Greetings from the west slope. We are enjoying one of our wettest winters and springs on record. The desert sure is pretty when it’s green. The worst part of this kind of weather is that there will be so much grass growing out on the range that we will probably experience a record fire season this summer when it all dries out. Whenever I hear in the news of all the bad weather that the “east slopers” get I wonder how some of you get to your flushes. (An east sloper is everyone east of the Rockies, for those wondering). I guess there is no perfect place to live and flush cows for a living.

The AETA received a very nice letter from Dr. Jim Collins, one of the “old timers.” He announced the termination of his membership after his retirement several years ago. Look for this letter in this issue of Closer Look. This reminds me of the rest of the people who started this organization and how they are slowly disappearing. They all are missed. Thanks for all you’ve done to further the industry and to get the AETA to where it is today.

We too will retire some day. I hope everyone is thinking of an exit strategy. This is a great time to think about bringing in new veterinarians, Ph.D.’s, and technicians into our businesses so that our clients can continue to receive quality service. I would guess that most of us don’t have any idea about when to retire, especially Dr. Murphy! (By the way, I hear he is looking for a job.)

The AETA’s legal issues are starting to show some progress. A hearing is set for June with one of the banks to try to recover more misappropriated funds. The criminal phase is getting some attention with some talk of a plea agreement. The GMO Resolution Committee has advised the Board on this matter, and we are committed to recover all possible funds from the parties at fault and to allow the court system to deliver justice to the guilty. Hopefully this is the year to have this completely resolved.

Some of you may not be aware that at least 2 members of the Audit Committee visit the AETA’s headquarters office in Savoy at least once a year to inspect our financial state. The staff at FASS open up our records for complete inspection. If they find anything out of the ordinary, any and all questions are addressed right away. All bank account and CD balances are checked and account numbers verified. We are happy to report that everything looks good. The AETA invested $60,000 in a 7-month CD that will mature right after our annual meeting in Ottawa so that we can get ideas as to what our options are for investing for a longer term.

The ET statistics survey deadline has past. We are very pleased to report that only 11 certified companies missed the
AETA Headquarters Directory

Vicki Paden, AETA Administrative Assistant
(aeta@assochq.org)

As the AETA Administrative Assistant, Vicki works with the AETA members on day-to-day issues. She updates the AETA membership database, processes memberships, renewals, meeting registrations, orders, claims, invoices and responds to e-mail. She is also the helpful, friendly voice on the other end of the phone when you call the AETA line.

Christina Tomlinson, AETA Newsletter Coordinator
(christinat@assochq.org)

Christina handles all coordination for the production of the *A Closer Look*, including newsletter advertising, article submissions, and announcement postings.

Save These Dates!

**AETA**

- 2006 AETA & CETA/ACTE Joint Convention
  Ottawa, ON, Canada
  October 5–7, 2006

- 2007 AETA Annual Meeting
  in conjunction with The Society for Theriogenology
  Monterey, California
  August 7–12, 2007

Future Meetings of Interest!

**IETS**

- 2007 IETS Annual Meeting
  Kyoto, Japan
  January 6–10, 2007

**AABP**

- 2006 AABP Annual Meeting
  St. Paul, Minnesota
  September 21–23, 2006

**SFT/ACT**

- 2006 Annual Meeting
  St. Paul, Minnesota
  August 22–26, 2006

deadline. They all received a personal call from myself to remind them of the importance of this survey and that it is part of the ETB certification agreement they signed with the AETA. Most had very good excuses, like they never received the survey. Others just “forgot.” I would like to see 100% compliance with this so someone like me doesn’t have to spend 2 hours calling all the nonresponders. I also discovered that there are no guidelines to follow to address the nonresponders. The Board will have to address this at our next meeting! Thank you to all the certified and noncertified companies that reported.

The meeting in Ottawa is coming along nicely. Most of the speakers are lined up, as well as the preconference entertainment. Please plan on traveling to Ottawa. The AETA’s financial health relies heavily on meeting attendance. Remember, although a passport is the ideal identification, US citizens do not require a passport to enter Canada. Just make sure you carry identification, such as a birth certificate and at least one ID card with photo, to establish your citizenship. Go to this US state department site for more detail: http://travel.state.gov/travel/tips/regional/regional_1170.html

See you in Ottawa!

Pat Richards, D.V.M.
AETA President

---

**A Closer Look Advertising Rates for 2005**

<table>
<thead>
<tr>
<th></th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Card</td>
<td>$50 per issue</td>
</tr>
<tr>
<td>¼ Page</td>
<td>$75 per issue</td>
</tr>
<tr>
<td>½ Page</td>
<td>$150 per issue</td>
</tr>
<tr>
<td>Full Page</td>
<td>$200 per issue</td>
</tr>
</tbody>
</table>

**Publication Schedule and Deadlines**

**Issue**

- Winter — February
- Spring — May
- Summer — August
- Fall — November

Ads are due the 1st of each issue month. If you would like to advertise in the next issue, please contact AETA at aeta@assochq.org or 217-398-2217.

AETA can now accept ads electronically or camera-ready for publication.
AETA Officers and Directors 2005-2006

President
Patrick M. Richards, DVM
1215 East 2000 South
Bliss, ID 83314
PHONE: (208) 539-3076
FAX: (208) 539-3076
E-mail: drpat@richards.myrf.net

Immediate Past President
Thomas L. Rea, DVM
Genetics West
17890 WCR 5
Berthoud, CO 80513
PHONE: (970) 359-3076
FAX: (970) 359-3076
E-mail: trgeneticswest@aol.com

Vice President
Ron Kling, DVM
New Vision Transplants
456 Springs Road
Grantsville, MD 21536
PHONE: (301) 895-5237
FAX: (301) 895-5237
E-mail: etmets@amerytel.net

Secretary Treasurer
Steve Hughes, DVM
3732 Garnett Street
Lenexa, KS 66214
PHONE: (913) 961-6666
E-mail: s Hughes@amerytel.net

Directors
Todd J. Bickett, DVM
Bickett Genetics, Inc.
455 Brotherton Lane
Chickamauga, GA 30707
PHONE: (706) 375-2136
FAX: (706) 375-2136
E-mail: tjbickett@aol.com

Cheryl Nelson, DVM
Nelson Reproductive Service
1735 Pinckard Pike
Versailles, KY 40383
PHONE: (859) 873-7319
E-mail: cnl79@qx.net

Allen Rushmer, VMD
Next Generation ET Service
1316 Oregon Pike
Leola, PA 17540
PHONE: (717) 656-6921
FAX: (717) 656-6934
E-mail: nextgenet@att.net

Byron Williams, DVM
EmQuest ET Service
Box 504
Plymouth, WI 53073-0504
PHONE: (920) 892-6878
FAX: (920) 892-8083
E-mail: emquest@excel.net

Byron Williams, DVM
EmQuest ET Service
Box 504
Plymouth, WI 53073-0504
PHONE: (920) 892-6878
FAX: (920) 892-8083
E-mail: emquest@excel.net

AETA Committees

AUDIT COMMITTEE
Daniel Hornickel, DVM, Chair
Sunshine Genetics Inc
W7782 Hwy 12
Whitewater, WI 53190
PHONE: (262) 473-8905
FAX: (262) 473-3660
E-mail: Dan@sunshinegenetics.com

Committee Members:
Edwin Robertson, DVM
Richard Whitaker, DVM

CERTIFICATION COMMITTEE
Stephen Malin, DVM, Chair
Malin Embryo Transfer
N5404A Highway 151
Fond du Lac, WI 54937
PHONE: (920) 921-1231
FAX: (920) 921-1231
E-mail: malin@spiritusa.net

Committee Members:
Boyd Henderson, VMD
Larry Horstman, DVM
Joseph M. Wright, DVM
James K. West, DVM

CONVENTION/PROGRAM COMMITTEE
Ron Kling, DVM, Chair
New Vision Transplants
456 Springs Road
Grantsville, MD 21536
PHONE: (301) 895-5237
FAX: (301) 895-5237
E-mail: godsmusic7@verizon.net

Committee Members:
Richard S. Castleberry, DVM, Co-Chair
Richard O. Whitaker, DVM, Chair
New England Genetic, LLC
10 Business Park Way
Turner, ME 04282
PHONE: (207) 225-2722
FAX: (207) 225-3883
E-mail: moodoc@megalink.net

Committee Members:
Darrel DeGroff, DVM
Stephen Malin, DVM
Daniel R. Hornickel, DVM

GOVERNMENT LIAISON COMMITTEE
Richard O. Whitaker, DVM, Chair
New England Genetic, LLC
10 Business Park Way
Turner, ME 04282
PHONE: (207) 225-2722
FAX: (207) 225-3883
E-mail: moodoc@megalink.net

Committee Members:
Charles Gue, DVM
David Duxbury, DVM

MANUALS, PROMOTIONS AND MEMBERSHIP COMMITTEE
David B. Duxbury, DVM, Chair
Midwest Embryo Transfer Service
1299 South Shore Drive
Amery, WI 54001
PHONE: (715) 268-9900
FAX: (715) 268-2691
E-mail: etmets@amerytel.net

Committee Members:
Byron Williams, DVM

GMO RESOLUTION COMMITTEE
Randall H. Hinshaw, DVM, Chair
Ashby Embryos
Ashby Herd Health Services Inc.
2420 Grace Chapel Road
Harrisonburg, VA 22801
PHONE: (540) 433-0430
FAX: (540) 433-0452
E-mail: RHinshaw@RICA.NET

Committee Members:
Darrel DeGroff, DVM
Stephen Malin, DVM
Daniel R. Hornickel, DVM

NEWSLETTER COMMITTEE
John F. Hasler, Ph.D., Chair
Bioniche
427 Obenchain Road
LaPorte, CO 80535
PHONE: (970) 484-9860
E-mail: jfhasler05@msn.com

Committee Members:
Kathy Creighton Smith
Larry Kennel, DVM

NOMINATIONS COMMITTEE
Thomas L. Rea, DVM, Chair
Genetics West
17890 WCR 5
Berthoud, CO 80513
PHONE: (970) 539-2439
FAX: (970) 535-0788
E-mail: trecgenticisseur@aol.com

Committee Members:
Todd Bickett, DVM
Darrel DeGroff, DVM

PROFESSIONAL REVIEW COMMITTEE
Patrick M. Richards, DVM
1215 East 2000 South
Bliss, ID 83314
PHONE: (208) 539-3076
FAX: (208) 352-1934
E-mail: drpat@richards.myrf.net

Committee Members:
Thomas Rea, DVM
Steve Hughes, DVM
Ron Kling, DVM

STATISTICAL INFORMATION COMMITTEE
Ron Kling, DVM
Steve Hughes, DVM
Thomas Rea, DVM
Chair
Genetics West
17890 WCR 5
Berthoud, CO 80513
PHONE: (970) 539-3076
FAX: (970) 359-3076
E-mail: drpat@richards.myrf.net

Committee Members:
Thomas Rea, DVM
Steve Hughes, DVM
Ron Kling, DVM

STANDARDIZATION COMMITTEE
Dan Hornickel, DVM
Bickett Genetics, Inc.
455 Brotherton Lane
Chickamauga, GA 30707
PHONE: (706) 375-2136
FAX: (706) 375-2136
E-mail: tjbickett@aol.com

Committee Members:
Bickett Genetics, Inc.

NEWSLETTER COMMITTEE
John F. Hasler, Ph.D., Chair
Bioniche
427 Obenchain Road
LaPorte, CO 80535
PHONE: (970) 484-9860
E-mail: jfhasler05@msn.com

Committee Members:
Kathy Creighton Smith
Larry Kennel, DVM

NOMINATIONS COMMITTEE
Thomas L. Rea, DVM, Chair
Genetics West
17890 WCR 5
Berthoud, CO 80513
PHONE: (970) 539-2439
FAX: (970) 535-0788
E-mail: tregenticisseur@aol.com

Committee Members:
Todd Bickett, DVM
Darrel DeGroff, DVM

EXHIBIT COMMITTEE
David B. Duxbury, DVM, Chair
Midwest Embryo Transfer Service
1299 South Shore Drive
Amery, WI 54001
PHONE: (715) 268-9900
FAX: (715) 268-2691
E-mail: etmets@amerytel.net

Committee Members:
Byron Williams, DVM

GOVERNMENT LIAISON COMMITTEE
Richard O. Whitaker, DVM, Chair
New England Genetic, LLC
10 Business Park Way
Turner, ME 04282
PHONE: (207) 225-2722
FAX: (207) 225-3883
E-mail: moodoc@megalink.net

Committee Members:
Charles Gue, DVM
David Duxbury, DVM

MANUALS, PROMOTIONS AND MEMBERSHIP COMMITTEE
Thomas A. Borum, DVM, Chair
Borum’s Veterinary Embryonics
145 East Franklin Street
Natchez, MS 39120
PHONE: (601) 442-5523
FAX: (601) 442-5523
E-mail: aeta@borum.com

Committee Members:
Robert Zinnikas, DVM
Ronald M. Kling, DVM
Stanley F. Huels, DVM

MEMBERSHIP COMMITTEE
Cheryl Nelson, DVM, Chair
Nelson Reproductive Service
1735 Pinckard Pike
Versailles, KY 40383
PHONE: (859) 873-7319
E-mail: cnl79@qx.net

Committee Members:
Irmtraud Robertson
Brad Stroud, DVM
One-Stop Shopping for Your Reproductive Healthcare Needs

Our pharmacists are always available to answer your questions.

Toll Free 1.866.646.2233
Arizona: 480.946.2223    Toll Free Fax 1.866.646.2235
2930 North Hayden Road, Scottsdale AZ 85251
Estradiol Cypionate (ECP) Not Approved For Use In Animals—CVM Advisory

April 5, 2006
FDA, Center for Veterinary Medicine Media Release http://www.fda.gov/cvm/CVM_Updates/ECPup.htm

The FDA’s Center for Veterinary Medicine (CVM) would like to remind food-animal producers and veterinarians that estradiol cypionate (ECP) is not approved for use in animals in part because the safety of its use has not been demonstrated, as required under the Federal Food, Drug, and Cosmetic Act. Estradiol Cypionate has been used as an estrogenic hormone for reproductive therapy in food animals. However, there are no FDA-approved new animal drugs containing this product. The agency has received reports that ECP has been compounded for use in dairy cows and beef cattle by pharmacies and veterinarians. The use of ECP in food-producing animals is illegal, and manufacturing or compounding of ECP for such use is illegal.

In addition, the extra-label provisions of the Federal Food, Drug, and Cosmetic Act do not permit this use. The Animal Medicinal Drug Use Clarification Act (AMDUCA) amended the Federal Food, Drug, and Cosmetic Act to allow licensed veterinarians to prescribe extra-label uses of approved animal drugs and human drugs in animals. However, under AMDUCA, extra-label use is limited to treatment modalities when the health of an animal is threatened or suffering or death may result from failure to treat. The extra-label use of ECP for reproductive purposes does not qualify under these provisions.

Questions about the prohibition against the manufacturing, compounding, or use of ECP may be addressed to Dr. Michael Talley, FDA/Center for Veterinary Medicine, Division of Compliance, 865-919-5407, Michael.Talley@fda.hhs.gov.

Minimize Costly Media Waste With Our Unique 6 mL EMCARE Single Use Minipacs

- Patented MOPS buffer out performs other commercial buffers by almost 20%
- Competitive Cost Per mL
- Easy to Use Twist Off Tops

ICPbio EMCARE® Mini Pacs

Call us for our catalogue & complete price list.

Partnarn
ANIMAL HEALTH

TOLL FREE Ph: 1-866-690-4998 Fax: 1-866-216-3335
EFFECT OF GLYCEROL AND ETHYLENE GLYCOL ON THE DEVELOPMENT OF IN VITRO BOVINE EMBRYOS.

A. C. Nicacio, R. Simões, M. A. Peres, J. S. A. Gonçalves, M. E. O. D’Ávila Assumpção, J. A. Visintin, University of São Paulo - FMVZ, São Paulo, São Paulo, Brazil.

The aim of this study was to evaluate the viability of in vitro-produced bovine embryos after exposure to different cryoprotectant solutions and cryopreservation. Bovine ovaries were collected at slaughterhouse and oocytes were matured, fertilized, and cultured in vitro. The embryos were co-cultured on a granulosa cell monolayer in SOF + 5% FCS and nonessential amino acids. In Experiment 1, expanded blastocysts were exposed to 10% ethylene glycol (EG) solution for 10 min (Group EG) or to 10% EG solution for 10 min and to 20% EG + 20% glycerol (Gly) solution for 30 s (Group EG/Gly). Cryoprotectants were diluted with PBS + 0.2% BSA + 0.3 M sucrose and PBS + 0.2% BSA solutions, both for 3 min, and the hatching rate was evaluated after culture. In Experiment 2, after exposure, EG Group was cryopreserved by slow freezing procedure (1.2°C/min) and EG/Gly Group was vitrified on nitrogen vapor for 2 min. After thawing, cryoprotectants were diluted using PBS + 0.2% BSA + 0.3 M Sucrose and PBS + 0.2% BSA solutions, both for 3 min; hatching rate was evaluated after culture. As a control group for both experiments, non exposed embryos were cultured and evaluated for hatching rate. In Experiment 1, the hatching rates were 59.72% (43/72) for control, 62.38% (63/101) for EG, and 69.00% (69/100) for EG/Gly groups. In Experiment 2, hatching rates were 59.72% (43/72) for control, 15.22% (7/46) for EG, and 0.00% (0/46) for EG/Gly groups. Results were analyzed by chi-square test. In Experiment 1, no differences were observed among groups (P > 0.05) and in Experiment 2, differences were observed among control, EG, and EG/Gly groups (P < 0.05). In conclusion, the cryoprotectants were not deleterious to the development of in vitro bovine embryos until hatching, but the cryopreservation procedures decreased embryo viability.

This work was supported by FAPESP 04/05335-1.
MARK YOUR CALENDAR!

2006 AETA & CETA/ACTE Joint Annual Scientific Convention
The Westin Ottawa, Ottawa, Ontario, Canada
October 5-7, 2006

The planning for the 2006 AETA & CETA/ACTE Joint Conference in Ottawa, Ontario, Canada is well underway. Topics ranging from sexed semen technology and field superovulation trial results to ultrasound prediction of superovulation responses will be presented. Also to be presented will be nutritional topics with the latest on chelated minerals and fatty acids and their effects on reproduction and fertility. Trans Ova will present a talk on the applications of new technologies in embryo transfer practice. Breakout sessions for those with small ruminant interests are being planned as well. Drs. John Hasler and Reuben Mapleton will be providing a breakout session in ET101 with a technical slant. This will be an excellent opportunity for assistants to get some basic training in embryo morphology, labelling and sanitation, etc and those new practitioners or those old practitioners who want to brush up and get the latest information on the basics of ET. Practical wet labs are being planned for embryo biopsy, semen evaluation and vitrification of embryos. The tentative program outline is included on the next page.

Bioniche has graciously sponsored the Pre-Conference social again this year, with a ride on the Steam Engine Train with a spectacular gourmet meal while watching the beautiful fall scenery chug by in a great sunset view.

The golf tournament has again been scheduled, and for those not interested in golf there are many sites to take in that are within walking distance of the hotel. Shopping at the Rideau Centre (which is attached to the Westin), the Sparks St. Mall or the Byward Market, to tours of the Parliament Buildings, National Art Gallery and Bank of Canada Currency Museum to name a few. The Museum of Civilization and the Casino Du Lac-Leamy, both in Hull are a 5-minute taxi ride for those inclined.

The companion tours are being planned as well, which will include a bus tour to the Mackenzie King Estates, the property of the longest serving Prime Minister of Canada.

The convention will be held at ‘The Westin Ottawa’, which is located in downtown Ottawa. The convention rate is: $169 CAD for a traditional room and $209 CAD for a Deluxe room. There is lot’s to see and do in Ottawa, so we invite you and your companions to visit and learn!

For informative CE and an exciting vacation, mark Thursday, Oct. 5 to Saturday, Oct. 7, on your calendars.

For information on the convention and AETA, please visit the AETA website at: http://www.aeta.org/06mtg.asp

WE LOOK FORWARD TO SEEING YOU IN OTTAWA!
TENTATIVE PROGRAM OUTLINE:

**WEDNESDAY, October 4, 2006**

8:00 AM – 10:30 AM  MEETING: CETA/ACTE Certification Committee
11:00 AM – 6:00 PM  MEETING: AETA Board of Directors
11:00 AM – 6:00 PM  MEETING: CETA/ACTE Board of Directors
1:30 PM – 5:00 PM   EXAM: AETA & CETA/ACTE Certification Exam

**THURSDAY, October 5, 2006**

6:00 AM – 1:30 PM   SOCIAL: Golf Tournament at Stonebridge Golf & Country Club  
                      SPONSORED BY: Schering Plough Animal Health
1:00 PM – 4:00 PM   Registration
1:00 PM – 4:00 PM   Exhibit Set-up
2:15 PM – 4:15 PM   WET LABS: (participants may attend 2 wet labs)  
                      ➢  Embryo Biopsy - Presented by Dr. Martin Darrow
                      ➢  Vitrification – Presented by Dr. John Hasler
                      ➢  Semen Evaluation – Presented by Dr. Brad Stroud
4:20 PM – 8:30 PM   SOCIAL: Pre-Conference Social: Wakefield Steam Engine – Sunset Dinner Train  
                      SPONSORED BY: Bioniche Animal Health Inc.

**FRIDAY, October 6, 2006**

6:45 AM – 7:45 AM   Continental Breakfast in Exhibit Area  
                    SPONSORED BY: Pfizer Animal Health
6:45 AM – 7:30 PM   Exhibits Open
6:45 AM – 5:00 PM   Registration
10:00 AM – 3:00 PM  Companion Tour: Bus Tour to Gatineau Park & Mackenzie King Estate
7:45 AM – 8:00 AM   Introductions and Welcome
8:00 AM – 9:30 AM   SESSION: The impact of Organic trace minerals on fertility and reproduction  
                    Presented by Dr. Steve Elliott  
                    SPEAKER SPONSORED BY: Tim deWit, Alltech Canada Biotechnology Centre
9:30 AM – 10:30 AM  SESSION: Protected fats and fatty acids and effect on reproduction  
                    Presented by Dr. Elliot Block  
                    SPEAKER SPONSORED BY: Church & Dwight Company
10:30 AM – 11:00 AM Break in Exhibit Area  
                    SPONSORED BY: Reproduction Resources
11:00 AM – 12:30 PM MEETING: AETA Annual Business Meeting
11:00 AM – 12:30 PM MEETING: CETA/ACTE Annual General Meeting
12:30 PM – 1:30 PM   Lunch  
                    SPONSORED BY: PETS, Inc (Professional Embryo Transfer Supply, Inc.)
12:30 PM – 1:30 PM   MEETING: CETA/ACTE New Board of Directors
1:30 PM – 3:00 PM   SESSIONS:  
                    Assessing Semen Quality - Presented by Dr. Patrick Blondin
                    Sexed semen technology - Presented by Dr. Richard Remillard
                    Sexed semen superovulation trial results – Presented by Dr. Martin Darrow
3:00 PM – 3:30 PM   Break in Exhibit Area  
                    SPONSORED BY: Pfizer Animal Health
SESSION: Fertilization failure due to mishandled frozen semen - the science & economics of exposure damage and what you can do to prevent it / Update on commercial bovine cloning
Presented by Dr. Brad Stroud

SOCIAL: Happy hour and a half
SOCIAL: Banquet & Entertainment

ENTERTAINMENT SPONSORED BY: I.M.V. International Corporation

President's Reception in Hospitality Suite
COCKTAILS SPONSORED BY: Veterinary Concepts

SATURDAY, October 7, 2006

AETA Past Presidents / Board of Directors' Breakfast
Registration
Exhibits
Continental Breakfast in Exhibit Area

Sponsored by: Pfizer Animal Health

Companion Tour: TBA

BREAKOUT SESSION: ET 101 with a technical slant
Presented by Dr. Reuben Mapleton & Dr. John Hasler

BREAKOUT SESSION: Assisted Reproduction in Small Ruminants: Challenges and Opportunities
Presented by Dr. Hernan Baldassarre

SESSION: Using ultra-sonography to predict response to superovulation
Presented by Dr. Jean Durocher

SESSION: Commercialization of Biotechnology
Presented by Dr. David Faber

Speaker Sponsored by: Trans Ova Genetics

Break in Exhibit Area

Sponsored by: PETS, Inc. (Professional Embryo Transfer Supply, Inc.)

AETA SESSION: AETA Certification Session (for AETA members)
SESSION: Validation of a Monoclonal Antibody-Based Capture Enzyme-Linked Immunosorbent Assay for Detection of Campylobacter fetus
Presented by Dr. John Devenish

SESSION: Biosecurity for the ET farm
Presented by Dr. Rich Vanderwal

Sponsored by: Wyeth Animal Health

Lunch

Sponsored by: Diamondback Drugs

SESSION: Vitrification of Equine Embryos, a field study in a commercial setting
Presented by Dr. Jason J. Hudson

Speaker Sponsored by: Partnar Animal Health Inc.

SESSION: The Effect of Heat Stress & Average Ambient Temperatures on the Superovulatory response of cattle to Ovagen vs. Folltropin
Presented by Dr. Russ Page & Josh Howle

Speaker Sponsored by: Partnar Animal Health Inc.

Break in Exhibit Area

Sponsored by: Minitube of America

SESSION: Practitioners Forum / Roundtable Discussion
Moderator: Dr. Reuben Mapleton

Sponsored by: Merial Canada Inc.

President’s Reception in Hospitality Suite
COCKTAILS SPONSORED BY: Veterinary Concepts
2006 AETA & CETA/ACTE Joint Scientific Convention
Exhibitors

(as of May 17, 2006)

Agtech Inc.
Bioniche Animal Health, Inc.
CowChips, LLC
Diamondback Drugs
I.M.V. International Corporation
IVX Animal Health
Minitube of America
Partnar Animal Health, Inc.
PETS, Inc. (Professional Embryo Transfer Supply, Inc.)
Reproduction Resources
Sec Repro Inc.
Steuart Labs
Trans Ova Genetics
Universal Ultrasound
Veterinary Concepts
Veterinary Sales & Service

Attention: 2006 Meeting Attendees
Travel Information

NOTE: All participants are encouraged to have a valid Passport when traveling outside and returning to the US. All international participants are encouraged to allow at least 6 months to obtain a visa. For more information please visit the links listed below.

http://Travel.State.Gov
http://travel.state.gov/travel/cbpmc/cbpmc_2225.html
Thank You Letter

Dear AETA,

After having been retired from practice for the past several years, the time has come to terminate my membership status. The AETA is a tremendous organization made up of a great group of people. Not only did it provide me with volumes of technical and practical information over the years, but more importantly I was fortunate to have acquired a long list of valued friendships that I very much appreciate to this day. It’s an honor to have been one of the “old timers” and to have had the opportunity to serve and be a part of the growth and maturation of this fine organization. Great times and fond memories. Thanks to all. Best wishes for continued success, and God bless.

Dr. Jim R. Collins
I.M.V. INTERNATIONAL CORPORATION

Proudly Introduces its NEW Line of Embryo Transfer Media Products for the Bovine and Equine Industry

GOLD FLUSH™

Zwitterionic Embryo Flushing Media

• Packaged in inert, gas tight, multi-layer, medical RESIN bags for improved pH stability over time as compared to widely used PVC bags.

• Gamma sterilized bags are filled with the 0.22 micron filtered sterile solution in a laminar flow hood.

• Contains 0.5gr irradiated BSA and 50mg Kanamicin per liter.

• Manufactured in the USA, exclusively for I.M.V. by a biotechnology company complying with cGMP, Pharmacopeia, USDA, FDA and ISO 9001-V2000.

Other Embryo Transfer Media

• Embryo Holding Medium

• Embryo Freeze Medium
  Ethylene Glycol
  Glycerol

• Embryo One Step Thaw

• Embryo Thaw Kit

Media is packaged in unique unbreakable PETG bottles with inert silicone stoppers and color foil caps.

COMPETITIVELY PRICED • SAMPLES AVAILABLE UPON REQUEST

I.M.V. International Corp.
is a division of

I.M.V. International Corporation
11725 - 95th Avenue North • Maple Grove, MN 55369
(763) 488-1881 • Fax: (763) 488-1888
TOLL FREE: 1-800-342-5468 • www.imvusa.com
I have not received any questions for inclusion in this issue of A Closer Look. However, I included the following question and answers that were recently exchanged on CETA’s “Tech Talk,” presenting to the AETA membership.

QUESTION received from Dr. Albiny Corriveau:

I saw news about the sterilization of medical equipment with the ethylene oxide in hospital. They talk about the risk of cancer with the emission of gas and the regulation of reduction of these gases. I use ethylene oxide each week with security, I think, but I’m afraid with the environment. What product does everybody use to sterilize the flush catheter? The material?

Albiny Corriveau

RESPONSE received from Dr. Reuben Mapletoft:

Albiny, Ethylene oxide also kills embryos. Don’t walk away; run away.

Reuben

RESPONSE received from Dr. John Hasler:

Reply to Albiny.

I don’t know the regulations in Canada concerning ethylene oxide (EO), but in the USA, the federal government (FDA) made a big change in the sale and use of EO more than 15 years ago. Prior to that, it was easy to buy, and many veterinary clinics used it rather casually, often just putting the items to sterilize in a plastic bag overnight or in a covered can. When it became very clear that EO was potentially carcinogenic and posed a risk to pregnant women, everything changed. Clinics had to pass a written examination to keep buying EO, and a special chamber vented to the outside was mandated in every location purchasing EO.

I don’t know why it is necessary to use EO any more for sterilizing catheters. Several brands of silicone catheters are available and can be easily autoclaved. I recommend using distilled water and not autoclaving with surgical gowns and typical veterinary surgical supplies. It is easy to overlook the fact that you can produce sterile but toxic conditions in an autoclave. Sterile can also be toxic, and “dirty” items can be sterile at the same time! Anything that is water soluble and in an autoclave will be deposited on the items during autoclaving (i.e., soap and detergent residues, hard water deposits, chemical residues, etc.).

If one feels it is necessary to use EO, remember that there is a residue that is potentially highly embryotoxic and may persist or some time depending on the substance, absorbability, temperature, and degree of aeration. I would not be comfortable aerating catheters or filters for less than 2 or 3 weeks, even considering the very low surface to volume ratio involved when using them. If you got into using EO for straws or filters, watch out because the surface to volume ratio is very high, the contact time with embryos can be long, and the aeration time necessary for complete disappearance of EO may be very long.

End of sermon

John Hasler

********************************************************************

Questions for “Ask John” may be addressed to:

askjohn@assochnq.org

Thank you.
Dear AETA Members:

Thank you to all who have already submitted the AETA survey; the Stats Committee appreciates your efficiency. See below for the generous rewards that you will be receiving from some of the participating AETA Meeting exhibitors.

Just a reminder that the survey is mandatory for all Certified ET Companies, but the AETA appreciates the valuable information submitted by all ET practitioners. We welcome comments or suggestions on Dr. Stroud’s new Excel format and hope it made your tabulations quicker and easier.

For those who have submitted the survey by March 31st, we hope you enjoy the following offers:

Partnar Animal Health—Any member that provided their data to AETA by the March 31, 2006 deadline will be mailed a coupon for 5% off their next order from Partnar Animal Health.

Greg Shewfelt
Partnar Animal Health
greg.shewfelt@partnaranimalhealth.com

IVX Animal Health (formerly Phoenix Scientific) had 2 drawings for those that submitted their survey by March 31st.

Winner of drawing # 1: 300 doses of ProstaMate (pgf2α)
Dr. Larry Lanzon, Lander Veterinary Clinic, Turlock, CA!

Winner of drawing # 2: 300 doses of OvaCyst (GnRH)
Dr. Phil Buhman, Preferred Genetics for Bovine, Columbus, NE!

Dr. Rich Markham
Director of Technical Services
IVX Animal Health
rich_markham@ivax.com

Veterinary Sales & Service, Inc.
We would like to offer AETA members a $1,000 discount on a purchase of any of our new ultrasound scanners.

Todd Mezera
VP Sales
Veterinary Sales & Service, Inc.
(888) 234-5999
www.vetsales.net

Please feel free to contact Dr. Stroud at bstroud@biotechproductions.com or myself with any questions or comments.

Sincerely,

Jeanne Reyher
AETA Stats Committee
reyherembryonics@aol.com
Detecting Emerging Diseases in Farm Animals through Clinical Observations

Gwenaël Yourc'h,†* Victoria E. Bridges,‡ Jane Gibbens,§ Brad D. De Groot,¶ Lachlan McIntyre,¶ Roger Poland,# and Jacques Barnoin*  

Predicting emerging diseases is among the most difficult challenges facing researchers and health managers. We present available approaches and tools to detect emerging diseases in animals based on clinical observations of farm animals by veterinarians. Three information systems are described and discussed: Veterinary Practitioner Aided Disease Surveillance in New Zealand, the Rapid Syndrome Validation Project—Animal in the United States, and “emergences” in France. These systems are based on syndromic surveillance with the notification of every case or of specific clinical syndromes or on the notification of atypical clinical cases. Data are entered by field veterinarians into forms available through Internet-accessible devices. Beyond challenges of implementing new information systems, minimizing economic and health effects from emerging diseases in animals requires strong synergies across a group of field partners, in research, and in international animal and public health customs and practices.

After the discovery of antimicrobial drugs, the increased knowledge in pathogenesis, and the improvement of health management, infectious diseases were thought to be a concern restricted to the application of known control measures. However, the dramatic spread of highly pathogenic diseases such as AIDS and multidrug-resistant bacterial infections led the scientific community to seriously examine emerging infectious diseases (1). Additionally, most of the emerging issues for humans are zoonotic (2) (e.g., avian influenza, bovine spongiform encephalopathy [BSE], severe acute respiratory syndrome [SARS], West Nile virus fever). Consequently, emerging diseases are now being addressed in domestic animals and wildlife with greater interest (3).

Emerging diseases in animals, especially farm animals, involve economic losses through direct (deaths, culls, movement restriction, laboratory tests) and indirect (decreased consumption of animal products, tourism decline) costs. For example, the cost of the BSE epidemic in the United Kingdom has been high, both for control measures and through lost trade, >£740 million in 1997 alone (http://www.defra.gov.uk/animalh/bse/general/qa/section9.html, accessed 9 May 2005). In addition, BSE has been implicated in the deaths of 150 persons in the United Kingdom to date (http://www.cjd.ed.ac.uk/figures.htm, accessed 9 May 2005). In 1997 and 2004, outbreaks of avian influenza A (H5N1) in Asia, with transmission to humans, led to massive destruction of poultry to avert a pandemic (4).

Because diseases will continue to emerge, the potential unexpected or atypical features of future health problems makes surveillance particularly challenging (5). No single data source captures all the information required for surveillance. Early clinical detection is one of the cornerstones (6) regarding unexpected diseases insofar as the surveillance activities of the veterinarians can be focused and systematized. This article presents approaches and tools focused on detecting potentially emerging diseases in farm animals through 3 information systems being tested in New Zealand, the United States, and France.

Approaches To Detect Clinical Emerging Issues

Most surveillance programs deal with a restricted set of known diseases that fail to address the challenges of looking for the unknown. However, in the United States, many new human infectious diseases have been recognized by examining illnesses without identified cause (7).
Furthermore, in Great Britain, the unusual neurologic clinical signs in cattle forewarned of a new disease, BSE (8). Developing the ability to detect atypical syndromes in a timely fashion is critical to reducing the impact of disease emergence.

Programs targeted to detect atypical animal diseases follow 2 approaches. The first approach, syndromic surveillance, monitors disease trends by grouping clinical diseases into syndromes on the basis of clinical features rather than specific diagnoses (9). Even though syndromic surveillance systems seek to minimize the amount of data collected from each case, their main drawback is the heavy reporting load and requirement for disciplined reporting of recognized case data.

The second approach focuses on detecting individual atypical cases. Based on how previous emerging diseases have been detected (Table 1), atypical cases can arise from a new disease that shows clinical signs the clinician cannot link to a known disease. Alternatively, they arise from a known disease expressed atypically through unusual clinical signs, atypical region or species, or increased severity. An atypical case can also result from the detection of a rare or inadequately documented sporadic disease. Detection focused on atypical cases requires a lighter reporting load than syndromic surveillance, but the practitioner response is likely to be variable and require regular prompting.

**Information Systems To Analyze Clinical Data from Farm Animals**

Advances in information technology have allowed novel uses of Web and pocket personal computer applications, which provide speed, efficiency, interactivity, and security. In 1997 in Colorado, veterinarians provided information regarding unusual clinical events through the Internet (22); however, the program was discontinued because of poor user response. Subsequent approaches and tools to clinically detect potential emerging diseases in farm animals are presented here through 3 prototype information systems: the Veterinary Practitioner Aided Disease Surveillance System (VetPAD, New-Zealand) (23), which is its third year with 7 pilot veterinarians; the Rapid Syndrome Validation Project—Animal (RSVP-A, USA) (24), which has been piloted among 17 veterinarians in Kansas since 2003 and 10 veterinarians in New Mexico since 2005; and the “emergences” system (available from http://www.inra.fr/maladies-emergetes) (25), which was

<table>
<thead>
<tr>
<th>Table 1. Examples of emerging diseases and how they were detected and identified in farm animals in the last 20 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emerging disease (etiology)</td>
</tr>
<tr>
<td>Blue tongue (Reoviridae)</td>
</tr>
<tr>
<td>Border (Flaviviridae)</td>
</tr>
<tr>
<td>Bovine leukocyte adhesion deficiency (CD 18 gene mutation)</td>
</tr>
<tr>
<td>Bovine spongiform eencephalopathy (prion)</td>
</tr>
<tr>
<td>Complex vertebral maiformation (SLC35A3 gene mutation)</td>
</tr>
<tr>
<td>Epizootic rabbit enteropathy (unidentified virus)</td>
</tr>
<tr>
<td>Hendra virus disease (Paramyxovirus)</td>
</tr>
<tr>
<td>Highly pathogenic avian influenza (H5N1 virus)</td>
</tr>
<tr>
<td>Nipah virus disease (Paramyxovirus)</td>
</tr>
<tr>
<td>Porcine dermatitis and nephropathy syndrome (suspected porcine circovirus 2)</td>
</tr>
<tr>
<td>Porcine reproductive and respiratory syndrome (Arteriviridae)</td>
</tr>
<tr>
<td>Post-weaning multisystemic wasting syndrome (suspected porcine circovirus 2)</td>
</tr>
<tr>
<td>Rabbit hemorrhagic disease (Caliciviridae)</td>
</tr>
<tr>
<td>West Nile fever (Flaviviridae)</td>
</tr>
</tbody>
</table>
pilot tested with 12 veterinarians in 2003 and has been pilot tested with 30 veterinarians since September 2005 (Table 2). All systems are being tested in cattle because veterinary practitioners have high rates of on-farm contact with bovine herds.

**Data Capture and Strategies**

All 3 systems work from the premise that practicing veterinarians hold key animal health information, which could improve means for early detection of emerging disease if aggregated efficiently through advanced information technology. While all systems capture basic epidemiologic data, they each represent a different approach to emerging disease surveillance.

VetPAD has a syndromic surveillance approach. It can include all farm animals. It collects data describing every case. Cases are categorized by using dropdown lists, check boxes, and a clinical diagnosis. Based on the categorizations, cases can be flexibly aggregated for syndromic surveillance. The strategy to minimize the surveillance reporting impact is to provide a tool capturing the ordinary business data veterinarians must manage anyway (medical records, inventory, and accounts). Surveillance data are a subset of these other data.

The RSVP-A system employs an aggregation-based syndromic surveillance but focuses on a restricted set of syndromes (non-neonatal diarrhea, neurologic dysfunction or recumbency, abortion or birth defect, unexpected death, erosive or ulcerative lesions, and unexplained feed refusal or weight loss). These syndromes are defined to cover clinical signs of emerging disease other than the common production problems on which most livestock enterprises are focused. Practitioners determine the specific syndrome each case best fits and record demographic data about the diseased animals. The RSVP-A system also requests additional clinical observations potentially useful to further characterize incident patterns. The strategy to minimize the reporting impact is to focus on less common clinical syndromes and to make data capture for each case require ≤1 minute.

“émergences” has a different approach as it targets atypical cases and specific diseases, which correspond to

| Table 2. Comparison of 3 information systems to analyze animal disease through clinical observations* |
|-------------------------------------------------|---------------------------------|---------------------------------|
| General information                             | VetPAD                         | RSVP-A                         | “émergences”                  |
| Country of origin                                | New Zealand                    | United States                  | France (available in French, Spanish, English) |
| Species targeted/where applied                   | Farm animals/dairy cattle      | Cattle/cattle                  | Domestic animals/cattle        |
| Means of recording                               | Pocket PC                      | Palm device, PC with Internet, wireless microbrowser | PC with Internet, cell phone |
| Record                                           | Syndromic surveillance: all clinical cases | Syndromic surveillance: 6 syndromes (see text) | Atypical syndromes and customized targeted diseases, record of the absence of cases |
| Type of clinical data                            | Farm localization and ownership, number affected, dead, and at risk | Type of farm, production stage, localization, number affected, dead, and at risk | Type of farm, production stage, localization, contact with other animals, number affected, dead, and at risk |
| Main epidemiologic data                          | Clinical syndrome/specific clinical diagnosis | Type of syndrome, some additional clinical observation | Reasons for notification, main clinical characteristics |
| Main data related to the disease                 | Pick-up lists, check boxes, free text fields | Pick-up lists, check boxes, free text fields | Pick-up lists, check boxes, free text fields |
| Type of data field                               | Photos                          | Photos, epidemiologic questionnaires | Photos, epidemiologic questionnaires |
| Other record                                     | Analysis and reporting at the practitioner, regional, and national levels | Incident pattern reports from coverage areas defined by practitioners, maps | Practice statistics, statistics with all reported cases, access to all reports |
| Output                                           | Visit management, list of remedies, printouts for clients (wireless technology) |                           | |
| Related to epidemiologic surveillance            |GPS capability, linkage of clinical to laboratory diagnosis, barcode scanning|GPS capability|Implementation of anatomo-pathology and laboratory analyses |
| Other outputs                                    |                                |                                | |

*VetPAD, Veterinary Practitioner Aided Disease; RSVP-A, Rapid Syndrome Validation Project – Animal; “émergences,” information system in France; PC, personal computer; GPS, global positioning system.
known diseases hypothesized to be emerging. Forms are available (see an example of atypical case form, Figure) for reporting epidemiologic and clinical data. The system requests a follow-up description of each case’s evolution and monthly confirmations of vigilance from veterinarians reporting no cases. Moreover, atypical cases can be categorized by the system administrator according to clinical description similarities to facilitate exploration of their potential links. The system has generic features, making it available for any country, any disease, and any domestic species. Description of atypical cases for “émergences” is a less frequent and more open process than the syndromic surveillance methods.

In all these systems, routine data recording is simplified by the use of pick-up lists. However, free text fields are also available, as the unexpected often does not fit in predefined fields. VetPAD and RSVP-A use mobile telephones or personal data assistants for data capture. “émergences” primarily uses the Internet.

**Output and Statistics**

A successful surveillance system must be able to keep veterinarians engaged and continuing to submit data after the novelty of the new system wears off. Systems can provide value to a veterinarian with useful management tools, which are available in VetPAD, and by enhancing their clinical expertise and intellectual curiosity. To trigger interactions and learning from participants’ experiences, practitioners participating in “émergences” have access to all case descriptions. In addition, illness and death rates are available in real time either at the clientele level (“émergences”) or at a custom-made level (“émergences,” RSVP-A). In VetPAD, customized reports are available to involved parties.

One output of these surveillance systems is an indication of unusual events that require additional investigation. This investigation might include communication with other veterinarians to find additional cases, targeted epidemiologic studies, research projects, or control programs.

Other outputs are data upon which analyses can be conducted. A challenge is the categorization of reports to identify possible etiologic links. Procedures based on contextual analysis must be developed to analyze pick-up list data as well as free text (26). Each system must also address the challenge of detecting increased incidence of a rare event. Two types of situations can be considered. The first is the emergence from a “zero case” situation (e.g., BSE occurred probably as erratic cases before its amplification [27]). Incidence threshold analysis needed for this situation requires methods such as the evaluation of record process (28). Moreover, the constructed statistics should be robust with a small number of cases and allow differentiation of sporadic cases from emergence (29). The second

![Figure. Sample of online form reporting epidemiologic and clinical data.](image-url)
PETS
PROFESSIONAL EMBRYO TRANSFER SUPPLY, INC

SERVING THE EMBRYO TRANSFER INDUSTRY FOR OVER 15 YEARS.

4-Well and 6-well Cluster Dish

Our dishes are sterilized using Gamma Irradiation. The 4-well and 6-well dishes have a unique patented locking lid and rounded bottom for easy location of embryos. These dishes are an excellent choice for holding and washing embryos.

10 dishes per package or 120 dishes per case

Embryo filters

We have a wide selection of filters. Check out our website or call for details and prices.

EZ WAY FILTER
EMCON FILTER
SURE FLUSH FILTER
HY FLOW FILTER
MAXI FILTER

PHONE: (903)567-4536
PHONE: (800)7359215
FAX: (903)567-4927
EMAIL: SALES@PETS-INC.COM
WWW.PETS-INC.COM
situation is the emergence of clusters of highly pathogenic variants of an endemic disease. Spatial-temporal analysis can provide helpful insights concerning baseline patterns of clinical syndromes and aberrations from them, which can trigger further investigation.

Limitations and Evaluation of Systems Based on Clinical Observation

Limitations

Atypical case detection is limited by practitioners’ experience, knowledge, vigilance, and willingness to report findings (30). Multiple, similar reports of atypical cases improve confidence that a new disease is emerging. Making case data available through surveillance systems, such as the 3 we have indicated, will also foster basic common knowledge and shared practical experience among veterinarians. Because surveillance for the unknown requires a mindset different from surveillance of the known, notification quality and vigilance should be enhanced by specific training courses (31).

A substantial limitation of syndromic surveillance is the need to establish baseline levels for defined syndromes. This step requires time and resources; however, without them, we cannot know when the incidence of a syndrome has significantly increased. VetPAD and RSVP-A are developing such baselines.

Economic consideration leaves few alternatives to clinical detection of farm animal diseases. Laboratory analyses are infrequently performed and generally more basic compared to human medicine (32). However, slaughterhouses and other assembly points do provide surveillance opportunities.

Finally, a clinical reporting tool alone is only the first step to determine if the cases share an etiologic pathway. Review by expert clinicians, necropsy findings, immunologic screenings, and focused epidemiologic studies play key roles in such determination (33). Similarities between distinct submitted atypical cases provide additional evidence. For example, BSE was identified as a novel syndrome through epidemiologic, clinical, and pathologic findings (8).

Evaluation

To determine whether to extend an information system, several points must be reviewed. First, the activity and number of participating veterinarians can be evaluated by quantifying indicators such as number of entries submitted, number of atypical cases entered, and participants’ levels of accessing posted results. Moreover, all systems include reference diseases or symptoms for which descriptive statistics are available, which can serve to check quality recording (e.g., babesiosis in the “emergences” pilot study). In addition, the likelihood of detecting an emerging event is high. Many rare diseases are not defined in cattle, so a dedicated information system should detect ≥1 unexpected event over the test period. For example, the initial “emergences” pilot found 3 sets of clinical signs not linked to a known disease (persistent, ultimately fatal paraplegia, without general clinical signs [Figure]; weight loss, depilation at the extremities leading to death; and congenital cataract neither linked to bovine virus diarrhea nor familial history) and 1 rare known syndrome (facial eczema). Finally, the decision to extend a detection system will depend largely on the interest veterinarians hold and on the inclusion of new diseases as a national surveillance objective (6,34).

Other Systems To Capture Clinical Data

We have presented examples of clinical data capture from cattle herds at the veterinary level, in which sufficient individual health data are available. For species concerned by herd health approaches (sheep, poultry), initiatives have been taken for information systems through online questionnaires answered by farmers (35). In 1 such system, New Zealand producers must complete questionnaires targeted on diseases that occurred in the previous 12 months and have clinical signs similar to exotic diseases. The ultimate research goal is to develop a disease sentinel Web module to integrate with veterinary practice Web sites. The main problem is the disparity in response quality between farmers.

The reality of an emergence can be tested by survey of a set of representative herds. In the United States, the National Animal Health Monitoring System is not designed to collect information regarding emerging diseases per se; however, questions about a previously identified emerging disease have been inserted into surveys. In addition, the National Animal Health Monitoring System has provided baseline data on emerging disease analysis and assessment. In France, the Central Service for Survey and Statistical Studies, which runs economic surveys among a representative national sample of herds, has added specific questions regarding animal health issues (36).

In addition to farm animals, pets, zoo animals, and wildlife must be considered as sources of transmission and reservoirs for emerging diseases. For pets and zoo animals, tools similar to the ones proposed can be adapted because these animals are regularly seen by veterinarians. Wildlife can be a source of new farm animal or human diseases and is affected by many farm animal diseases (Table 1). Thus, all observations of health problems in wildlife can potentially contribute relevant information for human or domestic animal populations (37). However, the ability to closely monitor clinical signs is lacking. Death rate is the most feasible way to monitor wildlife health and has indeed
been the detection trigger of many emerging diseases (38). Testing sampled healthy animals for a set of diseases is another strategy, but few disease surveillance programs not targeted at specific diseases are in place (e.g., “marine mammal strandings” project in United Kingdom [39]). One of the key challenges remains to bring professional and amateur outdoorsmen to report wildlife health observations through an information system flexible enough to encompass all species and situations. New forms dedicated to wildlife with appropriate location (instead of client or farm) could be added to the information systems already adapted to several species (VetPAD and “emergences”). Alternatives such as monitoring risk factors for emergence (e.g., encroachment of habitats), as well as minimizing contact between domestic and wild species by good, on-farm biosecurity, could reduce the likelihood of new domestic animal or human diseases emerging from wildlife reservoirs. In all cases, approaches must seek to increase collaboration among wildlife and domestic animals health workers to break down traditional boundaries between fields.

Conclusion and Interest for Human Health

Much effort is being put into developing new tools to detect emerging diseases through veterinary practitioners. If successful, this effort will also define the “normal” clinical baseline for syndromes and rare diseases, allowing statistical confirmation that an atypical syndrome is emerging. In addition to building new information technologies, early disease identification with timely responses requires synergy across a group of partners, including those who traditionally interact in animal health management as well as in public health (40) and across geopolitical boundaries. Although human and animal worlds remain fairly separated, initiatives are narrowing this separation. For instance, integration of emerging animal disease surveillance systems with those in the human arena is proposed in the UK’s “RADAR” veterinary surveillance information management system (41). Furthermore, during the “emergences” test phase, the Health National Institute agreed to cooperate in the event an animal issue with potential public health implications was identified. Finally, the most relevant challenge is to promote joint human-animal projects concerning potentially common emerging diseases, such as the avian-porcine-human influenza complex. Effective combination of such emerging disease surveillance systems would result in earlier identification of potential issues, providing opportunity for quicker response.

Acknowledgments

We thank the Centers for Epidemiology and Animal Health’s Center for Emerging Issues; the Institut National de la Recherche Agronomique group “Épidémiologie et Risques Emergents” (EpiEmerge); Prylos (Paris, France) and Link’Age (Clermont-Fd, France); the practicing veterinarians who tested the information systems and gave constructive comments; and anonymous reviewers who helped us improve the manuscript.

Funding for research on VetPAD was provided by the Ministry of Agriculture and Forestry (MAF) of New-Zealand, and Schering Plough Animal Health. Developmental work was conducted by a team at Massey University’s EpiCentre, led by Lachlan McIntyre.

Funding for the RSVP-A was provided by the US Department of Homeland Security through the Kansas Department of Animal Health and the US Department of Agriculture, Veterinary Services.

Sandia National Laboratories designed and developed the original RSVP surveillance system, a system with applications in both human and animal disease surveillance.

Sandia National Laboratories and New Mexico State University/New Mexico Department of Agriculture are primary collaborators, along with Kansas State University, on the RSVP-A project that has been jointly pursued since 2003. The opinions on RSVP-A in this article do not necessary reflect all of the project’s collaborating parties.

Dr Vourc’h obtained her veterinary degree from the National Veterinary School of Alfort (ENVVA) and her PhD in ecology and evolutionary biology in Montpellier (France). Her current research interests include detection and analyses of emerging animal diseases and the epidemiology and ecology of tickborne diseases.

References

The AETA supports the FDA guidelines as stated in the Animal Medicinal Drug Use Clarification Act of 1994 [AMDUCA]. More information about this topic can be found at http://www.avma.org/scienact/amduca/amducal.asp.
Triennial Reproduction Symposium

The Triennial Reproduction Symposium will be held in Minneapolis on Sunday, July 9 from 8:00 am to 5:30 pm, immediately before the ADSA/ASAS annual meeting. Topics include:

1. Minisymposium I. Follicle and oocyte – 3 speakers on The dominant follicle, Cytoplasmic maturation, and Meiotic maturation of oocytes. (M. Lucy, University of Missouri; A. Watson, University, Western Ontario; F. Richard, Laval University)

2. 2006 Casida Award for Graduate Education. To Be Announced.

3. The USDA-NRI grants program in Reproduction – Panel discussion on the balance between translational and basic research funding. (M. Mirando, USDA; J. Reeves, Washington State University; W. Thatcher, University of Florida)

4. Techniques sessions on: RNAi (R. Anthony, Colorado State University); Microarrays (G. Smith, Michigan State University); Statistical power calculations (R. Lenth, University of Iowa) and Analysis of binomial and categorical data (R. Quaas, Cornell University).

5. Minisymposium II. Reproductive immunology – 3 speakers on Interface with the endocrine system, The enigma of the fetal allograft, and Sperm and seminal plasma and the female immune system.(P. Hansen, University of Florida; C. Davies, Washington State University; S. Robertson, University of Adelaide)

Registration is $100; $30 for students. Details are at [http://adsa.asas.org/meetings/2006/](http://adsa.asas.org/meetings/2006/)

Obituary

Dr. Craig Keith Thompson

Age 56, passed away on April 25, 2006, at his home in Edmonds, WA. He was born in Mt. Pleasant, MI, and graduated from Barryton High School in 1967, received his BS in Pharmacy from Ferris State College in 1972 and Doctor of Veterinary Medicine from MSU in 1976. He practiced mixed animal medicine in Big Rapids and Clare, MI before returning to MSU to complete a residency and later to obtain board certification in theriogenology. From 1982-1995 Craig provided a reproduction specialty practice throughout Michigan. After moving to Edmonds, WA in 1996, Craig obtained a masters in Acupuncture and Oriental Medicine. Craig is survived by his wife, Janice, and three sons, Jon Barry, Joshua and Joseph.
The world’s first non-refrigerated, non-animal origin brand of Embryo Transfer media!

Bioniche Animal Health USA proudly introduces another major innovation for embryo transfer and reproduction specialists: SYNGRO™ Holding, an embryo holding medium in a non-refrigerated, non-animal origin formulation.

The latest research indicates that the embryo has unique needs, including ideal pH and osmolarity. SYNGRO Holding addresses these needs with a formula that specifically eliminates bovine serum albumin (BSA) and all other materials of animal origin.

Importantly, the product does NOT require refrigeration, thus it eliminates reliance on costly refrigerated freight services. It also provides practical storage and handling benefits for the practitioner.

SYNGRO Holding represents the first in a complete line of technologically-advanced media that also offer practical and economic advantages to all reproductive specialists due to their non-refrigerated format.

Practical Benefits with Every Use

- Eliminates concerns regarding animal-based formulas
- Eliminates costly second day air shipments of refrigerated media
- Eliminates the ‘down-time’, waiting for media to warm to room temperature with each use
- Eliminates wastage of ‘re-warmed’ refrigerated medium; store extra SYNGRO medium at room temperature
- Eliminates need to change current procedures - just substitute for any holding medium now used

All SYNGRO™ brand media bearing this symbol are made with a non-animal origin formulation from Bioniche.

SYNGRO Holding

Product Codes:
- ESM024 -50ml
- ESM224 -20ml
- ESM824 -8ml x 6 vials

For more information, contact your reproduction product distributor or Bioniche Animal Health USA, Inc. at 1-800-335-8595. Visit www.Bioniche.com