By now I hope all of you have registered for our annual meeting in Tampa. Dr. Rea and the Convention Program Planning Committee have an excellent program ready for us. There are several new items on the agenda this year including a Past President’s breakfast and a day fishing trip. I hope that since the hurricane season has started early this year, we will be hurricane-free in October. See “y’all” in Florida.

As noted in the last newsletter, AETA has been granted approval by the Registry of Approved Continuing Education (RACE) to provide continuing education for veterinarians. Our Tampa program has been approved for 14.5 hours of CE. Most states that require veterinary CE allow courses approved by RACE. To view your individual state’s requirements, visit the website of the American Association of Veterinary State Boards (www.aavsb.org/raceStates.asp).

The Cooperator Committee has received the pregnancy results from the transfers done in China in March. At Madam Wang’s farm in Shandong Province, there were 19 pregnancies from 30 transfers. At Mr. Wong’s farm in Anhui Province, there were 13 pregnancies from 20 transfers and at Beijing Dairy Cattle Company, there were 7 pregnancies resulting from 8 transfers. The totals are 39 pregnancies out of 58 transfers (67%). There will be a full Cooperator Committee report available in Tampa.

Please read the abstract and news release on Johne’s Disease in this issue. Although we may not agree with everything that is contained in the news release, we need to be aware of this kind of negative reaction to new Johne’s Disease research. I believe it is in our best interest to encourage our clients to take advantage of the Johne’s Disease eradication programs that are available.

It has been a pleasure to serve as President of AETA. Although we have had a tough “curve” thrown at us, we have not only survived as an organization, I believe we are a better association because we are overcoming this difficulty. The past two years have dictated a much more hands-on approach for board members. It has been rewarding to work with a group of directors who have been willing to donate a great amount of time working to accomplish a smooth transition to our new management company. But, the AETA belongs to all of its members. Please don’t hesitate to make suggestions to board members and volunteer to serve on various AETA committees.
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Summary of AETA Activity Questionnaire for 2003

General Information

One hundred four embryo transfer businesses (etb) submitted responses to 2003’s questionnaire (89 of these were AETA certified). Fifty-seven percent (60 of 104) considered embryo transfer a full-time activity. The average staff consisted of 1.2 professional employees and 1.2 support staff. Forty-six of the etb provided donor housing. Twenty-seven etb provided recipients for clients. Fifty-three of the 104 respondents had more than 50% of their recoveries in the dairy breeds. No comparisons with previous years have been included in this report.

Bovine General Activity

General activity data are summarized in Table 1.

Other Species General Activity

The reporting of activity for other species varied in terminology from etb to etb; these data were summarized as accurately as possible.

Caprine: Recoveries – 196; Transfers – 1568; Fresh Transfers – 983; Embryos Frozen – 384; Embryos Thawed & Transferred – 58.


Equine: Recoveries – 129; Transfers – 6; Fresh Transfers – 96; Embryos Frozen – 7; Embryos Thawed & Transferred – 2; Pregnancy Rate – 59%.

Export Activity

Export activity data for bovine exports from beef breeds are summarized in Table 2; exports from dairy breeds are summarized in Table 3. The only exports for other species that were reported in 2003 were 349 Angora embryos exported to Australia.

Commercial IVF/IVP, Transgenic, and Clonning Activity

Five etb reported activity in one or more of these areas in 2003. Reported commercial IVF/IVP activity included: 2781 recoveries (1690 dairy; 1091 beef); 12,063 viable oocytes; 1558 transferred embryos; a pregnancy rate on fresh transfers of 52%; 908 embryos frozen; and 344 embryos thawed and transferred.

Thanks

A special thank you to those etb that took the effort to send in complete and accurate data on the first request and to the statistical committee members!

TABLE 1: 2003 General Bovine ET Activity by Region.

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<tr>
<th>Region</th>
<th>ETB</th>
<th>Recoveries Dairy</th>
<th>Recoveries Beef</th>
<th>Transf. Emb.</th>
<th>Fresh Trans.</th>
<th>Fresh Trans. %</th>
<th>Embryos Frozen Total</th>
<th>Embryos Frozen Gyc</th>
<th>Thaved &amp; Transf. DT</th>
<th>Thaved &amp; Transf. %</th>
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1. Definition of regions: NC=VA, HI, TN, MS, NJ, SD, and WI; NE=CT, ME, VT, ME, WI, NY, OH, and PA; NW=ID, OR, UT, WA, and WY; SC=CO, KS, IA, MO, NM, OK, and TX; SE=GA KY, MS, NC, TN, and VA; SW=CA.

2. Percentages are averages of reported values for the etb; they are not weighted by the number of transfers done by that etb. Total percentages are the averages of the percentages for the regions.
TABLE 2: 2003 Exports of Embryos from Beef Breeds.

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TABLE 3: 2003 Exports of Embryos from Dairy Breeds.

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</table>

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- Uniformity batch to batch
- Patented FSH:LH
- Ensured biological efficiency
- Better donor recovery after treatment
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217 LUTEAL REGRESSION AND FOLLICLE DEVELOPMENT FOLLOWING PROSTAGLANDIN-F2α TREATMENT 3 DAYS AFTER OVULATION IN MARES

D.R. Bergfeld, R.A. Pierson, and O.J. Ginther

A University of Wisconsin, Madison, WI, USA; B University of Saskatchewan, Saskatoon, Saskatchewan, Canada

The corpus luteum (CL) is responsive to exogenous prostaglandin-F2α (PGF) 1 to 2 days after ovulation in the mare (Troedsson et al. 2001 Theriogenology 55, 1891-1899); however, complete and sustained demise of the CL beginning less than 5 days after ovulation in response to PGF treatment has not been documented. The present study was designed to compare the morphological and physiological response of the primary CL to PGF given at early diestrus with a more conventional treatment given at about mid-cycle. In addition, follicle status pre- and post-treatment were examined and compared between the treatment groups. On the day of pretreatment ovulation (Day 0), riding-type horse mares were randomly assigned to receive a single dose of PGF (Lutalyse, Upjohn, Kalamazoo, MI, USA; 10 mg/mare, i.m.) on Day 3 (n=17) or Day 10 (n=17). Beginning on either Days 3 or 10, transrectal ultrasonography was used to determine follicle and CL diameters, determine luteal tissue gray-scale scores (echogenicity), and to detect ovulation. Follicular and luteal measurements and jugular blood samples were collected daily until the post-treatment ovulation. Structural and functional regression of the CL was indicated by: 1) a progressive decrease (day effect; P<0.0001) in mean diameter of the CL beginning 24 h after PGF treatment in the Day 3 and Day 10 groups; 2) a precipitous decrease (P<0.009) in mean plasma progesterone concentrations within 24 h in both groups followed by a more gradual decline to basal concentrations by the second day in the Day 10 group or after the fourth day in the Day 3 group; and 3) an increase (P<0.02) in mean luteal tissue echogenicity in both groups after the second day following PGF treatment. The mean intervals from PGF treatment to ovulation were not different (P=0.2) between groups (combined, 9.9 days) but the mean (±SEM) interovulatory interval was shorter (P=0.001) in the Day 3 group (13.2±0.9 days; range, 7 to 20 days) than in the Day 10 group (19.2±0.7 days; range, 14 to 26 days). The greater the diameter of the largest follicle at the time of PGF treatment, the shorter the interval to post-treatment ovulation in the Day 3 (r = -0.57, P<0.02) and Day 10 (r = -0.74, P<0.001) groups. Growth rates of the preovulatory follicles were similar (P=0.59) between groups (combined, 3.6 mm/day) but the maximum diameter was smaller (P=0.05) in the Day 3 group (40.5±1.2 mm) compared to the Day 10 group (43.4±0.8 mm). Unexpectedly, more (P<0.03) double follicles occurred in the Day 3 group (6/17, 35%) than in the Day 10 group (1/17, 6%). In conclusion, an immature CL at early diestrus responded to PGF treatment in a manner comparable to a mature CL at mid-cycle. The Day 3 group ovulated an average of 6 days earlier than the Day 10 group as a result of the difference in timing of the PGF treatment between groups. Thus, these results warrant a reassessment of the prevailing concept that the equine CL is resistant to PGF-induced regression before 5 days after ovulation, especially when considering the potential benefits of a shortened interovulatory interval and an increased double ovulation rate.

218 ULTRASOUND-GUIDED TRANSVAGINAL INJECTION OF A LOW DOSE OF FSH-LH INTO THE BOVINE OVARY AS AN ALTERNATIVE WAY TO STIMULATE FOLLICULAR GROWTH: PRELIMINARY RESULTS


A Laboratory of Veterinary Physiology, Department of Veterinary Sciences, University of Antwerp, Belgium; B Department of Obstetrics, Reproduction and Herd Health, Faculty of Veterinary Medicine, University of Ghent, Belgium

While some researchers claim a positive influence of FSH on the number of punctured follicles and retrieved oocytes in stimulated cows (Looney CR et al. 1994 Theriogenology 41, 67-72), others found comparable results between protocols with one stimulated v. two unstimulated ovum pick-up (OPU) sessions a week (Stubbings RB and Walton JS 1995 Theriogenology 43, 713-721). The use of FSH/LH causes explosive follicular growth and a substantial increase in ovarian blood supply when given at the superovulation protocol. The sixth cow received a classical FSH stimulation as prescribed by the manufacturer by means of i.m. injections of a total dose of 500 µg FSH and 100 µg LH as a positive control. During the first session, all follicles with a diameter of >5 mm were aspirated, while prior to each injection (morning and evening), ovarian activity was checked by ultrasound examination and taped on video for all cows. Intra-ovarian FSH injection was successful since, in most cases, a small echographically dense area was seen during and immediately following injection. This area moved around following displacement of the ovary, indicating intra-ovarian disposition of the FSH. Following the four-day stimulation treatment, the average (±SD) number of follicles with a diameter >5 mm was 5.5 ±4.2 on the ovaries of intra-ovarian injected cows, 21 in the case of the positive control cow and only 1 follicle in the negative control. These results suggest that transvaginal, ultrasound-guided injection of a low FSH/LH dose directly into the ovary might be an alternative way for ovarian stimulation prior to OPU. Additional dose-titration experiments are ongoing.
Our objective was to explore the synergy between sexed semen and in vitro embryo production and assess benefits of these technologies on commercial farms. Ovaries were collected from high genetic merit Holstein cull cows via colpotomy or at the time of slaughter. Oocytes were aspirated from the ovaries, fertilized 20-24 h later, and matured to the morula or blastocyst stage. Embryos were transferred into recipient Holstein cows and heifers on the same farms. Seven Wisconsin herds participated, and 365 embryos were produced from 104 donor cows. Only 272 of these embryos were transferred due to limited availability of recipients. Sexed semen from three Holstein sires was used. On average, 3.5 ± .37 transferable embryos were produced per donor, including 1.4 ± 0.18 grade 1 embryos and 1.5 ± 0.20 grade 2 embryos. Individual farms averaged from 1.6 to 5.8 transferable embryos per donor. Laboratory data also revealed interesting results. On average 43.7 ± 4.0 oocytes were collected per donor, and the number of usable oocytes (33.9 ± 3.4), and percent embryos cleaved (52.1 ± 1.9), were significant predictors of the number of blastocysts developed. We divided the usable oocytes and embryos cleaved per donor into quartiles. The fourth quartile for embryos cleaved was significantly greater (P<0.05) than the lower three quartiles, and the usable oocyte quartiles all significantly differed from each other. Semen freeze date was also a significant predictor of the number of blastocysts developed, suggesting significant variation in the quality of sorted semen per ejaculate. To preliminarily test the effect of sorting on the percentage of embryos developing to blastocyst stage, oocytes were recovered from ovaries collected at a slaughterhouse and fertilized using non-sorted semen or sex-sorted semen from the same sires. Oocytes (n=3,312) fertilized using non-sorted semen tended (P=0.06) to produce more embryos developing to blastocyst stage than oocytes (n=1,577) fertilized using sex-sorted semen (20.1 ± 2.9% v. 12.2 ± 2.3%, respectively). Preliminary pregnancy results show strong farm and sire effects. Overall conception rate was 36% for heifer recipients and 18% milking cow recipients. These results suggest that low cost in vitro embryo production may have promise as an early system for utilizing sexed semen in dairy cattle breeding programs.

The objective of this study was to compare the ultrastructure of bovine embryos from different breeds and origin in terms of lipid contents. Jersey and Holstein embryos produced in vivo were obtained from superovulated donors by non-surgical method 7 days after AI. Embryos produced in vitro (Holstein cross breed) were obtained from cumulus-oocytes complexes (COC) aspirated from slaughterhouse ovaries. The COC were matured and fertilized in vitro. The zygotes were cultivated in vitro for 7 days in SOFaa media. Embryos produced in vivo (Holstein n=5; Jersey n=5) and in vitro (n=5) classified as blastocysts grade II were fixed in Karnovsky solution immediately after embryo recovery or embryo culture and prepared for microscopic electronic evaluation. Ultrastructure of inner cell mass and trophoblast cells was analyzed. Morphometry on electron microscopy was performed using a point-count method in random samples of electron micrographs of each embryo category. The data were analyzed by chi square test. The volume density occupied by number of lipid droplets was greater in Jersey and in vitro-produced embryos compared with Holstein embryos (24.3% ± 11.7; 28.4% ± 19.6 and 9% ± 6.68, respectively, P<0.05).
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FDA warns compounders, veterinarians

The Food and Drug Administration has issued at least five warning letters to pharmacies compounding human and/or animal drugs since issuing a Compliance Policy Guide clarifying the department's stance on drug compounding. The FDA has also warned two veterinary practices about extralabel drug use and illegal drug residues in food animals.

The compounding warning letters allege that the pharmacies have failed to comply with the Food, Drug, and Cosmetic Act, which limits drug compounding to situations in which a product is medically necessary for treatment and is prescribed as part of a valid veterinarian-client–patient relationship for a specific patient. The CPG, available at www.fda.gov and an article in the Dec. 1, 2003, issue of JAVMA on page 1558, or online at www.avma.org/onlinews/JAVMA/dec03/031201l.asp, describe in greater detail the compounding oversight and circumstances in which the FDA is likely to exercise discretionary authority and not prosecute those who are acting outside the regulations.

The letters require the pharmacies to take corrective actions and cover a range of alleged infractions. The infractions include:

- Compounding drugs for use in animals where an approved drug is available
- Compounding outside a valid veterinarian-client-patient relationship
- Manufacturing commercial-sized lots of drugs in anticipation of receiving prescriptions
- Failing to comply with FDA current good manufacturing practices
- Compounding from bulk drugs
- Using compounded drugs, made from bulk ingredients, in situations where the health of the animal is not threatened
- Compounding from bulk drugs that have been removed from the market for human use for safety reasons
- Labeling drugs inadequately

At least two warning letters have been issued to veterinary practices since December for illegal extralabel drug use, and illegal residues in food animals.

One letter warned a veterinary hospital about prescribing, compounding, and dispensing gentamicin and gentamicin combined with other antimicrobials for the treatment of bacterial infections in dairy cows, with labeling specifying a 30-day withdrawal time. Gentamicin is not FDA-approved for use in cows, and extralabel use of the drug must comply with FDA regulations, according to the warning letter. The letter noted that the specified withdrawal time was not supported by science. According to the letter, there is no scientifically established withdrawal time for the use of gentamicin in cattle; however, the Food Animal Residue Avoidance Bank advises that a minimum preslaughter withdrawal period of 18 months or more be established.

Another letter warned a veterinary practice about the sale of prescription drugs for extralabel use without a valid veterinarian-client-patient relationship.

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NEW MILK RESEARCH FINDS INFECTIOUS BACTERIA SURVIVES PASTEURIZATION

MONDAY, AUGUST 9, 2004, PHOENIX, ARIZONA

In a late-breaking session of the International Association for Food Protection, Dr. Jay Ellingson of the Marshfield Clinic Laboratories, Marshfield, WI, presented the Clinic's recent findings that the milk we drink is contaminated with an organism that has been implicated as a suspected cause of Crohn's Disease, Mycobacterium avium subspecies Paratuberculosis (MAP).

Dr. Ellingson reported that in a test of 702 samples from three of the five top milk-producing states, California, Minnesota, Wisconsin, at least 2.8% of the samples contained MAP that was alive and capable of multiplying. The Wisconsin data confirm research findings in the UK, where live MAP was cultured from British retail milk as well.

MAP is well-known as the cause of Johne's Disease in cattle and sheep, and MAP infection is rampant in dairy herds nationwide. Johne's is on a steady increase, causing concern among dairy producers. Johne's can affect many other animals including primates. In Johne's, MAP causes chronic inflammation of the intestine and spreads throughout the body of the animal, resulting in a wasting disease with no practical cure.

Crohn's Disease is a chronic inflammatory disease of the intestine, causing wasting in people and is suffered by more than half a million Americans. The number of Crohn's Disease patients continues to grow, with an estimated 20,000 Americans, primarily young people, joining the ranks every year. The rate of new cases is rising, painting a deeply concerning picture for American families.

The following article is reprinted courtesy of the American Society for Microbiology, APPLIED AND ENVIRONMENTAL MICROBIOLOGY, August 2004, p. 4899.

Persistence of Mycobacterium paratuberculosis during Manufacture and Ripening of Cheddar Cheese

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Received 12 November 2003/ Accepted 5 May 2004

Model Cheddar cheeses were prepared from pasteurized milk artificially contaminated with high (10^4 to 10^5 CFU/ml) and low (10^1 to 10^2 CFU/ml) inocula of three different Mycobacterium paratuberculosis strains. A reference strain, NCTC 8578, and two strains (806PSS and 796PSS) previously isolated from pasteurized milk for retail sale were investigated in this study. The manufactured Cheddar cheeses were similar in pH, salt, moisture, and fat composition to commercial Cheddar. The survival of M. paratuberculosis cells was monitored over a 27-week ripening period by plating homogenized cheese samples onto HEYM agar medium supplemented with the antibiotics vancomycin, amphotericin B, and nalidixic acid without a decontamination step. A concentration effect was observed in M. paratuberculosis numbers between the inoculated milk and the 1-day old cheeses for each strain. For all manufactured cheeses, a slow gradual decrease in M. paratuberculosis CFU in cheese was observed over the ripening period. In all cases where high levels (>3.6 log) of M. paratuberculosis were present in 1-day cheeses, the organism was culturable after the 27-week ripening period. The D values calculated for strains 806PSS, 796PSS, and NCTC 8578 were 107, 96, and 90 days, respectively. At low levels of contamination, M. paratuberculosis was only culturable from 27-week-old cheese spiked with strain 806PSS. M. paratuberculosis was recovered from the whey fraction in 10 of the 12 manufactured cheeses. Up to 4% of the initial M. paratuberculosis load was recovered in the culture-positive whey fractions at either the high or low initial inoculum.
Professor John Hermon-Taylor, Chairman, Department of Surgery, St. George's Hospital Medical School, London, England, is convinced that there is a solid association between MAP and Crohn's. Careful research in our own laboratories and others in the United States and elsewhere shows unequivocally that when the tests are done correctly almost everyone with Crohn's Disease is found to be infected with MAP. MAP causes chronic inflammation of the intestine in animals, and, of course, it is doing the same thing in people. MAP infection is difficult to eradicate, but we already know that anti-MAP treatment can heal a substantial proportion of people whose lives have been ruined by Crohn's Disease.

Cheryl Miller, PARA's Co-Executive Director, says: “The dairy industry has been well aware of the MAP-Crohn's connection for decades. Instead of investing in research to solve the problem, they have chosen instead to launch clever marketing campaigns directed at children with the full knowledge that MAP may be causing Crohn's in those children. People's lives are ruined by this devastating disease. Children are suffering.”

"The milk industry and the governmental agencies FDA and USDA have been insisting that milk is safe because MAP supposedly doesn't survive pasteurization,” said PARA's Stephen Merkel. “For years they ran simulation studies but wouldn't test real world milk. They argued that their simulations showed 'no problem.' The Marshfield findings settle the debate that's been raging for years. MAP is in the U.S. milk supply.”

Alan Kennedy, an Irish member of PARA, commented on the past UK research. “When the news appeared that MAP was alive in retail milk in the UK, there was plenty of media attention, but no consumer backlash. Sales of milk and dairy products were not affected. This was primarily because Europeans had faith in the agencies responsible for food safety. The responsible agencies conducted the required research, they openly published the results, they formed policies by asking for input from all stakeholders, and initiated rational and effective policies, all open and in the public eye. The European Dairy Industry is now in a stronger position to face increasing global competition for markets. I hope that the American agencies realize that soon and act to eliminate MAP from dairy and beef products. It genuinely is in everybody's best social and economic interest.”

PARA's Co-Executive Director, Karen Meyer, states: "The Marshfield retail supermarket milk study is long overdue. Dr. Jay Ellingson is to be commended for undertaking this controversial research, which undoubtedly has had dairy folks worried since its inception. Now that PARA's position has been vindicated, I predict that there will be a lot of milk-mustache wiping at the FDA. It is a tragedy that our children are exposed to this dangerous pathogen every day. American consumers will be watching closely to see how the dairy industry and FDA deal with this issue. Will they finally take measures to protect the public by aggressively attempting to get MAP out of the food chain, or will they continue to try to bury the problem as they have done for decades? Time will tell.”

Paratuberculosis Awareness and Research Association, Inc. (PARA) is a nonprofit organization of Crohn's Disease patients, their families, and friends, dedicated to raising awareness of the zoonotic (disease-causing) potential of MAP, urging governmental agencies to address the control and eventual eradication of MAP from the environment, particularly from foods of animal origin, and advocating funding for research that will determine the role played by MAP in causing Crohn's Disease. Since 1997, PARA has been urging the dairy industry and FDA to test the retail milk for the presence of MAP.

For more information about MAP and Crohn's Disease, visit:
PARA's website - www.crohns.org International Association for Paratuberculosis - www.paratuberculosis.org
Crohn’s Disease Information Center - www.shafran.net/crohn Johne's Information Center - www.johnes.org
A delegation of 5 Chinese government officials visited Sunshine Genetics and ABS Global on September 3 as part of their BSE fact finding tour in the US. The group had various representatives from the Ministry of Agriculture and well as CIQ, the Chinese counterpart of APHIS-VS. The tour was led by Dr. Bob Bokma from APHIS and will visit NSVL in Ames, Iowa as well as meeting with USDA officials in Washington, DC for 3 days. The tour is to evaluate the BSE problem in regards to opening the semen and embryo market from the US to China in the near future. The group also visited Mellwood Holstein Farm, Waunakee, WI and were intent on questions regarding feed sources and production methods.

Drs. Dan Hornickel and Chris Keim did an excellent tour of the Sunshine Genetics facilities at Whitewater, WI, that was previously approved for ET export to China. The group was joined by Dr. Linn Wilbur, AVIC in WI, Dr. Richard Bertz, area vet for WI APHIS, Corey Pickelsimer economist- FAS-USDA, and Dr. Scott Armbrust represented the AETA Cooperator Committee. Ms. Jianping Zhang, Ag Specialist from the US Embassy in Beijing, was the interpreter.
2004 AETA & CETA/ACTE JOINT CONVENTION
Updated Convention Program

Please see bold text for schedule changes

Wednesday, October 13
8:00 AM - 10:30 AM  CETA/ACTE Certification Committee Meeting
11:00 AM - 6:00 PM  AETA/CETA Board of Directors Meeting
1:30 PM - 5:00 PM  CETA and AETA Certification Exam
6:00 PM - 10:00 PM  AETA Board of Directors Meeting

Thursday, October 14
7:00 AM - 2:00 PM  Golf Tournament
7:00 AM - 2:00 PM  Charter Boat Fishing/Tour
3:00 PM - 5:00 PM  Equine Wet Lab - Dr. Ed Squires, Ph.D. and Dr. Elaine Carnevale, DVM, Ph.D. Colorado State University - Embryo Morphology and Grading, Embryo Freezing, Superovulation
3:00 PM - 5:00 PM  Ultrasound Wet Lab - Dr. Bill Beal, Ph.D, Virginia Tech
3:00 PM - 5:00 PM  Small Ruminant Wet Lab - Dr. Hernan Baldassarre, DVM
6:30 PM - 10:00 PM  Starship Dinner Cruise

Friday, October 15
7:00 AM - 7:00 PM  Exhibits
7:00 AM - 5:00 PM  Registration
7:00 AM - 8:00 AM  Continental Breakfast
9:00 AM - 4:00 PM  Companion Tour - Busch Gardens
8:00 AM - 8:30 AM  Introduction of Sponsors
8:30 AM - 9:00 AM  USDA-APHIS Updates BSE, Japan
9:00 AM - 10:00 AM  Dr. Peter Hansen, Ph.D., University of Florida - Can ET Be Used to Improve Pregnancy Rate in Heat Stressed Dairy Cattle

10:00 AM - 10:30 AM  Break
10:30 AM - 11:00 AM  Dr. John Hasler, Ph.D. - Vitrification Update
11:00 AM - 12:00 PM  AETA & CETA Annual Business Meeting
12:00 PM - 1:30 PM  Lunch
12:00 PM - 1:30 PM  CETA/ACTE New Board of Directors Meeting
1:30 PM - 2:15 PM  Dr. Elaine Carnevale, DVM, Ph.D., Colorado State University - Assisted Reproduction in the Horse
2:15 PM - 3:00 PM  Dr. Hernan Baldassarre, DVM, Nexiatechnologies Inc. - State of the ART (Assisted Reproductive Technology) in Goats
3:00 PM - 3:30 PM  Break
3:30 PM - 4:15 PM  Dr. Charles Looney, Ph.D., Ovagenix - Environmental Influences on ET, Breed Differences
4:15 PM - 5:15 PM  Certification Session for AETA/CETA
6:00 PM - 7:00 PM  Social Hour
7:00 PM  Banquet

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Certification Exam Notice

As has been the case in the past, the certification test will be offered prior to the AETA meeting in Tampa. The test will be given on Wednesday, October 13, 2004, from 1:30 to 5:00 PM. Applications for this test are due no later than 9/22/04. The application form and guidelines are available online at [www.aeta.org](http://www.aeta.org) or from the association office. If there are any questions, please feel free to contact the association office or any member of the Certification Committee.

Future Meeting Dates

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Session: State of the ART (Assisted Reproductive Technology) in Goats
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Session: Genetic Modification of Swine for Medicine and Agriculture
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- Florfenicol (compare to Nuflor®)
- Azithromycin

**LACTATION INDUCTION**
- Estradiol/Progesterone Combinations
- Reserpine
- Dexamethasone SP

**MISCELLANEOUS**
- Isoflupredone Acetate (compare to Predef®)
- Stanozolol (compare to Winstrol-V®)
- Hydroxyprogesterone Caproate
- Boldenone Undecylenate (compare to Equipoise®)
- Trichlormethiazide/Dexamethasone (compare to Naquasone®)
- Testosterone Cypionate
- Progesterone (Repository)
- Mibolerone (compare to Cheque Drops®)

Our pharmacists are always available to answer your questions.

It is said that work, well done, is art. At Diamondback Drugs, we continually strive to perfect the art and science of veterinary pharmaceuticals.