**One Health News Bits**

**3- 21-12**

[**Researchers agree to temporary halt of H5N1 research**](http://www.voanews.com/english/news/health/Bird-Flu-Researchers-Postpone-Work-Amid-Bioterrorism-Concern-137816303.html)

Researchers at the University of Wisconsin and Erasmus University Medical Center in the Netherlands have agreed to a temporary stop in their H5N1 research due to bioterrorism concerns. The groups separately developed a form of the virus that easily spreads via airborne transmission, making it much more contagious than the version currently in birds. During the 60-day stop, the scientific community and governments will assess whether continuing the research is safe. (1/21)

[**Raw milk suspected in human brucellosis case**](http://www.berkshireeagle.com/ci_19790322)

Public health officials are investigating a Massachusetts dairy that sells raw milk after the dairy's owner was diagnosed with the brucellosis, which is characterized by flulike symptoms that can progress to severe disease in the central nervous system, bone and heart. The dairy's herd has been vaccinated for brucellosis, according to the owner. (1/23)

[**Understanding Creutzfeldt-Jakob disease**](http://www.cbc.ca/news/technology/story/2012/01/20/f-faq-mad-cow-bse.html)

Scientists believe that bovine spongiform encephalopathy is a variant of the sheep disease scrapie that was introduced into bovine feed. British scientists discovered the disease in 1986 after cattle died of suspicious causes. This article presents facts about BSE and its human variant, Creutzfeldt-Jakob disease, which has infected 222 people in 12 countries as of October 2010. (1/20)

[**Mercury is found at higher levels in Northeastern birds**](http://www.nytimes.com/2012/01/24/science/study-finds-mercury-in-more-northeastern-bird-species.html)

A recent study reports that methylmercury, the neurotoxic organic breakdown product of mercury from industry, is present in birds in higher concentrations than previously thought and at locations previously thought to be unaffected. "The birds not only act as sentinels to what is happening in nature, but the results of these studies propose hypotheses for effects that have not yet been identified for people," said Joanna Burger, a behavioral ecologist who has studied mercury levels in animals. (1/23)

[**FDA and AVMA work together on antibiotic use in animal agriculture**](http://www.foodsafetynews.com/2012/01/qa-with-michael-taylor-part-ii-antibiotics-carbendazim-consolidation/)

The FDA hopes to avoid a long, complicated legal process to relabel medically significant antibiotics to negate their use as growth promoters in the agricultural industry, said FDA deputy foods commissioner Michael Taylor. The FDA and AVMA are working together to ensure public health while keeping antibiotic decision-making for animals squarely in the hands of veterinarians. (1/24)

[**Pets and owners benefit from mutual exercise**](http://www.washingtonian.com/articles/health/22464.html)

Pets and their owners both experience less stress and have higher levels of oxytocin, a hormone associated with good feelings, after exercising together, according to Sandra Barker, director of the Center for Human-Animal Interaction. Several resources are available to help owners enhance their workout with pets, such as dog-and-owner running clubs and fitness videos with tips on how to intensify dog walks. (1/23)

[**Researcher says engineered avian influenza virus isn’t lethal**](http://www.bloomberg.com/news/2012-01-25/bird-flu-virus-engineered-in-wisconsin-lab-isn-t-fatal-scientist-says.html)

The airborne version of highly pathogenic avian influenza strain H5N1 engineered at the University of Wisconsin at Madison is not fatal and can be treated by currently available medicines, said Yoshihiro Kawaoka, professor of virology and the study's lead researcher. Kawaoka halted his research following an agreement reached with federal officials over bioterrorism concerns related to the altered virus, but he argues that more research is urgently needed. (1/25)

[**Red tide threatens marine life and poses public health risk**](http://www.nbcmiami.com/news/weird/Wildlife-Officials-Rescue-Manatee-With-Red-Tide-138048608.html)

Veterinarians at the Miami Seaquarium are treating two sea turtles and one manatee for nervous system problems caused by Karenia brevis, the algae responsible for red tide. The algae is more common on the Gulf coast of Florida, but officials do monitor Florida's Atlantic coast for the algae, which produce nerve toxins. (1/25)

[**Prion disease may be more mobile between species**](http://www.myhealthnewsdaily.com/2164-prions-brain-disease-spread-lymph.html)

Recent research found that there are higher concentrations of prions, the protein particles that can cause Creutzfeldt-Jakob disease, the human form of bovine spongiform encephalopathy, in spleen and lymph tissue than there are in brain tissue, raising the sobering possibility of a host of humans and animals that may be carrying the disease. Chronic wasting disease, also a prion disease, is decimating deer populations in the U.S., and although it's not thought to cross species, the possibility of human carriers is raised by the current research. (1/26)

[**AVMA tracks “One Health” news**](http://www.aardvarks2zebras.org/)

More than ever, veterinarians protect not only animal health, but the health of all the human beings on the planet. Understanding and addressing the issues created at the intersection of animal, human and environmental health is the concept of One Health. Stay up-to-date on the latest One Health news through AVMA's [Aardvarks to Zebras Web site](http://www.aardvarks2zebras.org/).

[**Scientists look for link between seal and dolphin deaths**](http://www.msnbc.msn.com/id/46175315/ns/us_news-environment/#.T1_EDPFrMTZ)

The recent rash of dolphin strandings and deaths along the New England coast has made officials and scientists question whether the problem is related to seal deaths that occurred recently in the same waters. Investigations have not yet identified the cause of the dolphin deaths, but the seals died from an influenza virus similar to one seen previously in birds, but not seals. (1/28)

[**Pythons have greatly reduced Everglades wildlife, study finds**](http://www.npr.org/2012/01/30/146088909/invasive-pythons-put-squeeze-on-everglades-animals)

Biologist Michael Dorcas found that wildlife populations in the Florida Everglades have greatly diminished, most likely due to predation by non-native pythons. Raccoons, possums, white-tailed deer and bobcats have decreased between 87% and 99% since the 1990s, Dorcas found. While officials think the government's recent ban on importing pythons is too late to help the Everglades, it may help prevent the species from gaining a foothold in other southern states. (1/30)

[**How viruses and prions evolve**](http://www.smartplanet.com/blog/savvy-scientist/improbable-evolution-how-life-beats-the-odds/291)

Biologists have long wanted to understand better the evolutionary mechanisms that enable species to occupy previously forbidden ecological niches — and the limitations on those mechanisms. Several recent discoveries highlight the importance of that work and provide at least some of the answers. (1/31)

[**Viruses might not be all bad**](http://www.cdispatch.com/robhardy/article.asp?aid=15391)

This article reviews biologist Nathan Wolfe's book "The Viral Storm: The Dawn of a New Pandemic Age," emphasizing the history of viruses jumping between humans and other species. The author points to new trends in studying viruses not only as a source of potential pandemics but also as a means to help humans fight other infections, a process he refers to as "virotherapy." (1/30)

[**Social media could augment food safety and help thwart terrorism**](http://www.foodqualitynews.com/Innovation/Social-media-could-enhance-foodborne-outbreak-detection-report)

Dr. Ryan Newkirk, a food-safety fellow at FSIS, examined how social media outlets such as Facebook and Twitter could be used to thwart food terrorism and promote food safety. In conjunction with current systems to track foodborne illnesses, incidental or intentional, social media could be used to track keywords related to medical problems such as diarrhea and vomiting, and use them to identify foodborne illnesses earlier. (1/30)

*Comparative Research News Bits*

3- 21-12

[**Penn scientists successfully treat retinis pigmentosa in dogs**](http://articles.philly.com/2012-01-25/news/30663366_1_corrective-genes-gene-therapy-healthy-genes)

Gene therapy research led by scientists at the University of Pennsylvania's School of Veterinary Medicine successfully treated retinitis pigmentosa in dogs, a genetic defect of the gene RPGR that causes blindness in few dogs but thousands of humans. "Every single abnormal feature that defines the disease in the dogs was corrected following treatment," said lead author and veterinary ophthalmologist William Beltran. The advance holds hope for helping humans afflicted with this type of blindness. (1/25)

[**Cleveland zoo orangutan gets contraceptive implant**](http://blog.cleveland.com/metro/2012/01/orangutan_at_cleveland_metropa.html)

Physician Judith Volkar and veterinarians at the Cleveland Metroparks Zoo implanted a contraceptive device in Kitra, a Bornean orangutan, this week. The device is intended for use in humans, and Tuesday's surgery marked the first time in North America that it has been implanted in an orangutan. (1/25)

[**Decreasing iron improves Alzheimer’s and Parkinson’s symptoms**](http://online.wsj.com/article/SB10001424052970204740904577192901072611524.html?mod=dist_smartbrief)

In a recent study, mice bred without tau protein, an iron-regulating protein, had elevated iron levels and exhibited symptoms of Alzheimer's and Parkinson's disease, both of which are associated with excess iron in human patients. The mice symptoms were completely reversed after a drug that reduces iron was given. Other metals, such as zinc and copper, may also play a role in brain diseases, the research found. (1/31)

[**New technique may help breed endangered species**](http://www.theage.com.au/national/breakthrough-on-test-tube-cubs-may-save-snow-leopard-20120202-1qvkf.html)

Australian researchers have created pluripotent stem cells, cells that differentiate into any type of body cell, from the ear tissue of endangered snow leopards. Similar processes have already been successful in mice and the northern white rhinoceros, though this is the first such success among felines. The research may lead to embryonic stem cell fertilization for endangered species, which introduces greater genetic variation. (2/3)

[**Canine cancer patients serve as models for personalized medicine**](http://online.wsj.com/article/SB10001424052970203315804577207252135374064.html?mod=dist_smartbrief)

Since dogs develop cancers that are similar to those founds in humans, many oncology researchers are using dogs in clinical trials to further develop personalized medicine, a treatment method using an analysis of cancer genes to create targeted therapies. Researchers hope the information learned from the canine trials will improve cancer treatments for pets and people. (2/7)

[**New cancer treatment using T-cells is successful in dogs**](http://www.foxnews.com/health/2012/02/07/new-canine-cancer-therapy-could-be-mimicked-in-humans/)

Researchers from the University of Texas MD Anderson Children's Cancer Hospital and Texas A&M University College of Veterinary Medicine tested a new cancer therapy in dogs whereby the animal's T-cells are removed and stored prior to chemotherapy and then reintroduced to the body. The replaced T-cells, unharmed by the chemotherapy, eradicated remaining cancer cells, improving the dogs' tumor-free status by nine months compared with chemotherapy alone. The FDA has given its approval for human trials. (2/7)

[**Gel speeds bone healing in animals**](http://onlineathens.com/local-news/2012-02-06/uga-stem-cell-discovery-could-help-bones-mend-faster)

Researchers at the University of Georgia Regenerative Bioscience Center helped design fracture putty, a gel-like substance fortified with mesenchymal stem cells that produce a bone-growth promoting protein that has been shown to cut fracture repair time from weeks to days in animal studies. The gel will likely be used in animals and people, and the Department of Defense, which funded the research, is interested in using it for soldiers in the field. (2/7)

[**Study will assess venom’s ability to protect heart attack patients**](http://www.twincities.com/allheadlines/ci_20105752)

A team of Mayo Clinic researchers has received a $2.5 million National Institutes of Health grant to study whether a peptide from snake venom can help protect against heart and kidney damage in heart attack patients. "The snake peptide is very effective in helping the kidney get rid of salt and water, so that the body does not become congested and overloaded. The peptide also prevents the heart muscle cell from dying," said cardiologist John Burnett. (3/5)

[**Horses are ideal model for human asthma studies**](http://wamu.org/news/12/03/07/virginia_tech_researchers_study_asthma_using_horses)

Virginia Tech professor and large animal veterinarian Virginia Buechner-Maxwell studies horses with an asthma-like condition called heaves to better understand human asthma. Horses are a good research species for respiratory disease because blood and respiratory secretions can be easily gotten, their treatment protocol and allergen exposure can be tightly controlled, and approval for studies is less difficult to obtain.  (3/7)

[**Cancer-fighting gene lowers obesity and increases longevity in mice**](http://consumer.healthday.com/Article.asp?AID=662469)

New research found that mice bred to have additional copies of the cancer-protective gene Pten, in addition to having less cancer than mice without the genetic alteration, also resisted obesity despite a high-fat diet and lived roughly 15% longer. Although human studies need to be done, scientists are already developing drugs that target Pten for cancer treatment. (3/6)

[**Vitamin E decreases bone density, mice study finds**](http://www.telegraph.co.uk/health/healthnews/9121828/Why-vitamin-E-pills-could-risk-weaker-bones.html)

Japanese researchers using mice specially engineered to have higher-than-normal bone mass found that giving them vitamin E decreased bone mass. The researchers are calling for human studies in light of the millions of people who take daily vitamin E supplements. (3/5)

[**Evidence of Epstein-Barr-like virus found in dogs with lymphoma**](http://www.sciencedaily.com/releases/2012/03/120312140252.htm)

Research from the University of Pennsylvania School of Veterinary Medicine found evidence of a virus similar to Epstein-Barr virus (EBV) in some dogs with lymphoma. EBV was previously thought to infect only humans, but scientists hypothesize that the approximately 15,000 years of cohabitation between dogs and people prompted the virus to adapt and infect some dogs. The research, done with Penn's Perelman School of Medicine, provides new avenues for studying the connection between EBV and lymphoma in humans. (3/12)

[**Scientists cure type 1 diabetes in mice**](http://denver.cbslocal.com/2012/03/09/cu-researchers-find-cure-for-type-1-diabetes-in-mice/)

University of Colorado researchers identified T-cells that attack the pancreas, causing most type 1 diabetes cases, and created a drug that fights those T-cells, effectively preventing the disease in mice. Additionally, the drug reversed the effects of diabetes in mice with the disease. Researchers will next move to gain FDA approval and begin human trials. (3/9)