, G. W., 109
 Smith, J., 272, 314
 Smorag, Z., 75, 91, 95, 258
 Sohn, S. H., 48
 Somfai, T., 44, 93, 218
 Son, D. S., 130
 Son, W. J., 167
 Song, B. S., 56, 106
 Song, H. J., 275, 283, 292
 Songsasen, N., 253
 Soraci, A. L., 11
 Souza, E. D., 315
 Spate, L., 33
 Spate, L. D., 5, 136, 180
 Spencer, T. S., 153
 Spizziri, B. E., 67, 205, 216
 Springer, G. K., 180
 Spurlock, D., 3
 Squires, E. L., 205, 216, 263
 Stein, P., 253
 Stokes, J. E., 271
 Stranzinger, G., 145
 Strejcek, F., 49
 Stringfellow, D. A., 153, 154
 Stucky, M., 94
 Sturmey, R. G., 137
 Suarez, G., 32
 Sugio, S., 79, 273
 Sugulle, A. H., 80, 217
 Suh, T. K., 271
 Sullivan, E., 157
 Susko-Parrish, J. L., 226
 Sutovsky, P., 5
 Suzukamo, C., 79, 231
 Suzuki, M., 206
 Suzuki, O., 148
 Suzuki, T., 83
 Svarcova, O., 49, 57
 Syverson, C. M., 155
 Szczesniak-Fabianczyk, B., 95
- ## T
- Tada, N., 305
 Tagliavini, F., 300
 Taiyeb, A., 195, 251
 Takano, K., 148
 Takuma, T., 126
 Tamargo, C., 14
 Tamargo Miguel, C., 162
 Tanco, V. M., 164
 Taniguchi, S., 38, 58
 Tatemizo, A., 38
 Terlouw, S. L., 149
 Tesfaye, D., 112, 134, 189, 190, 254
 Tetzner, T. A. D., 53, 291
 Thanh, D. N. Q., 218, 247
 Thatcher, M. J., 21
 Thatcher, W. W., 21
 Thundatil, J., 224
 Tian, X. C., 199
 Tinnanooru, P., 191
 Tohi, T., 85
 Tohi, Y., 305
 Tokoro, M., 179
 Tomek, W., 254
 Tomii, R., 59, 84
 Tong, C., 114
 Topper, E., 100
 Torii, R., 39, 60, 256, 290
 Torner, H., 254
 Torres, C. A. A., 96, 315
 Tosetti, V., 278
 Touzé, J.-L., 161, 207
 Travis, A. J., 253
 Tribulo, A., 294
 Tribulo, H., 294
 Tribulo, R., 294
 Trinca, L. A., 143
 Tsuchiya, H., 39, 60, 256, 290
 Tsuchiya, K., 150
 Tsujii, H., 120
- ## U
- Uchio-Yamada, K., 148
 Udupa, R., 57
 Ueno, S., 84, 85, 305
 Uguz, C., 97, 229
 Uhm, S. J., 173, 310
 Ulbrich, S., 119
 Un, C., 189
 Urakawa, M., 150, 296

V

Vajta, G., 28, 42, 81, 303
Valentin, C., 264, 269, 270
Vallet, J.-C., 161
Van Soom, A., 12, 252, 280
Van Steelandt, M. D., 164
VanEtten, T., 311
Vantini, R., 291
Varisli, O., 97, 229
Vazquez, J. M., 70, 77, 88
Veneranda, G., 22
Verdier, M., 161
Viana, J. H. M., 141, 156, 219,
312, 315
Vichera, G., 307
Vieira, A. D., 50
Vielhuber, K., 124
Vignon, X., 41
Villarreal, J., 151, 295
Villemoes, K., 28, 42
Vireque, A. A., 255
Viscomi, C., 300
Vivanco, W., 159
Vivani, L., 129
von Waldthausen, D. C., 4
Vos, C., 157

W

Waddell, J., 3
Wakayama, T., 38, 47, 290
Wakimoto, K., 290
Walker, D. J., 121, 205
Walker, K. A., 136
Wall, R., 34
Walter, J., 110
Wang, C., 234
Wang, K., 61
Wang, M. K., 57

Wani, N. A., 235
Wanke, R., 4
Watson, P. F., 15, 227
Watters, J. J., 142
Wax, D., 33
Wax, D. M., 5
Wei, H., 140
Wei, H. X., 62
Wells, D. N., 144
Weppert, M., 175
West, R., 269, 270
Westhusin, M. E., 43, 145
Wheeler, M. B., 29, 182, 284, 286,
311
Whitear, S. L., 192
Whitehead, K., 160
Whitlock, B. K., 154
Whitworth, K. M., 5
Wildt, D. E., 69, 253
Wilson, S., 182, 286
Wilson, S. M., 29, 311
Winkler, M., 309
Wirtu, G., 25, 274
Wock, J. M., 297
Wolf, E., 4, 107, 110, 119, 169,
175, 181, 239
Wolf, X. A., 293
Won, J. Y., 35
Woodall, S. A., 21
Woodbury, M., 224
Woods, R. J., 180
Worku, D., 189
Wrenzycki, C., 110, 313

X

Xia, G., 304
Xu, J., 98, 199

Y

Yamada, M., 72, 249
Yamaguchi, S., 73
Yamasaki, J., 39, 60, 256, 290
Yamazaki, W., 187
Yang, F., 110
Yang, H., 28, 81
Yang, H. M., 42
Yang, I. S., 133
Yang, S. H., 118
Yang, S. Y., 6
Yang, X., 98, 199
Yang, Y. I., 167
Yin, X. J., 63, 139
Yoo, J. Y., 184, 193, 302
Yoshioka, H., 206, 298
Yu, J. L., 24
Yu, X. F., 63
Yuan, Y., 257

Z

Zakhartchenko, V., 107, 110, 169
Zeviani, M., 300
Zhang, D., 64
Zhang, D. X., 194
Zhang, J., 98
Zhang, K., 62
Zhang, L. J., 65
Zhang, X., 28, 81
Zhang, Y., 24
Zhao, J., 287
Zhong, Z. S., 33
Zhou, H. M., 64, 65
Zhou, P., 304
Zhu, J., 236
Zitta, K., 119, 169

2008 RECIPIENT

IETS DISTINGUISHED SERVICE AWARD

RICHARD CARMICHAEL

Award Presentation: Tuesday, January 8 at 13:30

Richard A. Carmichael was born on January 2, 1930 in Sigourney, Iowa. He went to high school in Sigourney, Iowa and to Washington Junior College in Washington, Iowa. Richard received his Doctor of Veterinary Medicine in 1955 from Iowa State University. After graduation he became an owner and partner of Speaker and Carmichael Veterinary Clinic, Keota, Iowa. This was a general practice, including both large and small animal practice and specific pathogen free swine surgery. He was involved in this veterinary clinic from 1955 until 1972. In 1972, Richard traveled to Cambridge, England where he took part in the first embryo transfer training conducted by Dr. L.E.A Rowson. He spent a period of time in Cambridge during this training and upon his return home founded Maplehurst Ova Transplants, Inc., specializing in commercial embryo transfer and training of embryo transfer technology to qualified veterinarians and reproductive physiologists. He was the President and General Manager of Maplehurst Ova Transplants from 1972 until 1990. In 1990 he founded and was President and General Manager of Maplehurst Genetics International Inc., specializing in embryo transfer, domestic and international marketing and training. Richard is currently the President and General Manager-Maplehurst Genetics International Inc., specializing in international marketing and consultation. He has trained scientists from over 41 different countries in the technologies of embryo transfer.

On the airplane trip home from England in 1972, he had his first idea about forming an international society dedicated to this new technique of embryo transfer. His initial idea was to form a society that would begin with the practical, applied side of embryo transfer and foster the dissemination of scientific information to its membership and then mature it into a society that focused on the basic biology of mammalian embryos. Richard was the Chairman of the Organizing Committee of the group that became the IETS. His vision for the society has come to fruition. Richard Carmichael has served the IETS in many capacities over the years including membership on the Board of Governors in 1974 and 1975, as secretary/ treasurer in 1976 and as President in 1977. Richard was Program Chair of the IETS Workshop in 1979 and has been a member of the IETS Import/Export (now HASAC) Committee since 1980 and served as the Chairman of the Government Liaison & Regulatory Sub-Committee. Richard has served the embryo transfer industry in many ways over the years. He served on the United States Animal Health Association Committee Import/Export and the Sub-Committee Embryo Movement. Richard has served on the Board of Directors of the American Embryo Transfer Association in 1981, as the AETA Vice-President in 1982 and as President in 1983. In 1985, Richard served on the IETS International Embryo Transfer Society Committee to International Organization of Epizootics with the primary purpose to present scientific data on the pathogen-free aspect of the washed bovine embryo. This initial meeting resulted in the free movement of bovine embryos worldwide. He was on the National Commission on Agricultural Trade & Export Policy as an Advisor on the Embryo Transfer Report to the President in 1985. He was also a member of a research project to Review Embryo Transfer and Disease Transmission for Agriculture Canada in 1987 and an advisor to the National Cattlemen's Association Livestock Semen and Embryo Export Subcommittee in 1988. Richard served as the industry representative to U.S. House of Representatives Committee on Agriculture hearing and as the industry representative to Federal Register hearing on proposed embryo import regulations in 1990. Richard has received a number of prestigious awards including the AETA Embryo Transfer Practitioner of the Year Award in 1985; the AETA Award for excellence in publishing to promote and publicize the embryo transfer industry in 1988; the AETA "Tough Egg Award" in 1989; he was awarded Life Membership to Iowa Veterinary Medical Association and Charter Member of National Cattlemen's Beef Association in 1996; Honorary Life Membership to American Embryo Transfer Association in 2002 and was presented the Stange Award for Meritorious Service in Veterinary Medicine from the College of Veterinary Medicine at Iowa State University. Richard Carmichael has spent countless hours promoting the IETS, embryo transfer technology, and the embryo transfer industry. For all of his efforts and vision over the past 35 years, Dr. Richard A. Carmichael is a most worthy recipient of the 2008 International Embryo Transfer Society Distinguished Service Award.

SPECIAL EVENTS

OPEN MEETING OF THE HEALTH AND SAFETY ADVISORY COMMITTEE

Sunday, January 6, 2008

17:15 – 18:15

Centennial Hall F-H

OPENING RECEPTION

Sunday, January 6, 2008

18:15

Centennial Hall Foyer

Local band Interstate Cowboy will provide live country-western music

OPEN MEETING OF THE COMPANION ANIMALS, NON-DOMESTIC & ENDANGERED SPECIES COMMITTEE

Monday, January 7, 2008

17:00 – 18:00

Mineral Hall A

OPEN MEETING OF THE DOMESTIC ANIMAL BIOMEDICAL EMBRYOLOGY COMMITTEE

Monday, January 7, 2008

17:00 – 18:00

Mineral Hall C

BANQUET AT STAMPEDE MESQUITE GRILL & DANCE EMPORIUM

Monday, January 7, 2008

18:00 – 24:00

Buses will carry attendees to the Stampede where a western buffet dinner will be served. After dinner, a variety of activities will be available: dance teacher for country-western line and couple dances, live music to practice the new footwork, mechanical bull for bull riding, pool tables and a cash bar. Buses will provide transportation back to the Hyatt Regency at 10:00 pm, 11:00 pm and midnight. (*Tickets are required and may be purchased on the registration form.*)

PRACTITIONER'S FORUM: REGIONAL ISSUES

Tuesday, January 8, 2008

10:50 – 12:00

Centennial Hall F-H

Differences in the daily practice of bovine embryo transfer in different parts of the world

Panel discussion moderated by Dr. Charles Looney with practitioners from Europe, Latin America, and the Orient.

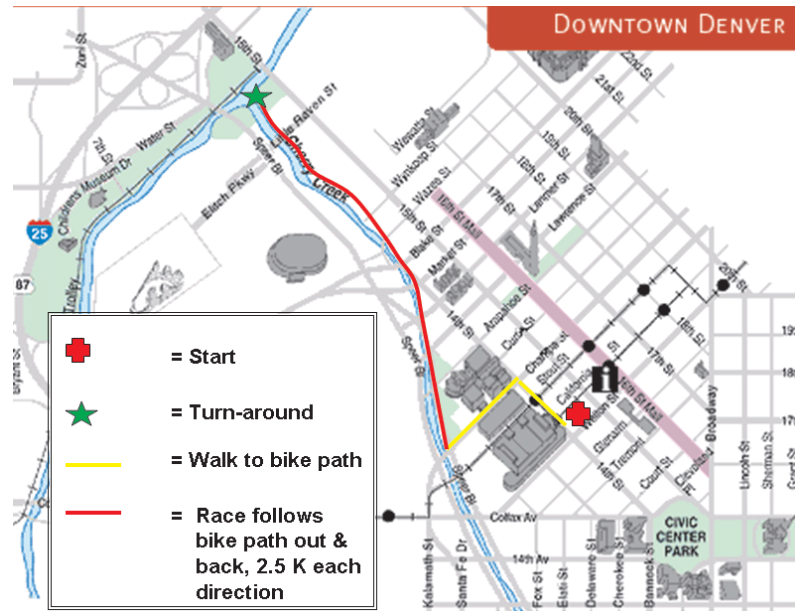
6TH IETS ANNUAL RUNNING COMPETITION

Tuesday, January 8, 2008

15:45 – 16:45

The annual IETS 5K run will begin at 3:45 pm on Tuesday, January 8, 2008. Participants will leave the Hyatt Regency Hotel and warm up during a 3-4 block walk to the Cherry Creek Bike Trail. The bike trail has separate paved trails for bike and pedestrian traffic and follows picturesque Cherry Creek. The run will begin at the entryway to the

bike path off of Speer Boulevard and will continue in a north-west direction for 2.5 K to Confluence Park, where Cherry Creek joins the South Platte River. Runners will turn around at the 2.5 K marker and return along the same trail until reaching the finish line at the trail entrance. Participants should be prepared for any weather (especially cold, snow, and ice) and should not forget that Denver is at an altitude of 5,280 feet (1,609 meters). The trail is maintained (i.e. cleared of snow) in the winter, but the run will be held on a 'weather-permitting' basis.



POST-CONFERENCE OUTING - DOWNHILL SKIING

Wednesday, January 9, 2008 or Thursday, January 10, 2008

Full Day

A shuttle bus service has been arranged. Individuals who would like to attend must sign up by November 15. Cost of the day will depend on number of people participating, and cost of lift tickets and rental equipment. Shuttle buses will provide transportation to Breckenridge ski area, about 1.5-2 hours west of Denver. Buses will leave the Hyatt at around 7:00 am, arriving at the ski area around 9:00 am. Individuals can rent equipment and purchase lift tickets at the area (these are the participant's responsibility, you will pay these the day of the event), enjoy a day of skiing in the Colorado Rockies, then meet the vans at an appointed time (around 3:00-4:00 pm) for the trip back to the Hyatt Regency.

A deposit of \$75 is required to register for this outing. Once the final number of participants is determined you will be notified of the final costs and any balance remaining to be paid. If the minimum number of participants is not reached, we will cancel the event and return your deposit to you. You must register for this event by December 15, there will be no onsite registration for this event. No refunds of the deposit will be made if you cancel your participation after December 15. Please contact headquarters with any questions you may have. *Please note the anticipated total cost of the event is approximately \$180-200, this includes \$75 for transportation, \$81 for a lift ticket and \$25 for equipment rental.*

POST-MEETING TOURS

Wednesday, January 9, 2008 or Thursday, January 10, 2008

Full Day

Directions will be provided; participants must provide their own transportation:
 Animal Reproduction and Biotechnology Laboratory, CSU, Fort Collins, CO
 Equine Reproduction Laboratory, CSU, Fort Collins, CO
 Colorado Center for Reproductive Medicine, Englewood, CO

Final times will be announced at a later date. There is no cost for these events, however participants must provide their own transportation.

EXHIBIT DIRECTORY

BOOTH LISTING BY BOOTH NUMBER

Booth #	Company
1.....	Agtech, Inc
2.....	Hamilton Thorne Bioscience, Inc.
3.....	IMV Technologies
4.....	Bioniche Animal Health
5.....	Minitube of America
6.....	Partnar Animal Health
7.....	Ovitra Biotechnology
8.....	PETS, Inc

Booth #	Company
11.....	Eppendorf AG
12.....	CSIRO Publishing
13.....	Veterinary Concepts
14.....	Estroprotect
15.....	Ultimate Genetics
17.....	Trans Ova Genetics
18.....	ALOKA Ultrasound
19.....	Biogenics, Inc.

BOOTH LISTING BY COMPANY NAME

Agtech, Inc.

8801 Anderson Ave.
Manhattan, KS 66503
USA
Phone: 785-776-3862
Fax: 785-776-4295
Website: www.agtechinc.com
Booth Number: 1

ALOKA Ultrasound

10 Fairfield Blvd.
Wallingford, CT 06492
USA
Phone: 203-269-5088
Fax: 203-269-6075
Website: www.aloka.com
Booth Number: 18

Biogenics, Inc.

2797 Napa Valley Corp. Dr.
Napa, CA 94558
USA
Phone: 707-224-7810
Fax: 707-224-7024
Website: www.biogenics.com
Booth Number: 19

Bioniche Animal Health

PO Box 1570
231 Dundas St. E
Belleville, ON K8N 5J2
Canada
Phone: 613-966-8058
Fax: 613-966-4177
Website: www.bionicheanimalhealth.com
Booth Number: 4

CSIRO Publishing

PO Box 1139
Collingwood, Victoria 3066
Australia
Phone: +61 3 9662 7601
Fax: +61 3 9662 7600
Website: www.publish.csiro.au/
Booth Number: 12

Eppendorf AG

Barkhausenweg 1
Hamburg, Hamburg 22339
Germany
Phone: +49 40 53 801 291
Fax: +49 40 53 801 662
Website: www.eppendorf.de
Booth Number: 11

Estroprotect

PO Box 39
Spring Valley, WI 54767
USA
Phone: 800-559-9704
Fax: 715-778-5817
Website: www.estroprotect.com
Booth Number: 14

Hamilton Thorne Bioscience, Inc.

100 Cummings Ctr.
Suite 465E
Beverly, MA 01915
USA
Phone: 978-921-2050
Fax: 978-921-0250
Website: www.hamiltonthorne.com
Booth Number: 2

IMV Technologies

11725 95th Avenue North
Maple Grove, MN 55369
USA
Phone: 800-342-5468
Fax: 763-488-1888
Website: www.imvusa.com
Booth Number: 3

Minitube of America

PO Box 930187
Verona, WI 53593
USA
Phone: 608-845-1502
Fax: 608-845-1522
Website: www.minitube.com
Booth Number: 5

Ovitra Biotechnology

PO Box 158
Midway, TX 75852
USA
Phone: 979-450-2599
Fax: 936-348-2686
Website: www.ovitra.com
Booth Number: 7

Partner Animal Health

3560 Pine Grove Ave
Unit 227
Port Huron, MI 48060
USA
Phone: 866-690-4998
Fax: 866-216-3335
Website: www.partneranimalhealth.com
Booth Number: 6

PETS, Inc.

Box 188
Canton, TX 75103
USA
Phone: 903-567-4536
Fax: 903-567-4927
Website: www.pets-inc.com
Booth Number: 8

Trans Ova Genetics

2938 380th Street
Sioux Center, IA 51250
USA
Phone: 712-722-3586
Fax: 712-722-3577
Website: www.transova.com
Booth Number: 17

Ultimate Genetics

PO Box 314
Wheelock, TX 77882
USA
Phone: 979-324-6168
Fax: 979-828-2251
Website: www.ultimategenetics.com
Booth Number: 15

Veterinary Concepts

PO Box 39
Spring Valley, WI 54767
USA
Phone: 800-826-6948
Fax: 715-778-4808
Website: www.veterinaryconcepts.com
Booth Number: 13

PRE-CONFERENCE SATELLITE SYMPOSIUM

ANIMAL MODELS OF REPRODUCTION

SATURDAY, JANUARY 5, 2008

PROGRAM CHAIRS: G.E. SEIDEL, JR. AND E.L. SQUIRES

- 8:00 am ***Introduction to Symposium***
G.E. Seidel, Jr., Colorado State University, Ft. Collins, CO
- Session I Chair: Eric Overstrom**
- 8:15 am ***Are Animal Models as Good as We Think?***
Robert Wall, USDA, Beltsville, MD
- 9:00 am ***The Preimplantation Mouse Embryo Model for Other Species - Virtues and Limitations; Is the Mouse Embryo Even A Good Model for The Mouse?***
Robert Taft, Jackson Lab, Bar Harbor, ME
- 9:45 am Break
- Session II Chair: Rebecca Krisher**
- 10:15 am ***In Vitro-Produced Bovine Embryos - Dealing With the Warts***
Patrick Lonergan, University College, Dublin, Ireland
- 11:00 am ***The Mare as a Model for Follicular Maturation and Reproductive Aging in the Woman***
Elaine Carnevale, Colorado State University, Fort Collins, CO
- 11:45 am Lunch
- Session III Chair: Fulvio Gandolfi**
- 1:15 pm ***The Nonhuman Primate Oocyte and Embryo as A Model for Women, or Is It Vice Versa?***
Don Wolf, Oregon Regional Primate Research Center, Beaverton, OR
- 2:00 pm ***Cryopreservation of Oocytes and Embryos: Optimization By Theoretical Versus Empirical Analysis***
Stanley Leibo, ACRES, New Orleans, LA
- 2:45 pm Break
- Session IV Chair: Robert Godke**
- 3:15 pm ***Lessons Learned From Nuclear Transfer (Cloning)***
Carol Keefer, University of Maryland, College Park, MD;
- 4:00 pm ***The Pregnant Sheep as a Model for Human Pregnancy***
Russell Anthony, University of Colorado Health Sciences Center, Denver and Colorado State University, Fort Collins, CO
- 4:45 pm Adjourn

POST-CONFERENCE SATELLITE SYMPOSIUM
RECENT DEVELOPMENTS IN THE PRACTICE OF BOVINE EMBRYO TRANSFER
WEDNESDAY, JANUARY 9, 2008
SPONSORED BY BIONICHE ANIMAL HEALTH

- 8:00 AM **Welcoming remarks**
Jim Phillips, President, Bioniche Animal Health, Global
- Session I Chair: John Hasler**
- 8:15 AM **Introduction to the Symposium**
Reuben Mapletoft, University of Saskatchewan, Canada
- 8:30 AM **Progress in Understanding Ovarian Follicular Dynamics in Cattle**
Gregg Adams, University of Saskatchewan, Canada
- 9:15 AM **Alternative Approaches to Setting up Donor Cows for Superstimulation**
Gabriel Bo, Instituto de Reproduccion Animal Cordoba (IRAC), Argentina
- 10:00 AM Break
- 10:30 AM **Nutritional Management of the Donor Cow**
Jose Santos, University of California-Davis, USA
- 11:15 AM **Factors Affecting Success of Embryo Collection and Transfer in Large Dairy Herds**
Richardo Chebel, University of California-Davis, USA
- 12:00 PM Lunch
- Session II Chair: Reuben Mapletoft**
- 1:30 PM **Nutrition, Synchronization, and Management of Beef Embryo Transfer Recipients**
Lee Jones, Frontier Genetics International, USA
- 2:15 PM Break
- 2:45 PM **Induction of Parturition in Zebu-cross Recipients Carrying In Vitro-Produced Bos indicus Embryos**
Luiz Nasser, Firmasa, Tecnologia Pecuária, Brazil
- 3:30 PM **The Use of Embryo Transfer to Produce Pregnancies in Repeat Breeding Dairy Cattle**
Osamu Dochi, Rakuno Gakuen University, Japan
- 4:15 PM **Approaches to Biosecurity in Embryo Transfer Programs**
Dan Givens, Auburn University, USA
- 5:00 PM General discussion

PRE-CONFERENCE WRITER'S WORKSHOP

WORKSHOP FOR AUTHORS PUBLISHING SCIENTIFIC PAPERS IN ENGLISH

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 2008 IETS conference). The workshop will be held in the Denver Hyatt Regency (IETS conference location) in Denver, Colorado on Saturday, 5 January (8:00 to 17:00) and Sunday, 6 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 reduced early registration fee (US\$200 for IETS members listed in current membership directory; US\$300 for non-members) must be received before 15 November 2007. The On-Site registration fee is US\$250 for IETS members and US\$350 for non-members (if space is available). Student registration (undergraduate or graduate students and post-doctoral fellows) is US\$150, pre-paid or US\$200 at the door. The registration fee does not include meals.

Information about the workshop: therio@shaw.ca or 403-317-2236

Registration and fees: iets@assochq.org or 217-398-4697



SAVE THE DATES

IETS 2009

JANUARY 4-7, 2009

SAN DIEGO, CALIFORNIA



