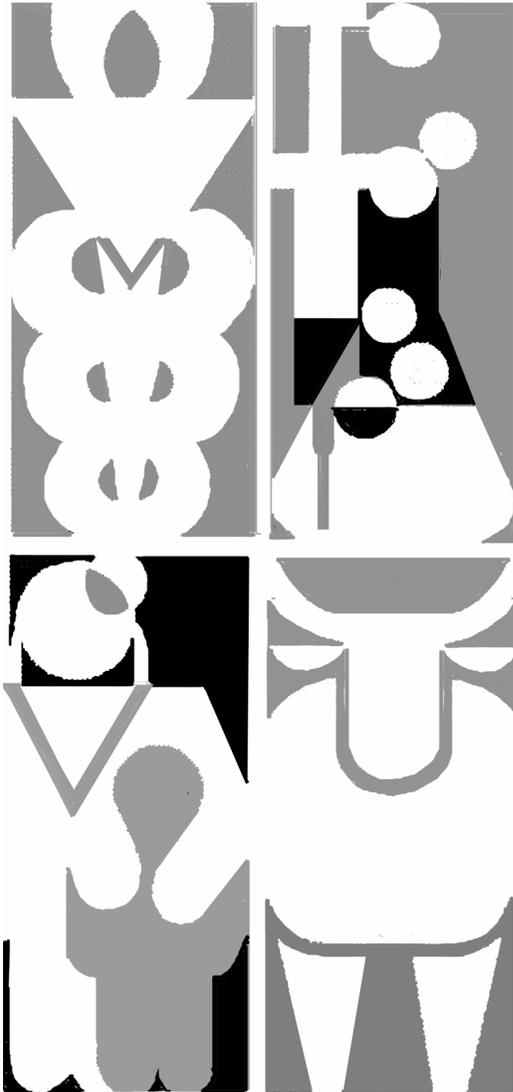


# NEWSLETTER



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AVEPM is committed to developing and fostering the academic base for veterinary epidemiology and preventive medicine

Visit the AVEPM Web site at...

<http://www.cvm.uiuc.edu/avepm/>

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**Important:** Please take a moment to look at your mailing label on the envelope. The number (e.g. 04) in the lower right corner of the mailing label is the last year for which a dues payment has been recorded. Membership dues are \$20 US annually and are payable to AVEPM on January 1 of each year. If, for example, your dues payment year is indicated to be 03, then to become current you should remit two years dues or \$40. The AVEPM Constitution and By-Laws require that members two years in arrears in payment of dues shall be dropped from membership (Article VI)

# ASSOCIATION NEWS

## AVEPM Education Committee Update

The continuing education committee of the Association for Veterinary Epidemiology and Preventive Medicine is co-sponsoring two Basic Epidemiology courses for the USDA in 2005 as part of their veterinary services career program. Fifteen Animal Health Technicians participated in a four-day course in April in Raleigh, North Carolina. During this course, the Animal Health Technicians were introduced to a new, CD-ROM-based course review, which is being designed for them. Participants were delighted with the opportunity to use these review materials as they are being developed.

Twenty-nine Veterinary Medical Officers, including several international participants will gather in Fort Collins, CO to attend a one-week Basic Epidemiology course in July, 2005. In August of 2004, a new initiative, which involved the creation of on-line course materials under a contract from USDA, was implemented. A CD-ROM-based Basic Epidemiology course was created as the first phase of a two-phase hybrid training course. Course participants will complete the web-based portion to prepare for the one-week traditional face-to-face training program in July. The Basic Epidemiology courses stress the application of epidemiological principles to solve population-based animal health problems.

An additional educational course will be held in Fort Collins, CO in July, 2005. A basic veterinary epidemiology and risk analysis course will be taught in Spanish for participants from Spanish-speaking countries in Central and South America.

Mo Salman

## How to Contact AVEPM

Applications for membership, accompanied by a check for \$20 payable to the AVEPM, should be sent to:

Dr. James Thorne, Secretary/Treasurer, AVEPM  
3310 Cheavens Rd  
Columbia, MO 65201-9383

Phone: 573/443-0157  
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Membership application forms are available online at:

<http://www.cvm.uiuc.edu/avepm/>

Newsletter items can be sent to:

Dr. Ronald D. Smith, Newsletter Editor, AVEPM UI  
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Current and past issues of the AVEPM Newsletter are also available online at:

<http://www.cvm.uiuc.edu/avepm/>

## NEWS & COMMENTARY

### **Aircraft Cabin Ventilation Influences the Transmission of Diseases In-Flight**

March 10, 2005  
Lancet

Mark Gendreau (Lahey Clinic Medical Centre, MA, USA) and colleagues reviewed data from studies looking at the transmission of diseases during commercial air travel. They found that while commercial airlines are a suitable environment for the spread of pathogens carried by passengers or crew, the environmental control systems used in commercial aircraft seem to restrict the spread of airborne pathogens. Proper ventilation within any confined space reduces the concentration of airborne organisms, with one air exchange removing 63% of airborne organisms suspended in that particular space. Computer models of data from an in-flight tuberculosis investigation reveal that doubling ventilation rate in the cabin reduced infection risk by half.

Investigations of in-flight transmission of tuberculosis suggest that the risk of disease transmission to other symptom-free passengers within the aircraft cabin is associated with sitting within two rows of a contagious passenger for a flight time of more than 8 hours. This is believed to be relevant to other airborne infectious diseases. However, in one outbreak of SARS, passengers as far as seven rows away from the source passenger were affected.

The review states that disinsection of aircraft - spraying before landing to kill insects - and vector control around airports, as well as immunisation, seem to have been effective in non-endemic areas. However, although International Health regulations recommend disinsecting aircraft travelling from countries with malaria and other vector-borne disease only five countries currently do so (Australia, Caribbean, India, Kiribati, and Uruguay). The authors believe the aviation industry and medical community should educate the general public on health issues related to air travel and infection. They write that good hand hygiene has been proven to reduce the risk of disease transmission, and air travellers should make it part of their normal travel routine.

Dr Gendreau comments: "Because of the increasing ease and affordability of air travel and mobility of people, airborne, food-borne, vector-borne infectious diseases transmitted during commercial air travel are an important public health issue. Heightened fear of bioterrorism agents has cased health officials to re-examine the potential of these agents to be spread by air travel. The SARS outbreak of 2002 showed how air travel can have

an important role in the rapid spread of newly emerging infections and could potentially even start pandemics. In addition to flight crew, public health officials and health care professionals have an important role in the management of infectious diseases transmitted on airlines and should be familiar with guidelines provided by local and international authorities."

### **Kansas State to Study RFID for Livestock Disease Control**

Kansas State University is evaluating radio frequency identification (RFID) technology as a possible solution for helping to eliminate the spread of livestock-borne diseases. KSU's Animal Identification Knowledge Laboratory will assess both low frequency and high frequency radio tracking technology. The lab will do a comparative study on UHF and LF technology in an effort to educate industry users on the efficiency of RFID for livestock identification and traceability.

### **U.S. Meat and Poultry Industry Gratified by CDC Data Showing Declines in Foodborne Illness**

(see CDC-MMWR report in "Suggested Reading" section below)

April 14, 2005  
American Meat Institute (AMI)  
Washington, DC

Continuing reductions in foodborne illnesses in the United States announced by the Centers for Disease Control and Prevention (CDC) today correspond to continuing reductions in pathogenic bacteria on meat and poultry products, according to the American Meat Institute Foundation (AMIF).

CDC today said that infections from E. coli O157:H7 are down 42 percent since the baseline years of 1996-1998. Over the same time period, USDA has observed a sustained decline in the positive samples of E. coli O157:H7 in its ground beef sampling program. Just last month, USDA announced a 43.3 percent drop in positive E. coli O157:H7 tests in the ground beef samples tested by USDA. CDC said today that the U.S. has achieved its Healthy People 2010 goal of less than one E. coli O157:H7 infection per 100,000 people five years ahead of schedule.

CDC also said that listeriosis cases declined 40 percent since the baseline years. This corresponds to a sustained decline in the incidence of *Listeria monocytogenes* on ready-to-eat meat and poultry products, according to USDA data.

## **CDC Readies for 21st Century Health Threats**

The Centers for Disease Control and Prevention has taken a landmark step in reorganization. The reorganization, which includes the creation of four new coordinating centers and two national offices, will help CDC more efficiently and effectively deal with 21st-century health threats.

Following notification by the Health and Human Services Secretary Mike Leavitt, the Congress accepted CDC's new strategic orientation, making it official today. "Transforming our healthcare system to help Americans live longer, healthier and better lives is our challenge in the 21st Century," Secretary Leavitt said. "CDC has taken a bold step to face that challenge. CDC is transforming itself by breaking down artificial walls between its scientists, eliminating redundancies, and strengthening collaboration with partners."

The new structure includes the creation of four new coordinating centers and two new national centers. The new coordinating centers are:

- The Coordinating Center for Environmental Health and Injury Prevention
- The Coordinating Center for Health Promotion
- The Coordinating Center for Infectious Diseases
- The Coordinating Center for Health Information and Services
- The National Center for Public Health Informatics, which applies computer and information sciences to achieve public health outcomes and is vital in translating scientific data into usable information.
- The National Center for Health Marketing, which will use research and science to develop messages that help Americans make sound health decisions.

CDC also announced the selection of Dr. Henry Falk as the director of the Coordinating Center for Environmental Health and Injury Prevention; Dr. Donna F. Stroup as the director of the Coordinating Center for Health Promotion; and Dr. Mitchell L. Cohen as the director of the Coordinating Center for Infectious Diseases.

"CDC is now a 21st-century agency ready for the challenges of 21st-century health threats," said CDC Director Dr. Julie Gerberding. "Any corporation or large organization will tell you, realignments are typically tough to achieve. The exciting part is the payoffs we're

already seeing as we emerge from this initiative as a modern, flexible, goal-oriented agency."

The new structure better aligns CDC to achieve these goals. With the new coordinating centers, CDC's scientists are better able to share their expertise to solve public health problems, emergencies or not; streamline the flow of information for leadership decision-making; and better leverage the expertise of partners.

"Sound science and a functional organizational structure at CDC are vital to the credibility of the entire public health system," explained George E. Hardy, Jr., MD, MPH, executive director of the Association of State and Territorial Health Officials. "The importance of that credibility and the vital contributions of each of the three partners – local, state, and federal – in the public health system, was dramatically demonstrated earlier this year in the reallocation of scarce influenza vaccine to high risk individuals. This was real public health in action."

When the nation faced a sudden flu vaccine shortfall this flu season, CDC, sister agencies and the public health community quickly cataloged hundreds of response tasks that needed doing and speed was critical to nearly every one of them. Working together on this shortfall provided important lessons to prepare for the possibility of an avian influenza outbreak.

The agency is changing to meet 21st century challenges such as new technology, complex information flow, and rising health-care costs. Change also includes modernizing its management and accountability to realize tangible savings that can go directly to science and programs that affect people's health. For example, CDC reallocated more than 600 open positions from administrative tasks to direct research and program activity positions – such as epidemiologists, medical officers, and laboratorians. CDC also reduced administrative costs by more than \$83 million and made these resources available for frontline projects that directly benefit health. Finally, CDC will save \$35 million over 7 years and improve its customer service by consolidating 40 separate information hotlines into a single hotline.

CDC's job is to protect lives and improve health. CDC's two overarching goals are to prepare for terrorist health threats and, at the same time, protect the health and quality of life across the entire lifespan of all Americans – from reducing perinatal problems such as low birth weight to preventing heart disease and stroke in older Americans. Goals for the modernizing of CDC emphasize specific activities that will truly protect people's health at every stage of life. Goals also focus on improving health and safety in the places people live, work, and play. CDC's focus on preparedness ensures

the health and safety of Americans against old and new threats whether natural or manmade.

"Today's milestone means we can now move from planning and trying out ideas to settling into the new way of doing business," CDC's Chief Operating Officer Bill Gimson said. During the last major transformation a quarter century ago, CDC had 4,000 employees and a budget of approximately \$300 million. Today, CDC's combined workforce (employees and contractors) is approximately 15,000 with a budget of about \$8 billion.

"The compassionate, scientific core of CDC remains the same. The changes add greater agility and accountability," said Gerberding. "We have transformed CDC into a learning organization. We learn as we go and what we learn we apply quickly. What CDC has learned is paying dividends today and will continue to as we confront the health threats of the future."

### **Goose Poop could be Superbug Soup, Researchers Caution**

April 29, 2005  
Globe and Mail/ Canadian Press  
A25  
Helen Branswell

Research, to be published in the June issue of Emerging Infectious Diseases was cited as finding that Canada geese can pick up and shed antibiotic-resistant pathogens, potentially making them an effective winged delivery network for so-called superbugs.

Dr. Scott Weese, a veterinarian who specializes in antimicrobial resistance at the Ontario Veterinary College in Guelph, was quoted as saying, "If you have a multidrug-resistant salmonella being shed by a horse in Georgia, and a goose happens to eat in that pasture and then fly up to Kentucky or Ontario, then maybe you can get quick dissemination of these bugs."

The story explains that the paper reports on the work of U.S. researchers who tested four flocks of Canada geese to see if the birds could acquire and shed antibiotic-resistant E. coli. Sampling was done by collecting droppings and swabbing bird butts.

The non-migratory flocks -- from Georgia and North Carolina -- had habitats representing different types of land use: recreational (a park), agricultural and industrial. One of the North Carolina flocks had a disturbing habit of loitering by a swine waste lagoon. Pig farms, like other livestock-rearing operations, can use high levels of antibiotics to tamp down diseases.

When samples from that flock were run through laboratory testing, many of the isolates were found to

harbour antibiotic-resistant strains of E. coli. Furthermore, 72 per cent of those isolates were resistant to more than one antibiotic; 48 per cent were resistant to three or more drugs.

Rates of antibiotic-resistant isolates were much lower in birds in another agricultural setting not close to a lagoon. The park birds tested clean.

### **Validation and Certification of Diagnostic Tests: OIE**

A ProMed Mail posting

The diagnostic methods for specific animal diseases are described in the OIE Manual of Diagnostic Tests and Vaccines for Terrestrial Animals and the Manual of Diagnostic Tests for Aquatic Animals. However, these manuals do not recommend specific diagnostic kits that can be used by Member Countries. Consequently the existence of several such kits has led to possible confusion in some Member Countries, which are not comfortable to choose approved diagnostic kits for trade or surveillance purposes.

In accordance with OIE missions to control animal diseases and to harmonise animal diseases control methods, including the harmonisation of diagnostic methods, the OIE International Committee adopted during the 71st General Session in May 2003 Resolution No. XXIX, endorsing the principle of validation and certification of diagnostic assays (test methods) for infectious animal diseases by the OIE. The Resolution asked the Director General of the OIE to set up specific procedures to be followed for the validation and certification of diagnostic assays, based on the fundamental concept of 'Fitness for Purpose'.

The OIE has, with the technical support of the OIE Collaborating Centres of Vienna (Austria) and Fougères (France), finalised a formal procedure for the validation and certification of diagnostic kits. This procedure is open to both public and private laboratories producing diagnostic kits and which are desirous of having those kits approved and registered at the OIE.

Assessment of the diagnostic kit will be carried out by independent experts and the results submitted for consideration by the Biological Standards Commission before being endorsed by the OIE International Committee during the annual General Session. This procedure may last approximately for 135 days for each application. If the diagnostic test is validated and certified by the OIE, the producer would be authorised to use the OIE logo on any document or equipment associated with the test.

For more information, see:

[http://www.oie.int/VCDA/eng/en\\_background\\_vcda.htm](http://www.oie.int/VCDA/eng/en_background_vcda.htm)

[This development should be warmly welcomed by the international animal health community. Though rather complex, a similar OIE-guided procedure for the approval of animal vaccines deserves consideration. - Mod.AS]

## **USDA's BSE Test Protocols Spur Worldwide Rumblings**

June 28, 2005  
Meatingplace.com  
Pete Hisey

Taiwan snapped its border shut to U.S. beef hours after Agriculture Secretary Mike Johanns announced that a false-negative test for bovine spongiform encephalopathy had been confirmed as positive by a British laboratory. Japan's initial reaction was moderate, but after discovering more details about the evidently bungled testing protocols USDA has used, demanded full records of the tests that took place last fall.

Meanwhile, leading U.S. newspapers published scathing attacks on USDA for, among other things, mingling the parts of the suspect animal with parts from other animals from different herds; freezing the remains, which makes detection more difficult; and failing to order the most definitive test on the market, the Western blot test.

But the blockbuster came from the New York Times, which reported on Sunday that USDA had actually received a positive result from an experimental test protocol, but chose not to report that result. "Until Friday, it was not public knowledge that an 'experimental' test had been performed by an Agriculture Department laboratory on the brain of a cow suspected of having mad cow disease, and the test had come up positive," the newspaper reported. USDA claimed that this result was never reported to Washington from the laboratory in Ames, Iowa.

Taiwan reinstates beef ban, Japan demands details  
Taiwan Premier Frank Hsieh immediately ordered an end to imports of American beef upon hearing the report about the positive test of the animal, now believed to be a beef animal from Texas. He said, however, that existing supplies of U.S. beef could continue to be sold.

Members of Taiwan's parliament immediately launched a lawsuit against the country's health department chief, Hou Sheng-Mao, demanding that he remove the U.S. beef from the marketplace.

"Hou was suspected of using his authority to benefit U.S. beef importers and markets," one legislator said. Another demanded that Hou resign immediately.

If it turns out that the latest reported case of BSE involves an animal born in the U.S., Japan says "the planned resumption of U.S. beef imports will likely be delayed," Asia Pulse reported Monday.

Japan plans to demand full details about the animal and USDA testing procedures, the news service said. Japanese officials had initially said that the discovery made no difference in their deliberations, since they expected at least a handful of cases would be found eventually in the U.S. herd.

In an Associated Press interview, Dr. John Clifford, USDA's chief veterinarian, said that test results were delayed because the animal in question was misidentified by breed, perhaps due to feces discoloring its hide, and its body parts were mixed with remains of other cattle. When USDA initially tried to trace the animal, the farmer said that it couldn't be his, because he raised a different breed of cattle. USDA believes it has now identified the animal's home herd and is using DNA testing on presumed herd mates to confirm that.

Johanns said that in light of the testing failure, USDA will consult with international and U.S. authorities to develop a more effective set of protocols, probably involving the Western blot test to settle any ambiguous situations. He also said that in light of the discovery of what is presumed to be a native animal, the department will reconsider its plan to scale back surveillance testing of high-risk animals. Several critics have suggested that USDA begin checking younger, asymptomatic cattle as well as older, symptomatic animals to get a true picture of the prevalence of BSE in the herd.

Johanns said that Inspector General Phyllis Fong ordered the retests with the Western blot three weeks ago without his knowledge, and he was unaware of the testing until it was underway. The day before the initial positive result was reported, on June 9, Johanns was asked by Meatingplace.com why the department refused to use the Western blot. Johanns replied that, despite the previous policy that called the immunohistochemistry (IHC) test the "gold standard" in BSE testing, there are "two gold standards," but USDA had decided to go with IHC testing for consistency's sake. In December 2003, when the first U.S. case of BSE was detected, USDA used the Western blot to confirm it.

# MEETINGS, WORKSHOPS & COURSES

See the AVEPM Web site at <http://www.cvm.uiuc.edu/avepm/> for details and the most current listings.

## CRWAD 2005 Meeting

The 2005 CRWAD meeting will be held in St. Louis, Missouri, USA, December 4-6, Sheraton Westport Hotel and Lakeside Chalet. The meeting will begin with the Researchers Reception and first Poster Session, Sunday evening. Presentations and the business meeting will conclude by 1 PM Tuesday afternoon, December 6.

FOR THOSE WHO NEED A UNITED STATES VISA IN ORDER TO ATTEND THE CRWAD MEETING PLEASE START YOUR APPLICATION PROCESS NO LATER THAN EARLY JUNE.

DEADLINE FOR ELECTRONIC ABSTRACT RECEIPT - August 26, 2005.

Hotel information and the sleeping room reservation form may be found on the following webpage:  
[http://www.cvmbs.colostate.edu/microbiology/crwad/SheratonWestPort\\_HotelChalet.htm](http://www.cvmbs.colostate.edu/microbiology/crwad/SheratonWestPort_HotelChalet.htm)

CHECK LIST REQUIREMENTS FOR ABSTRACT FORMAT AND SUBMISSION and the ON-LINE FORM are available on the CRWAD website at:  
<http://www.cvmbs.colostate.edu/microbiology/crwad/abstract.htm>  
[http://www.cvmbs.colostate.edu/microbiology/crwad/conference/formcrwad\\_05.cfm](http://www.cvmbs.colostate.edu/microbiology/crwad/conference/formcrwad_05.cfm)

REQUIRED: 1) Submit the on-line form and 2) e-mail only one copy of your abstract as a PC (not a Mac) Word document attachment.

FAILURE to submit the on-line form will omit your author information from the index of the Proceedings and your abstract title from the Program.

ALL oral presentations must be PowerPoint presentations.

CREDIT CARDS (Only Visa and MasterCard) are accepted.  
<http://www.cvmbs.colostate.edu/microbiology/crwad/credit.htm>

Sincerely, Robert P. Ellis, Executive Director

## CRWAD 2006 Meeting

From: Robert P Ellis <Robert.Ellis@ColoState.EDU>

Notice: 2006 Future CRWAD Meeting - Marriott, Chicago, IL (downtown magnificent mile)  
[http://marriott.com/property/propertypage/CHIDT?ptnr=thayer\\_chidt\\_banner](http://marriott.com/property/propertypage/CHIDT?ptnr=thayer_chidt_banner)

## Beginning and Intermediate/Advanced Courses in Epi Info

Emory University's Rollins School of Public Health and CDC's Office of Workforce and Career Development will cosponsor Epi Info training August 10--12, 2005, for beginning level students and August 15--17, 2005, for intermediate/advanced level students. Courses will be held at Emory University; tuition is charged.

These courses are designed for practitioners of epidemiology and computing who wish to develop software applications using Epi Info for Windows. The beginning level course will cover MakeView, Analysis, Enter, Epi Map and Epi Report. The intermediate/advanced level course will cover importing and converting other data formats; creating relational databases; advanced check-coding and use of Epi Info functions; advanced analysis (e.g., linear regression, logistic regression, Kaplan-Meier method, Cox proportional hazards, complex sample frequencies, tables and means); special topics regarding Epi Map and Epi Report; and issues related to students' own projects.

Additional information and applications are available from Emory University, Rollins School of Public Health, International Health Department, 1518 Clifton Road, N.E., Room 746, Atlanta, Georgia, 30322; fax 404-727-4590; website  
<http://www.sph.emory.edu/epicourses/>  
[e-mailpvaleri@sph.emory.edu](mailto:e-mailpvaleri@sph.emory.edu).

## POSITIONS

Space does not permit a listing of the many opportunities for graduate study and employment. Please visit the AVEPM Web site at <http://www.cvm.uiuc.edu/avepm/> for the most current listings.

## SUGGESTED READING

### CRWAD 2005 Newsletter Online

From: Robert P Ellis <Robert.Ellis@ColoState.EDU>

The 2005 CRWAD Newsletter is available on our CRWAD Web page:

<http://www.cvmbs.colostate.edu/microbiology/crwad/newlet05.htm>

### Brain Tissue Fragments in Jugular Vein Blood of Cattle Stunned by use of Penetrating or Nonpenetrating Captive Bolt Guns

April 2005  
Journal of Food Protection Volume 68, Number 4, p. 882-884

#### Abstract:

Although the incidence of bovine spongiform encephalopathy in cattle continues to decline in the United Kingdom, it remains important to maintain vigilance of all potential routes of transmission of infection to humans. Initial studies have demonstrated a potential risk of carcass contamination with brain tissue following the use of captive bolt gun stunning in cattle. The objective of this study was to further explore these initial findings particularly in regard to captive bolt guns currently in use in the United Kingdom. Brain tissue fragments or elevated levels of a marker protein for brain tissue were detected in venous blood samples from 4% (95% confidence interval, 1.6 to 9.8%) of cattle stunned by penetrating captive bolt gun and from 2% (95% confidence interval, 0.6 to 7%) of those stunned by nonpenetrating captive bolt gun.