I would personally like to invite you to the 2002 Annual Conference of the International Embryo Transfer Society (IETS) to be held January. The IETS is an active organization of academic, medical, veterinary and industry scientists with interests in a wide variety of the latest embryo technologies; such as embryo transfer, in vitro embryo production, embryo culture, cloning and transgenisis and covering mammalian species from domestic agricultural, laboratory and companion animal to wild species and humans.

This year the conference is being held at the exotic Iguassu Falls in Brazil; a wonderful place to spend a few days in January for those of you from the cold regions of the northern hemisphere. The Program Chair, Dr. Matt Wheeler and Co-chair, Dr. Laurence Smith, have selected a variety of topics for presentation under the theme “New Technological Developments Which Impact Successful Production of Live Offspring Derived From In Vitro Embryo Manipulations” for the meeting.

Mark your calendars and plan to attend and be informed by a great series of presentations and entertained by the evening social programs. Bring your family and friends and stay a few extra days to enjoy the wonderful sites.

With best wishes,

James M. Robl
President of the IETS

Table of Contents

1 ... Invitation from the President
2 ... Tentative Calendar of Events
4 ... Registration Information
5 ... Accommodations, Transportation and Area Information
6 ... Deadlines and Reminders
7 ... Program
12 ... Satellite Symposium
13 ... Pre-Conference Workshop
14 ... Pre-Conference Symposia
15 ... Meeting Sponsors
16 ... IETS Membership Application
Tentative Calendar of Events

Event times and locations are subject to change; events may be added.

Thursday, January 10, 2002
10:00-18:00 IETS Board of Governors Annual Meeting (Salon Marfin)

Friday, January 11, 2002
08:00-17:00 IETS Board of Governors Annual Meeting (Salon Marfin)
21:00-23:00 Dinner at the Hotel Bourbon
18:00-20:30 Registration (Cataratas Foyer) - Pre-Registrants only; Onsite registrations will start Saturday morning.

Saturday, January 12, 2002
06:30-18:30 Registration (Cataratas Foyer)
08:00-20:00 Exhibit Set-up (Iguassu Foyer)
08:00-17:00 Pre-Conference—Successful Publishing in English Language Journals Workshop (Araucária Room)
08:00-16:30 Pre-Conference Symposium on Methods for manipulating the embryonic genome in vitro (Cataratas Ballroom).
09:00-12:00 Regulatory Subcommittee of the Health and Safety Advisory Committee (Ipê Room II)
12:15-13:30 Lunch Break (Bourbon and Mabu Hotels)
13:30-17:00 IETS Foundation Board of Trustees Annual Meeting (Ipê Room I)
14:00-17:00 Research Subcommittee of the Health and Safety Advisory Committee (Alecrim Room)
17:00-19:00 Forms and Certificates Subcommittee, Health and Safety Advisory Committee (Ipê II Room)
18:00-20:00 Poster Set-up (Parana Foyer)
21:00-3:30 Dinner and Dance at the Mabu Hotel

Sunday, January 13, 2002
06:30-18:30 Registration (Cataratas Foyer)
06:00-10:00 Poster Set-up (Parana Foyer)
07:00-09:00 Past Presidents Breakfast (Taroba II Restaurant)
07:00-10:00 Inaugural meeting of the Companion Animal, Non-Domestic & Endangered Species (Candes) Committee (Imbuia Room)
09:00-12:00 Food Safety Subcommittee of the Health and Safety Advisory Committee (Ipê II Room)
07:30-18:30 Speaker Preparation Room (Alecrim Room)
07:30-18:00 Audio-Visual Library (Cataratas Foyer)
07:30-08:15 Student Competition Breakfast with Foundation (Ipê Room).
08:00-12:00 Successful Publishing in English Language Journals Workshop (Araucária Room)
08:30-10:00 Foundation Education Committee (Marfin Room)
09:30-14:00 Brunch (Bourbon and Mabu Hotels)
10:00-18:00 Commercial Exhibits (Iguassu Foyer)
10:00-11:30 Theriogenology Editorial Board Meeting (Ipê I Room)
12:00-12:20 Welcome and Introduction (Cataratas Ballroom)
12:30-16:15 Session I: Manipulation of follicle development (Cataratas Ballroom)
14:05-14:35 Coffee Break (Iguassu Foyer)
16:15-16:45 Presentation of IETS Distinguished Service Award (Cataratas Ballroom)
16:45-18:15 Student Competition Presentations (Cataratas Ballroom)
18:15-18:30 Coffee Break (Iguassu Foyer)
18:30-20:30 Joint Symposium IETS-ALPHA (Cataratas Ballroom)
21:00-23:00 Dinner at Bourbon and Mabu Hotels
Tentative Calendar of Events

Event times and locations are subject to change; events may be added.

Monday, January 14, 2002
06:00-10:00  Breakfast (Bourbon and Mabu Hotels)
07:00-17:00  Registration (Cataratas Foyer)
07:30-18:30  Speaker Preparation Room (Alecrim Room)
07:30-17:30  Audio-Visual library (Cataratas Foyer)
08:00-20:00  Commercial Exhibits (Iguassu Foyer)
09:00-11:50  Session II: Embryonic related electronic technologies (Cataratas Ballroom)
10:40-11:10  Coffee Break (Iguassu Foyer)
11:50-12:15  Discussion / Presentation of relevant posters (Cataratas Ballroom)
12:15-13:30  Lunch Break (Bourbon and Mabu Hotels)
12:20-13:30  Data Retrieval Committee Meeting (Ipê I Room)
13:30-15:00  Poster Session I, presentation by authors of ‘even’ numbered abstracts in Theriogenology 2002;56(1) and the Student Competition finalist poster presentations (Parana Foyer)
15:00-17:00  Session III: Genetic manipulation of the embryo. (Cataratas Ballroom)
17:00-17:30  Presentation of the IETS Pioneer Award (Cataratas Ballroom)
17:30-18:15  IETS Annual Business Meeting (Cataratas Ballroom)
17:45-19:00  Happy Hour Pool Gathering for student, trainees and program speakers only.
18:30-20:30  Open Meeting of the Health And Safety Advisory Committee (Araucária Room)
21:00-23:00  Dinner (Bourbon and Mabu Hotels)

Tuesday, January 15, 2002
06:00-10:00  Breakfast (Bourbon and Mabu Hotels)
07:00-09:00  Organizational Meeting of the IETS Board of Governors (Ipê I Room)
07:00-17:00  Registration (Cataratas Foyer)
07:30-18:30  Speaker Preparation Room (Alecrim Room)
07:30-17:00  Audio-Visual library (Cataratas Foyer)
08:00-20:00  Commercial Exhibits (Iguassu Foyer)
08:30-10:00  Poster Session II, presentation by authors of ‘odd’ numbered abstracts in Theriogenology 2002;56(1): (Parana Foyer)
08:30-10:00  Refreshments and Exhibitors (Iguassu Foyer)
09:00-10:00  Organizational Meeting of the IETS Foundation Board of Trustees (Ipê II Room)
10:00-12:30  Session IV: Use of assisted reproduction technologies in germplasm preservation and livestock embryo production. (Cataratas Ballroom)
12:30-13:30  Poster Teardown (Parana Foyer)
12:30-13:30  Lunch (Bourbon and Mabu Hotels)
13:30-13:50  Presentation of Student Competition Awards (Cataratas Ballroom)
13:50-14:00  Invitation to IETS 2003 (Cataratas Ballroom)
14:00-16:35  Session V: Advances in cryobiology (Cataratas Ballroom)
16:35-18:00  Practitioners’ Forum: Embryo transfer under field conditions (Cataratas Ballroom)
18:00-18:30  Closing Presentation (Cataratas Ballroom)
21:00-3:00  Closing Banquet and Dance (Parana Foyer)

Wednesday, January 16, 2002
06:00-10:00  Breakfast (Bourbon and Mabu Hotels)
09:00-17:00  Satellite Symposium: Practical considerations in dealing with embryos. (Cataratas Ballroom)
12:00-13:30  Lunch (Bourbon and Mabu Hotels)
15:00-17:00  Exhibit Teardown (Iguassu Foyer)
21:00-23:00  Dinner (Bourbon and Mabu Hotel)
Registration Materials
All registration materials are included in this mailing. Each technical registrant should complete the enclosed General Registration Form. One registrant per form. Please use the enclosed form to register for all events, including the workshop and satellite symposiums. Registration materials are also available on the IETS web site at http://www.iets.org.

Registration Deadline
Those whose registrations are postmarked December 1, 2001 or before will pay a lower rate than those who send in their registration after December 1, 2001. No telephone or e-mail registrations will be accepted. FAX (217) 398-4119 registrations will be accepted only if payment is made by credit card. Be sure to pre-register to avoid higher prices, missed events, and long lines in Omaha.

Membership Information
You do not have to be a member of the IETS to attend the conference. However, the difference between the member and non-member registration fees makes joining the Society at the time of registration very attractive. A membership application for the IETS is included in this booklet on page 16.

Payment
Payment must accompany the registration form. Checks must be in US funds made payable to the IETS. Payment by credit card (Visa, MasterCard, or American Express) is available. Please complete the credit card payment section of the General Registration Form.

Confirmations/Receipts
If you pre-register by December 1, 2001, we will mail you a registration confirmation/receipt. Please verify the receipt and events registered for and contact the IETS Business Office with any questions.

Calendar of Events
Included in this booklet on page 2 and 3 is a tentative calendar of events for the conference. Event times and locations are subject to change and certain events may be added.

Proceedings
Participants will receive the proceedings with their registration packet in Foz do Iguacu. IETS members who are unable to attend the conference will be mailed the proceedings after the conclusion of the event.

Reminder
Wear your nametag at all functions; it is your admission pass to all conference events. Tickets for special events and functions will be collected at the door or at the table. All tickets look alike, but event name, location, and date will appear on them. Be sure to give the ticket takers the appropriate ticket.

Special Needs
All conference rooms are wheelchair accessible. Please indicate any special needs when sending in your registration form.

Questions???
All inquiries about pre-registration or the conference should be made to the IETS Business Office, 1111 North Dunlap Avenue, Savoy, IL 61874 USA, (217) 356-3182, FAX: (217) 398-4119, e-mail: iets@assochq.org.

On-Site Registration Hours

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friday, January 11</td>
<td>18:00-20:30</td>
</tr>
<tr>
<td>Saturday, January 12</td>
<td>06:30-18:30</td>
</tr>
<tr>
<td>Sunday, January 13</td>
<td>06:30-18:30</td>
</tr>
<tr>
<td>Monday, January 14</td>
<td>07:00-17:00</td>
</tr>
<tr>
<td>Tuesday, January 15</td>
<td>07:00-17:00</td>
</tr>
</tbody>
</table>
Accommodations, Transportation and Area Information

The Hotel
The Bourbon Foz do Iguacu Hotel is a deluxe, Y-shaped hotel complex situated between 30 acres of tropical forest. Facilities include a complete infrastructure of leisure and comfort, including 311 rooms and suites, 2 swimming pools, a complete fitness center, 4 restaurants, 2 bars, 2 tennis courts, games room and jogging court surrounded by 50,000 square meters of untouched forest. The convention center within the Bourbon will house our meeting. Also note that the nightly room rate, Single US$120.00 (daily rate) or Double US$80.00 (daily rate per person), includes breakfast, lunch and dinner for each day you are a registered guest. The hotel is on the Rodovia das Cataratas (Waterfall Road) between the airport, the city and near the Tancredo Neves Bridge that unites Brazil and Argentina. This location has easy access to the Iguassu National Park. Please contact the official travel agent of the meeting for reservations. The Mabu Hotel will serve as the overflow hotel. The reservation form is included in this packet and available on the IETS website.

Travel
VARIG, Official Air Carrier of the 28th Annual Conference of the International Embryo Transfer Society – 16th Annual Conference of the Brazilian Embryo Technology Society, will be honored to take you to Brazil aboard its aircrafts. The largest airline in Latin America, VARIG is part of the Star Alliance – making it possible to access a broad network of destinations in more than 112 countries – offering benefits such as simultaneous check-in and baggage checking (for passengers who use the services of more than one company of Star Alliance) as well as complete integration of the mileage programs. For further information, call the official travel agent of the event or call VARIG local offices below, mentioning the "Tour Code" ERI0046900; North America: 1-800-468-2744 (Toll Free); Europe: 0-180-3334355 (Toll Free); Japan: 8-133-2116751 (Toll Free).

Once arriving at the airport in Foz do Iguacu you will be greeted by volunteers from the local organizing committee and directed to ground transportation to the Hotels.

Brazil has an airport tax that is payable when you leave the country. The departure tax at the time of printing is US$36, this fee often changes so try to check how much it is on arrival. There is also a charge of about US$7 for domestic flights, you should check this when buying the ticket as sometimes it is included in the price of your ticket. Tax must be paid on checking in, in Reals or US dollars.

Time Zone
Foz do Iguacu is 2 hours behind GMT and 3 hours ahead of EST.

Climate
January in Brazil is in the middle of their summer. IT WILL BE HOT. The temperatures could range from 18-35°C (64-100 Fahrenheit). Be sure you pack your clothes accordingly. There may also be rain showers; including raingear in your wardrobe is appropriate. The following website will help you monitor the weather in Foz do Iguacu:
http://www.cnn.com/WEATHER/sa/Brazil/FozdoIguacuSBFI.html

Visas
Nationals of those countries which require Brazilian visitors to have pre-issued visas, will need to have a visa before arriving in Brazil. Other nationalities will be issued a visa for up to 90 days stay on arrival in Brazil. This latter category includes European Community nations; South American countries, except Bolivia and Guyana; Finland, Morocco, Bahamas, Barbados, Trinidad and Tobago and the Philippines. Nationals from these countries require a valid passport, an onward ticket or proof of funds to buy one and enough money for their proposed length of stay. Please check the IETS website to see if you will need a Visa.

Language
The national language of Brazil is Portuguese. Due to the influence of the many other languages already existing or brought over by immigrant groups, Brazilian Portuguese differs from that spoken in Portugal in the same way that Australian and American English differ from that of England. English is often spoken in large cities and tourist centres. If you are thinking of buying a dictionary or phrasebook, it is important to make sure it is for Brazilian Portuguese.

Currency
The Brazilian Real is the official currency of Brazil. Some exchange rates at the time of publication:
1 US Dollar = 2.74 Brazil Real
1 Euro = 2.50 Brazil Real

Electricity
110 Volts. An adapter is needed for electrical appliances using another type of current.

Official Travel Agency:
STTC Eventos e Turismo
At. Sr. Valdir Pedro Christ
Av. das Cataratas, 1419 - Hotel Bourbon
85853-000 Foz do Iguassu - PR - Brasil
Phone +55 45 574 2527
Fax +55 45 523 2319
e-mail: sttctvaldir@sttceventoseturismo.com.br
http://www.sttceventoseturismo.com.br
Deadlines and Reminders

Hotel Reservations
The deadline for hotel reservations is December 13, 2001. Please make your hotel reservation before this date to ensure that you receive the discounted rate.

http://www.iets.org
Check out the IETS Web Site for changes in the Calendar of Events and other activities as well as links to the sponsor web sites.

Do you have a membership pin yet? Here's your chance to buy one and wear it on your lapel at the 2002 Annual Conference in Foz do Iguacu. The pins are made of sterling silver and are 5/8" diameter. The cost of a pin is $20.00. To order, mark the designated space on your General Registration Form and the pin will be available for pick-up at the IETS Booth in Foz do Iguazu.

Denim Blue Cap with Tan/Biege Bill
One size only.
$15.00

Denim Long-Sleeved Shirts
Sizes Medium, Large, X-Large, and XX-Large
$30.00

Orders can be made using the General Registration Form and will be available for pick-up at the IETS Booth in Foz do Iguazu.
New Technological Developments, Which Impact Successful Production of Live Offspring Derived From In Vitro Embryo Manipulations

Session I: Manipulation Of Follicle Development
Session Chairs: Darrel Kesler, USA and Reuben Mapleton, Canada

Effects of prematuration and maturation of bovine oocytes on competence to develop into blastocysts.
Steph Dieleman, Utrecht University, Utrecht, The Netherlands
The following subjects will be discussed on the basis of a mixture of known and new data: The “final” word on in vitro vs. in vivo maturation of oocytes with equivalent starting competence, a comparison of embryo numbers and quality with regard to incidence of chromosomal aberrations, cell number and expression of developmentally important genes. Prematuration in vivo and in vitro, protein factors from granulosa cells and cumulus in relation to apoptosis as observed by flow cytometry.

Selection of a single dominant follicle: Basic mechanisms and practical implications.
Milo Wiltbank, University of Wisconsin, Madison, Wisconsin, USA
In cattle a single dominant follicle is generally selected from a group of follicles in a follicular wave. There is a clear deviation in growth rate between the future dominant follicle and the largest subordinate follicle at an average size of 8.5 mm. At this time there are hormonal changes in circulating FSH and estradiol as well as induction of LH receptors in granulosa cells. These hormonal and cellular changes appear to be involved in selecting the dominant follicle and eliminating the largest subordinate follicle. Alterations in these selection mechanisms can produce multiple ovulations particularly in lactating dairy cows with high milk production.

The Control of Follicular Wave Development for Self-Appointed Embryo Transfer Programs in Cattle
Gabriel Bo, Instituto de Reproducción Animal Córdoba (IRAC), Córdoba, Argentina
Our expanding knowledge of the control of follicular wave dynamics during the bovine estrous cycle has resulted in renewed enthusiasm for the prospects of precise synchronization and finely controlled induction of ovulation. New protocols that control both luteal and follicular events during the estrous cycle offer the convenience of being able to initiate superstimulatory treatments quickly and at a self-appointed time, without the necessity of estrus detection and without sacrificing response. Similarly, these approaches can now be applied to the synchronization of recipients without the necessity of estrus detection. The intention of this presentation is to review the use of these protocols and to discuss how they may impact on the effectiveness and application of embryo transfer programs in the field.

Leptin Regulation Of Reproductive Function And Fertility
Gary D. Smith, University of Michigan, Ann Arbor, Michigan, USA
Leptin, a 16 KD protein secreted primarily by adipose tissue, was first discovered in the search for a satiety signal. When administered into the brain, leptin depresses appetite. Interestingly, hyperphagic, obese, transgenic mice with leptin deficiency were noted to be reproductively incompetent, and administration of leptin restored their fertility. These pivotal observations led to numerous studies of the site of action of leptin within the hypothalamo-hypophyseal-gonadal axis, and a variety of models have been used ranging from the prepubertal condition to fasting suppression of reproductive hormones. The preponderance of studies thus far have focused on how leptin serves as a metabolic signal of energy balance within the neuroendocrine system, particularly as a regulator of GnRH/LH secretion. Less research has been conducted with other components of the reproductive system, but local effects of leptin have been demonstrated in the gonads where hyperleptinemia suppresses steroidogenesis and potentially affects gamete maturation. This presentation will review the major concepts for the role of leptin in the modulation of fertility and will consider the potential use of leptin in assisted reproductive technology and embryo transfer.
Program

Joint Symposium IETS-ALPHA: Similarities/Differences: Bovine and Human In Vitro Embryo Production
Session Chairs: Lawrence Smith, Canada and Paulo Bayard Goncalves, Brazil

High Rates of Embryonic Wastage, Yet High Incidence of Multiple Births in Human ART: Is this Paradoxical?
   Catherine Racowsky, Harvard University, Boston, Massachusetts, USA
This presentation will focus on the intrinsic and extrinsic factors known to affect the developmental competency of human embryos. Specifically, genetic and cytoplasmic abnormalities of human oocytes and embryos, and the impact of follicular stimulation and culture environment will each be addressed. We will then consider questions relating to the optimum day of embryo transfer. These issues will then be brought together to focus on the apparent paradox that both embryonic wastage and multiple birth rates are high in human ART.

Blastocyst Culture in Human IVF: The Final Destination or a Stop Along the Way?
   Albert L. Smith, Fertility Lab Consulting, San Antonio, Texas, USA
The use of blastocyst culture in human IVF has decreased multiple pregnancy rates and increased implantation rates in some populations of infertility patients, and has potential for preimplantation genetic diagnosis. However, blastocyst culture does not work for all patient populations, and technical problems still remain in freezing and culturing human embryos.

The transmission of mitochondrial DNA following ART?
   Justin St. John, University of Birmingham, Birmingham, UK
In mammals, mitochondrial DNA is maternally inherited. However, the use of more sophisticated assisted reproductive technologies has led us to question whether this uniparental form of inheritance still persists. It appears that some of these technologies are responsible for the transmission of mtDNA from more than one source, for example Nuclear transfer. This raises important concerns regarding our understanding of mtDNA transmission and the survival of offspring.

Session II: Embryo Related Electronic Technologies
   Session Chairs: Jeremy Thompson, Australia and Robert Godke, USA

Microfluidic Technology for Assisted Reproduction
   David Beebe, University of Wisconsin, Madison, Wisconsin, USA
Microfluidic technology holds much promise for assisted reproduction. The use of micro channels for both embryo culture and embryo/oocyte manipulation will be discussed. We have shown embryo culture performed in micro channels can lead to enhanced developmental efficiencies. In addition, we have demonstrated both mechanical and chemical manipulation of oocytes in microfluidic systems.

Application of Electronic Estrous Detection Technologies to Reproductive Management of Cattle
   Rick Rorie, University of Arkansas, Fayetteville, Arkansas, USA
This manuscript describes the various electronic technologies that are commercially available for detection of estrus in cattle. Advantages, disadvantages and associated costs are presented for each technology. Application of electronic estrous detection to reproductive research and management is discussed.

The “pro” and “con” of Computer assisted sperm analysers in andrology research and breeding veterinary practice.
   John Vestegen, University of Liege, Belgium
Nowadays sperm analysis systems are found in hospitals, universities, pharmaceutical companies, contract labs, reproductive toxicology labs, veterinary clinics and animal breeding facilities around the world. They are versatile and easy to use. The analyzers offer many features to enhance the laboratory productivity and are attractive but are they accurate? Are the information they produce of clinical interest? Could the mobility parameters be of any predictive values in term of fertility? This presentation will try to present the pro- and against of this continuously growing and attractive technology.
Session III: Genetic Manipulation Of The Embryo

Session Chairs: Brett White, USA and Eric Walters, USA

The Placenta as a Contributor to Production of Large Calves
Gary Anderson, University of California, Davis, California, USA

Unusually high birth weights frequently occur in calves born from cultured embryos. The mechanism(s) through which in vitro manipulation during early cleavage is translated to enhanced fetal growth is incompletely understood. Since accelerated growth is primarily prenatal, the placenta of an in vitro-derived conceptus could account for abnormal fetal growth. Results from a systematic comparison of placentas from in vitro- versus in vivo-derived bovine embryos will be presented.

Recent Advances in gene transfer technologies
Bob Wall, USDA, Beltsville, Maryland, USA

The intentional introduction of recombinant DNA molecules into a living organism can be achieved in many ways. Viruses have been making a living by practicing gene transfer for millennia. Recently man has gotten into the act. The paradigm employed is fairly straightforward. First a way must be found to move genetic information across two membrane barriers. Then presumably DNA repair mechanisms do the rest. The array of methods available to move DNA into the nucleus provides flexibility necessary to transfer genes into cells as physically diverse as sperm and eggs. The advantages and disadvantages of variety of techniques will be discussed.

Recent Advances in nuclear transfer technologies
Jean-Paul Renard, INRA, Jouy en Josas, France

Different cell types have already been used as sources of nuclei to generate viable cloned offspring in several mammalian species. These successes are however obtained at a low frequency mainly because of the occurrence of long lasting detrimental effects that frequently result in developmental arrest at late fetal stages or after birth. This is the case both with cultured embryonic or somatic donor cells. Early cellular and molecular events that take place immediately upon or just after embryo reconstruction have up to now received great attention since they may determine the occurrence of later developmental failures. Recent studies however indicate that the way somatic cells are handled in vitro before being used as nuclear donors can dramatically affect the developmental potential of reconstructed embryos. This point to the importance of epigenetic modifications that occurs during cell culture or during the handling procedures preceding their use as donor for cloning. We will review those studies and will present the experimental strategies that could be designed to improve the efficiency of nuclear transfer technologies.

Session IV: Use Of Assisted Reproduction Technologies In Germplasm Preservation And Livestock Embryo Production

Session Chairs: Richard Fayer-Hosken, USA and Sherrie Clark, USA

Animal Genetic Resources in Brazil: Result of Five Centuries of Natural Selection
Arthur da Silva Mariante, CENARGEN – EMBRAPA, Brasília-DF, Brazil

The paper will show that Brazil has many adapted breeds of livestock developed from the genetic material brought to the country by the first Portuguese settlers. Due to the importation of exotic breeds, these old adapted breeds have been replaced and are now in danger of extinction. The Brazilian Conservation Program will then be presented, showing the efforts not only to conserve as well as to use these old adapted breeds.

In vitro embryo production in buffalo species: state of the art
Bianca Gasparrini, Naples University, Naples, Italy

Buffalo in vitro embryo production efficiency has been lower and variable compared with cattle, probably due to suboptimal culture environment. The objective of this presentation will focus on reviewing the state of the art of in vitro embryo production efficiency in this species, using oocytes recovered from slaughtered animals and from adult cows by transvaginal ultrasound guided follicular puncture. Progresses made in optimizing the maturation, fertilization and culture systems as well as advances in cryopreservation of in vitro produced buffalo embryos will be highlighted.
Program

In Vitro Embryo Production in Swine
Lali Abeydeera, PIC International, Berkley California, USA
Biotechnological advances in swine have tremendously increased the demand for high quality pig oocytes and/or embryos. In this review, a detailed account on the recent progress made in the production of pig embryos via in vitro maturation/fertilization and embryo culture will be discussed.

Advances in the production and propagation of transgenic goats using laparoscopic ovum pick-up and in vitro embryo production technologies
Hernan Baldassare, Nexia Biotechnologies, Ste-Anne-de Bellevue, Quebec, Canada
The utilization of laparoscopic ovum pick-up (LOPU) technique as source of immature goat oocytes for the production and propagation of transgenic goats will be presented. The combination of LOPU with in vitro maturation and fertilization, pronuclear microinjection and nuclear transfer technologies will be presented. Potential applications of this platform technology for livestock improvement programs will also be discussed.

Session V: Advances In Cryobiology
Session Chairs: Marcello Bertolini, Brazil and Robert Knox, USA

Advancements in cryopreservation of domestic animal embryos.
John Dobrinsky, USDA, -Beltsville, M aryland, USA
The development of embryo freezing technologies revolutionized cattle breeding. Since then, advancements in cryobiology, cell biology and domestic animal embryology have enabled the development of embryo preservation methodologies for our other domestic animal species, including sheep and goats. Recently, technologies have been developed to cryopreserve pig embryos, notorious for their extreme sensitivity to cooling, while horse embryo cryopreservation is in its infancy. While cryopreservation can enhanced the utilization of in vitro embryo production technologies, cryosurvival of IVP or micromanipulated embryos is less than that of in vivo derived embryos. In the near future, use of preserved embryos will be a routine breeding alternative for all domestic animal species, providing: preservation methodology for maternal germplasm; global genetic transport; increased selection pressure of herd genetics; breeding line regeneration or proliferation; and methodology for genetic resource rescue.

Cryopreservation of Gametes and embryos of Non-domestic Species
Stanley Leibo, Audubon Center for Research of Endangered Species, New Orleans, Louisiana, USA
Uncounted millions of live young have been produced from gametes and embryos stored at -70ºC or below, sometimes for as long as 25 to 35 years. Only rather recently have such methods been applied to gametes and embryos of non-domestic and threatened species. But levels of success vary considerably from species to species, as well as from individual to individual. It has become increasingly clear that differences among species in fundamental characteristics of their gametes may influence the efficacy of cryopreservation. In the future, innovative methods of assisted reproduction coupled with novel procedures of preservation by freezing or freeze-drying may offer alternatives to long-term storage of animal genomes.

Current Status of Sperm Cryopreservation: Why Isn’t It Better?
Coralia Medeiros, University Federal of Rio Grande do Sul, Porto Alegre-RS, Brazil
Evidences of bovine sperm capacitation as an effect of cryopreservation have accumulated lately. The capacitation process results in a reduction in the sperm lifespan. Procedures addressed to reduce the capacitation effect of the cryopreservation process may be useful to improve the viability of the cryopreserved sperm.

Cryopreservation of Bos Taurus vs. Bos Indicus Embryos: Are they really different?
José Antonio Visintin, University of São Paulo, São Paulo-São Paulo, Brazil
This talk will describe the ultrastructure of morula or blastocyst from Nelore (Bos Indicus) and Holstein (Bos Taurus) cows submitted to exposition or cryopreservation by slow-freezing, quick-freezing and vitrification. The morphology of embryos will be discussed from Bos Indicus and Bos Taurus.
A Summary of Current Bovine ET in the field.
Larry Nelson, Nelson Reproductive Services, Lexington, Kentucky, USA
A summary and overview of the most current services and techniques performed by the ET practitioner in commercial practice in the United States. Items to be discussed include embryo collection, superovulation, cryopreservation, embryo transfer and other services. This will be an up to date review of “real world ET practice”.

Factors Affecting The Success Of Embryo Transfer Technologies In Subtropical And Tropical Regions
Gabriel Bo, Instituto de Reproducción Animal Córdoba (IRAC), Córdoba, Argentina
Nowadays, the embryo transfer technique is widely used round the world, with over 500,000 embryos being transfer per year. However, many factors affect the widespread application and success of this technology, especially in subtropical and tropical environments, where most of the cattle are bos-indicus or bos-indicus derived. In our opinion, the success of embryo transfer in subtropical and tropical areas is mainly related to recipient management, synchronization, estrus detection, selection (CL presence and size), and the transfer technique. The intention of this presentation is to review these factors and to propose some alternatives to overcome the problems encountered in subtropical and tropical areas of the world.

Embryo Transfer in Bos indicus (Nelore, Gir, Girolando cattle).
Ciro Moraes Barros, UNESP, Botucatu, Brazil
Hormonal treatments currently used to superstimulate the follicular growth of donors and synchronize the estrus of recipients will be discussed. Considering that estrus detection is particularly difficult in Bos indicus, protocols that allow fixed time AI will be emphasized.
PRACTICAL CONSIDERATIONS IN DEALING WITH EMBRYOS
Wednesday, January 16, 2002
Cataratas Ballroom, Bourbon Hotel
Foz do Iguassu, Parana, Brazil

8:00-9:00  Registration
9:00-9:10  Welcome and Introduction

Morning Session: Techniques for In Vitro Embryo Manipulation
Chair: Michel Thibier
9:10-10:40  Practical Consideration of Embryo Manipulation
i. Handling Embryos in the Field
   Larry Nelson (Nelson Reproductive Services, USA)
ii. Bovine Embryos Splitting and Biopsy in Field Conditions
    Rui Fernando Félix Lopes (University Federal of Rio Grande do Sul)
iii. Pre-natal genetic typing in bovine embryos: reality and perspectives.
     Fernando Garcia (UNESP – Araçatuba)
10:40-11:00  BREAK
11:00 -12:00  The Effect Of Cryopreservation Procedures, Embryo Stage And Quality, And Recipient Parity And Estrous Synchrony On Bovine Pregnancy Rates.
   John Hasler (Fort Collins, CO)
12:00-13:30  LUNCH

Afternoon Session: The Embryo and Its Environment
Chair: John Hasler
13:30-14:10  Use Of Pregnancy Specific Proteins To Monitor Pregnancy And Determine The Timing, Frequencies And Sources Of Embryonic Mortality In Ruminants.
   Patrice Humblot (Laboratoire pour le Controle des Reproducteurs, Paris, France).
14:10-14:40  Conceptus Interactons And Reproductive Failure In Cattle
   William Thatcher (USA)
14:40-15:00  Anti Luteolitic Strategies To Improve Fertility In Cattle.
   Mario Binelli (Brazil)
15:00-15:20  BREAK
15:20-16:00  Identified And Non-Identified Challenges For Reproductive Biotechnologies Regarding Animal And Public Health.
   Michel Thibier (WHO)
16:00-16:30  Wrap-up and Closing Remarks
   -Ciro Barros (UNESP-Brazil)

Registration Information:
- For this fee attendees will be provided an issue of Theriogenology with the articles of each speakers talk.
- Also included in registration are a coffee break mid morning, lunch at noon, and a coffee break after lunch.
- Registration fees are payable to the IETS.
- Please register for this symposium using the General Registration Form accompanying this registration booklet.

If you would like further information regarding this symposium please contact:
Prof. Dr. José Luiz Rodrigues
Caixa Postal 15004
91501-970 Porto Alegre RS Brasil
Phone: + 55 51 33 16 61 26    Fax: + 55 51 33 16 63 05    Email: jlr@orion.ufrgs.br
Pre-Conference Workshop

PUBLISHING SCIENCE IN ENGLISH LANGUAGE JOURNALS
A Workshop for Authors Who have Limited Experience with Writing in English

PRESENTED BY

V.M. Shille, DVM, PhD, Editor, Theriogenology and
P.A. Sokol, MS, Certified Instructor of English to Speakers of Other Languages (ESOL)

Your publication is only as good as your research; your research will be judged to be only as good as your
publication.

WORKSHOP OUTLINE

Session 1 – Saturday, January 12, 08:00 – 12:00
How can I get published?
Do good, honest research
What is “good, honest” research?
Write articles that can be understood in 2115
What makes an article understandable after 113 years
Publish in primary research journals
Illustrations: figures, tables

Session 2 – Saturday, January 12, 13:00 – 17:00
It is so difficult to get started
Mechanics of writing
Strategies to overcome “writer’s block”
Style
Syntax
Difficulties due to culture and language
Grammar
Punctuation
Dealing with the editorial office and reviewers
Spelling

Session 3 – Sunday, January 13, 08:00 – 12:00
Basic Principles of Scientific Writing Illustrated by Actual Manuscript Edited in Class

Participants who wish to volunteer their manuscript for class editing exercises should mail 2 copies of double-spaced text with an explanatory letter to the Theriogenology Editorial Office BEFORE 1 DECEMBER, 2001. Choice of manuscripts for class use will be at Editor’s discretion.

Class size is limited to 20 participants. Registration fees are payable to IETS. The reduced early registration fee (US$150 for IETS members listed in current membership directory; US$200 for non-members) must be received before 30 December 2001. On-Site registration fee is US$250 (if space is available). Student registration is US$100, pre-paid or at the door.

For registration: Please register for this workshop using the General Registration Form accompanying this registration booklet.

For information: V.M. Shille, Phone 352-392-4700 ext 5646, Fax 352-392-9652,
Email <shillev@mail.vetmed.ufl.edu>
Pre-Conference Symposium

METHODS FOR MANIPULATING THE EMBRYONIC GENOME IN VITRO

Saturday, January 12, 2002
Cataratas Ballroom, Bourbon Hotel
Foz do Iguassu, Parana, Brazil

7:30-8:00 Registration
8:00-8:10 Welcome and Introduction

Session I  Nuclear Transfer Techniques
8:10-9:10 Demonstration and Discussion of Nuclear Transfer Techniques
Keith Campbell (Nottingham) and Bill Ritchie
9:10-10:10 The Influence of Donor Nuclei on Cloning
Björn Oback (AgResearch Ltd., New Zealand)

10:10-10:30 BREAK

Session II  Gene Transfer Techniques
10:30-11:30 Pronuclear microinjection: A mature method for producing transgenic animals.
Bob Wall (USDA) and Bill Ritchie

11:30-13:30 LUNCH

Session III  New Developments in Gene Transfer
13:30-14:10 Gene Targeting in Livestock
John Clark (Roslin)
14:10-14:50 The Use of Recombinase Proteins To Generate Transgenic Animals
Elizabeth Maga (UC Davis)

14:50-15:10 BREAK
15:10-15:50 Engineered Artificial Chromosomes: Vectors and tools to analyse centromere assembly.
Howard J Cooke (MRC Human Genetics UnitEdinburgh)
15:50-16:30 Discussion and Wrap-up
George Seidel (Colorado State)

Registration Information
For this fee attendees will be provided an issue of Cloning with the articles of each speakers talk.
Also included in registration are a coffee break mid morning, lunch at noon, and a coffee break after lunch.
Registration fees are payable to the IETS.
Please register for this symposium using the General Registration Form accompanying this registration booklet.

If you would like further information regarding this symposium please contact:
Prof. Dr. José Luiz Rodrigues
Caixa Postal 15004
91501-970 Porto Alegre RS Brasil
Phone: + 55 51 33 16 61 26    Fax: + 55 51 33 16 73 05
Email: jlr@orion.ufrgs.br
Join the IETS now and save on registration fees for the 2002 Annual Conference in Foz do Iguacu, Brazil

By becoming a member of the IETS now, you will enjoy a reduced rate when you register for the 2002 Annual Conference. As a member, you will also receive the quarterly Embryo Transfer Newsletter of the IETS, a reduced subscription rate to Theriogenology and Animal Reproduction Science, a membership directory, and discounts and advance information on future conferences and events.

Membership Application
International Embryo Transfer Society
2002 Annual Conference Special

Yes! I’d like to become a new member of the IETS now for 2002 and save when I register for the conference. This offer is good for only NEW professional, associate, or student members.

<table>
<thead>
<tr>
<th>Name</th>
<th>Last</th>
<th>First</th>
<th>M.I.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title</td>
<td>Success</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Company/Institution</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Address</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>City</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>State/Province</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zip/Postal Code</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Country</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phone</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FAX</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E-mail</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Membership Type
- [ ] Full Member (US $100)*
- [ ] Associate Member ($100)*
- [ ] Student Member ($55)*

*Includes a $10 administrative fee for joining with the Annual Conference.

Payment
- [ ] Check
- [ ] MasterCard
- [ ] Visa
- [ ] Am Ex

Card # _____________________________
Expiration date _______________________
Signature ___________________________

Please mail with registration and remittance to:
IETS
1111 North Dunlap Avenue
Savoy, IL 61874 USA
(217) 356-3182, FAX: (217) 398-4119
E-mail: iets@assochq.org
Web Site: http://www.iets.org