**One Health News Bits**

12-17-12

\*[**Where will the next pandemic come from, and how can we stop it?**](http://www.popsci.com/node/64751/?cmpid=enews101812&spPodID=020&spMailingID=4848026&spUserID=MTEzOTczNzQ1NTUS1&spJobID=291606676&spReportId=MjkxNjA2Njc2S0)

A Dutch couple left the Netherlands in June of 2008 for an adventure vacation in Uganda, only to find that this would be their last trip together. Unwarned by the potential hazards of an African bat cave and a virus called Marburg, this case and others represent not isolated events but a pattern of the emergence of new human diseases from wildlife. (10/15)

<http://www.popsci.com/node/64751/?cmpid=enews101812&spPodID=020&spMailingID=4848026&spUserID=MTEzOTczNzQ1NTUS1&spJobID=291606676&spReportId=MjkxNjA2Njc2S0>

**[Down on the farm, species fight for existence](http://now.tufts.edu/articles/escape-farmageddon)**

One breed of livestock vanishes from the planet every month. Now halfway into its 20-year conservation campaign, the Swiss Village Farm Foundation (SVF) and Tufts University have collected more than 60,000 samples of genetic material from 21 of the target breeds of animals at risk in this diminishing dilemma. The Arapawa goats, an example of such a breed from New Zealand origin, is experiencing this decline, and SVF and Tufts have begun a project of DNA preservation. (10/17) <http://now.tufts.edu/articles/escape-farmageddon>

**[Wild animals are also susceptible to MRSA, study suggests](http://news.sciencemag.org/sciencenow/2012/10/antibiotic-resistant-bugs-go-wil.html?ref=hp)**

University of Iowa epidemiologist Tara Smith and her research team detected methicillin-resistant Staphylococcus aureus, also known as MRSA, in three out of 114 wild animals: a migratory shorebird called lesser yellowlegs and two Eastern cottontail rabbits. The researchers found that the rabbits carried community-associated MRSA strains while the shorebird had a hospital-associated strain. Smith said the infections could have been acquired from hospital waste or other "spillover events" from humans, but it remains unclear whether the wild animals could transmit the superbugs to humans or other animals. (10/18) <http://news.sciencemag.org/sciencenow/2012/10/antibiotic-resistant-bugs-go-wil.html?ref=hp>

**[U.S. veterinarian devoted to Cameroon’s elephants](http://allafrica.com/stories/201210181135.html)**

Veterinarian Mike Loomis spends two months every year in Cameroon, sedating and placing tracking collars on elephants. Chief veterinarian at the North Carolina Zoological Park and a faculty member at North Carolina State University's College of Veterinary Medicine, Dr. Loomis implemented and now oversees a conservation project aimed at saving elephants by reducing conflict between the species and humans. Dr. Loomis and colleagues from the Cameroon Ministry of Forestry and Wildlife, the World Wildlife Fund and the U.S. Fish and Wildlife Service collect data to understand how elephants use the landscape and develop land-use protocols that protect them while giving people nonviolent means of deterring the elephants.  (10/17) <http://allafrica.com/stories/201210181135.html>

[**Texas feral swine pose infectious disease risk for livestock, humans**](http://southwestfarmpress.com/management/webinar-focus-risks-feral-hog-diseases-texas)

An estimated 2 million feral swine are roaming Texas, and they can transmit infectious diseases to other animals and, in some cases, to humans. Biologists are concerned about several diseases, including pseudorabies, foot-and-mouth disease and brucellosis. A webinar is being hosted at the Texas A&M AgriLife Extension Service in November to address the issue. (10/23) <http://southwestfarmpress.com/management/webinar-focus-risks-feral-hog-diseases-texas>

[**Petco’s turtle collection tries to curb salmonella outbreak**](http://www.khou.com/community/blogs/animal-attraction/Animal-Attraction---175378031.html)

Petco is offering to take in turtles of all sizes from consumers as part of a program to help curb a salmonella outbreak that has affected 219 people in 34 states. Of those who contracted one of the three strains of salmonella involved in the outbreak, 73% of them had contact with turtles, most smaller than 4 inches, prior to becoming sick. The outbreak occurred despite the FDA's ban on the sale and distribution of turtles with carapaces less than 4 inches long, which was put in place in 1975. (10/23) <http://www.khou.com/community/blogs/animal-attraction/Animal-Attraction---175378031.html>

[**New exercise program pairs furry workout partners with people**](http://www.washingtonpost.com/lifestyle/wellness/thank-dog-bootcamp-thats-notdrillsergeantsbarking/2012/10/23/407f834c-187e-11e2-9855-71f2b202721b_story.html)

Thank Dog! Bootcamp is an exercise program geared toward dogs and owners that offers people a chance to slim down with their pets while getting obedience training for their furry workout buddies. The hourlong classes include cardio, strength training and obedience training. (10/23) <http://www.washingtonpost.com/lifestyle/wellness/thank-dog-bootcamp-thats-notdrillsergeantsbarking/2012/10/23/407f834c-187e-11e2-9855-71f2b202721b_story.html>

[**Scientists work to crack Lyme disease’s genetic code**](http://www.sciencedaily.com/releases/2012/10/121025174140.htm)

Researchers at The University of Texas Health Science Center at Houston are working to identify the factors that explain the virulence of Borrelia burgdorferi, the spirochete that causes Lyme disease, which affects animals and an estimated 30,000 people in the U.S. per year. Using advanced technology, the team is testing the pathogen's 1,739 genes in an effort to find the ones responsible for its ability to spread so readily. The findings are expected to help develop vaccines, diagnostic tools and treatments. (10/25)

<http://www.sciencedaily.com/releases/2012/10/121025174140.htm>

[**12 Pa. deer farms under quarantine due to CWD threat**](http://blog.pennlive.com/pa-sportsman/2012/10/pennsylvanias_chronic_wasting_disease_quarantine_list_grows_to_12_deer_farms.html)

Earlier this month, Pennsylvania became the 23rd state with documented chronic wasting disease after a dead deer tested positive for the disease. Twelve farms with direct or indirect contact with the infected deer have been placed under quarantine. It's possible that many more farms will be affected, according to assistant state veterinarian David Griswold, who notes that animals are frequently moved between deer farms in the state. CWD is not believed to infect humans. (10/27) <http://blog.pennlive.com/pa-sportsman/2012/10/pennsylvanias_chronic_wasting_disease_quarantine_list_grows_to_12_deer_farms.html>

[**Children likely contracted E.coli from petting zoo at pumpkin farm**](http://seattletimes.com/html/localnews/2019538296_apwapumpkinpatchecoli.html)

Health officials in southwest Washington are investigating one confirmed case and another probable case of E.coli-related illness in children who visited a pumpkin patch and petting zoo. Laboratory results confirmed the bacterial infection in one child, while results are pending in the other case. (10/27) <http://seattletimes.com/html/localnews/2019538296_apwapumpkinpatchecoli.html>

[**U.S. agency supports avian influenza research**](http://www.examiner.com/article/usaid-to-provide-20-million-to-fight-bird-flu-other-emerging-threats)

The U.S. Agency for International Development has allotted $20 million for the U.N. Food and Agriculture Organization's efforts to study and prevent avian influenza and other potentially pandemic zoonotic pathogens. Most of the money will go to countries in Southeast Asia, a hot zone for emerging diseases due to the high concentration of people and animals living in close proximity. "The U.S. government has been key in generating international support to combat avian influenza and to reduce the chances for a human pandemic by assisting FAO and others to address the threat in animals before it spills over into humans," said FAO Chief Veterinary Officer Juan Lubroth. (10/30) <http://www.examiner.com/article/usaid-to-provide-20-million-to-fight-bird-flu-other-emerging-threats>

[**Direct, extensive contact with swine tied to most human H3N2v cases**](http://nationalhogfarmer.com/health/extensive-swine-contact-keyed-fair-flu-outbreak)

In a recent report, the CDC noted that most of the 306 H3N2v cases in humans since July were due to direct, extensive contact with infected pigs. Transmission of H3N2v between humans was uncommon but suspected in some cases, yet even most of those people had contact with swine, according to Lyn Finelli of the CDC. This year's outbreak may be over, the CDC postulates, because the last reported human case began Sept. 7. (10/29) <http://nationalhogfarmer.com/health/extensive-swine-contact-keyed-fair-flu-outbreak>

[**A looming mass extinction caused by humans**](http://www.bbc.com/future/story/20121101-a-looming-mass-extinction)

Conservationists fear many animal and plant species will vanish forever thanks to our impact on the planet. The big question is what we can do to prevent it. The prediction that in 300 years time, 75% of all mammal species will have disappeared from this planet is made by palaeobiologist Anthony Barnosky at the University of California, Berkeley, who studies biodiversity changes and compares them to today’s world. (11/1) <http://www.bbc.com/future/story/20121101-a-looming-mass-extinction>

[**Equine Hendra virus vaccine expected to halt transmission of virus to humans**](http://www.frasercoastchronicle.com.au/news/vaccine-released-control-deadly-hendra-virus/1605300/)

Seven years of research by a multidisciplinary team of scientists has resulted in a Hendra virus vaccine for horses. In Australia, Hendra has killed 81 horses. Four of the seven people who contracted the disease from horses died as a result of their infection. "The vaccine will also help to protect the health of horses and is a major win for anyone working in the equine industry, including veterinarians," said veterinarian Ben Gardiner, president of the Australian Veterinary Association. Veterinarian Deborah Middleton agreed. "I have seen first-hand how Hendra has created difficult working conditions for my colleagues and any Australian who works with horses," Dr. Middleton said. "A horse vaccine is crucial to breaking the cycle of Hendra virus transmission from flying foxes to horses and then to people, as it can prevent both the horse developing the disease and passing it on." The disease has only been documented in Australia, according to Iowa State University.(11/1) <http://www.frasercoastchronicle.com.au/news/vaccine-released-control-deadly-hendra-virus/1605300/>

[**Zoos help bring tiny toad back to natural habitat**](http://www.toledoblade.com/local/2012/11/01/Toads-from-Toledo-zoo-released-into-wild-in-East-Africa.html)

About 2,500 Kihansi spray toads were released into their natural habitat in the Kihansi River Gorge in Tanzania this week, thanks to the efforts of the Toledo Zoo, the Bronx Zoo and officials in Tanzania. The tiny species was discovered in 1996, only to be declared extinct in the wild in 2009 after the toads' habitat was changed by construction of a hydroelectric dam and illness affected their survival. "The reintroduction of the Kihansi spray toad to the Kihansi Gorge in Tanzania is a momentous achievement in conservation. This has been a truly global effort to save a species," said Wildlife Conservations Society President and CEO Cristian Samper. (11/1) <http://www.toledoblade.com/local/2012/11/01/Toads-from-Toledo-zoo-released-into-wild-in-East-Africa.html>

[**Hurricane Sandy forces rats above ground**](http://news.nationalgeographic.com/news/2012/10/121031-hurricane-sandy-new-york-rats-flooded-subway-weather-nation-science/)

New Yorkers will likely begin to notice extra and unwelcome wildlife underfoot in the aftermath of superstorm Sandy because thousands of rats flushed from their underground homes have taken shelter above ground, under cars, behind trash receptacles and in holes throughout the city. Pigeons, another common city species, likely waited out the storm in the protection of skyscrapers, said Tufts University animal behaviorist Robert Cook.(10/31) <http://news.nationalgeographic.com/news/2012/10/121031-hurricane-sandy-new-york-rats-flooded-subway-weather-nation-science/>

[**Pet cat without current rabies vaccine exposes owners to virus**](http://www.wrcbtv.com/story/19963080/two-in-whitfield-county-exposed-to-rabies-by-indoor-cat)

A 15-year-old, indoor pet cat that was not current on its rabies vaccination tested positive for rabies after biting its owner and exposing another person to the virus. Both people are being treated. The owner does not know how the cat contracted the disease. (10/31) <http://www.wrcbtv.com/story/19963080/two-in-whitfield-county-exposed-to-rabies-by-indoor-cat>

[**Cornell employs new, better test for Salmonella dublin in cattle**](http://phys.org/news/2012-11-cornell-salmonella-dublin-cattle.html)

In an effort to stop the spread of Salmonella dublin, which causes high morbidity and mortality in calves and is also dangerous to humans, the Cornell University College of Veterinary Medicine's Animal Health Diagnostic Center is using a new and better test for the bacteria. Salmonella dublin is spreading east, and the new test, which detects antibodies to the bacteria, identifies carriers animals with no symptoms that are nonetheless shedding bacteria. "We're very concerned about this disease spreading east because it could severely harm animal and human health, as well as the livelihoods of dairies in the region," said veterinarian Belinda Thompson, the AHDC's senior extension associate. (11/1) <http://phys.org/news/2012-11-cornell-salmonella-dublin-cattle.html>

[**Human West Nile cases level off in Oklahoma, but state sees increase in equine cases**](http://www.necn.com/11/01/12/Human-West-Nile-cases-level-off-equine-c/landing_nation.html?&apID=43d7d57b8f8b4c7b99de92df5a63b709)

The number of human cases of West Nile Virus has leveled off in Oklahoma, a state health official said Thursday, while the number of horses with the potentially deadly virus has risen sharply in the past two months. The state has had a record 176 cases and 12 deaths due to the disease thus far in 2012, said state epidemiologist Dr. Kristy Bradley. That includes six cases and one death in the past two weeks.

Even as the virus is waning in the human population, the number of horses that have contracted the disease has jumped from two at the end August to 39, with 14 cases in September and 23 in October, according to state veterinarian Dr. Rod Hall. Bradley said the threat to humans has not disappeared. And she warned that several continuous days of 70 to 80 degree temperatures, which the state has had this week, could bring the Culex mosquito back out. (11/1) <http://www.necn.com/11/01/12/Human-West-Nile-cases-level-off-equine-c/landing_nation.html?&apID=43d7d57b8f8b4c7b99de92df5a63b709>

[**Charlee Bear Product dog treats recalled over Salmonella danger**](http://www.annarbor.com/pets/charlee-bear-protein-crunch-bars-chicken-carrot-sweet-potato-recalled-pets-dog-treats/)

After a sample tested positive for salmonella, Charlee Bear Products of Madison, Wis., issued a recall of the company's Charlee Bear Protein Crunch Bars for dogs. Symptoms in dogs include vomiting, diarrhea, fever and weakness. Contaminated products also pose a handling risk to humans. (11/2) <http://www.annarbor.com/pets/charlee-bear-protein-crunch-bars-chicken-carrot-sweet-potato-recalled-pets-dog-treats/>

[**“Doga” soothes owners and pets**](http://www.capitalgazette.com/lifestyle/pets/doga-or-dog-yoga-a-pet-project-in-annapolis/article_8a2c5895-dc6e-5348-83e6-9470b775c1f6.html)

Pet owners participating in doga, or dog yoga, classes use their dogs for resistance while giving their pets a good stretch and massage. The dogs usually become more calm and relaxed as they take cues from their owners, according to instructor Kater Leatherman. Veterinarian Jessica Heard thinks doga fosters the human-animal bond and may also help dogs with arthritis and older, less flexible dogs. (11/5) <http://www.capitalgazette.com/lifestyle/pets/doga-or-dog-yoga-a-pet-project-in-annapolis/article_8a2c5895-dc6e-5348-83e6-9470b775c1f6.html>

[**Orangutans in Indonesia carry deadly, zoonotic hemorrhagic viruses**](http://www.theborneopost.com/2012/11/05/ebola-virus-found-in-kalimantans-orangutan/)

Researchers in Indonesia tested the serum of 353 orangutans and found evidence of Ebola virus in 65 samples and Marburg virus in six. The samples were collected between December 2005 and December 2006 and frozen until they could be tested. "Ebola could be a threat to humans living in Indonesia," said researcher Chairil Anwar Nidom. (11/5) <http://www.theborneopost.com/2012/11/05/ebola-virus-found-in-kalimantans-orangutan/>

[**Minnesota reports first known case of rabid deer**](http://www.austindailyherald.com/2012/11/05/deer-in-mower-county-tests-positive-for-rabies/)

The Minnesota Department of Natural Resources reported a deer has tested positive for rabies, marking the state's first known rabid deer. "This is just another reminder of how important it is to vaccinate" other animals, such as horses, said state public health veterinarian Joni Scheftel. Roughly 60 to 70 animals each year test positive for rabies in the state, and most are skunks and bats.(11/5) <http://www.austindailyherald.com/2012/11/05/deer-in-mower-county-tests-positive-for-rabies/>

[**Study: Equine assisted therapy promotes bond between mothers and toddlers**](http://blogs.psychcentral.com/equine-therapy/2012/11/can-equine-therapy-improve-infant-attachment/)

20 toddlers (age 1-2) and their mothers who showed dysregulation in their interaction or attachment with their child or risk factors in their background such as parental mental disorders, substance abuse, child abuse and neglect, domestic violence were investigated. Equine Assisted Activity (EAA) was compared to play-based early intervention. While both interventions improved the mother-child relationship with regard to attachment and caregiving over the course of eight therapy sessions, the data demonstrated one advantage of the EAA: mothers of boys improved more with regard to their compulsive caregiving than in the control group. Only EAA showed improvement in the physiological measures cortisol, heart rate and heart rate variability. Additionally, contact and physical closeness seems to be more positively perceived in EAA, and was linked to more physiological relaxation. (11/6) <http://blogs.psychcentral.com/equine-therapy/2012/11/can-equine-therapy-improve-infant-attachment/>

*Comparative Research One Health News Bits*

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[**Vision originated from one common ancestor, study finds**](http://www.sciencedaily.com/releases/2012/10/121029154324.htm)

Using genetic analysis of prehistoric animals, including Cnidarians, the first known animals with eyes, researchers concluded that vision originated from one common ancestor. "The great relevance of our study is that we traced the earliest origin of vision and we found that it originated only once in animals," said researcher Davide Pisani. "This is an astonishing discovery because it implies that our study uncovered, in consequence, how and when vision evolved in humans." (10/29) <http://www.sciencedaily.com/releases/2012/10/121029154324.htm>

**[November designated to increase pet cancer awareness](http://www.khou.com/community/blogs/animal-attraction/Animal-Attraction---177459731.html)**

VPI, the nation's largest pet insurance provider, named November National Pet Cancer Awareness Month starting in 2005, and along with the Animal Cancer Foundation, it seeks to raise awareness about pet cancer prevention, diagnosis and treatment. Cancer was the fourth most common pet claim filed last year with VPI, and lymphoma, skin cancer and spleen cancer topped the list of the 10 cancers most commonly associated with insurance claims. Pet owners should learn the signs of cancer in animals, said Carol McConnell, VPI's chief veterinary medical officer. (11/6) <http://www.khou.com/community/blogs/animal-attraction/Animal-Attraction---177459731.html>

[**Orangutan completes state-of-the-art chemotherapy for lymphoma**](http://www.miamiherald.com/2012/11/09/3090202_saving-peanut-life-of-beloved.html#storylink=addthis)

A team of physicians and a veterinarian has completed three chemotherapy treatments for Peanut, an 8-year-old orangutan at Florida's Jungle Island recently diagnosed with non-Hodgkin lymphoma. Now the doctors will monitor Peanut's response to the treatment, believed to be the first of its kind used in an orangutan, using CT, ultrasound, radiology and general assessments of her overall attitude and health. Peanut was treated with a lower dose of the standard human therapy: a combination of chemotherapy, antibodies and chemoimmunotherapy. (11/9) <http://www.miamiherald.com/2012/11/09/3090202_saving-peanut-life-of-beloved.html#storylink=addthis>

[**Jellyfish tentacles provide model for technique to monitor cancer**](http://www.sciencedaily.com/releases/2012/11/121112171312.htm)

Tumor cells circulating in a patient's bloodstream can yield a great deal of information on how a tumor is responding to treatment and what drugs might be more effective against it, but these rare cells have to be captured and isolated from the many other cells found in a blood sample. Inspired by the tentacles of a jellyfish, Karp and Karnik’s team coated a microfluidic channel with long strands of DNA that grab specific proteins found on the surfaces of leukemia cells as they flow by. Peter Kuhn, an associate professor of cell biology at the Scripps Research Institute, says this technology is an interesting alternative to existing approaches to capture rare cells, adding that further testing is needed to validate the technology's usefulness. (11/12) <http://www.sciencedaily.com/releases/2012/11/121112171312.htm>

[**Pig genome guides human and swine disease investigations**](http://www.nature.com/news/pig-geneticists-go-the-whole-hog-1.11801)

Pigs have long been an important animal model for the study of human conditions, shedding light on such ailments as retinitis pigmentosa and cystic fibrosis. This week's publication of a full reference genome, along with pigs' physiological similarities to humans, will continue to fuel research into human diseases including cancer, Alzheimer's, diabetes and muscular dystrophy, as well as swine illnesses such as porcine reproductive and respiratory syndrome. The findings may also prove a useful resource for breeding research. (11/14) <http://www.nature.com/news/pig-geneticists-go-the-whole-hog-1.11801>

[**Researches explore headshaking syndrome causes, treatments**](http://phys.org/news/2012-11-headshaking-horses.html)

Researchers continue to explore the pathology of equine headshaking syndrome, which shares similarities with certain human conditions. According to British researchers, surgical caudal compression of the infraorbital nerve demonstrated long-term efficacy of close to 50%, and exploration of treatments continues. Investigators are also looking into the possibility that focal demyelination, a frequent cause of human trigeminal neuralgia, is associated with the equine condition. Veterinarian Veronica Roberts asks anyone who is thinking of euthanizing a horse with headshaking syndrome to get in touch with her about possibly participating in the research. (11/14) <http://phys.org/news/2012-11-headshaking-horses.html>

[**Valley fever help for humans might start with our pets**](http://www.mercedsunstar.com/2012/11/24/2667799/valley-fever-help-for-humans-might.html)

Dogs and humans get hit with valley fever in a similar way. They inhale spores from a fungus common in the soil in the Southwest. The spores start in the lungs and can spread to other organs and parts of the body. Imulan BioTherapeutics LLC and Valley Fever Solutions Inc. have been doing some preliminary research on dogs, with Imulan testing an immune system stimulant of the same name, and Valley Fever Solution Inc. testing Nikkomycin Z. Results seem to be promising for both companies, and the hope is that the research will lead to new therapeutics for humans, as well.[Copyright 2012 . All rights reserved. This material may not be published, broadcast, rewritten or redistributed.](http://www.mercedsunstar.com/terms-of-service) (11/24) <http://www.mercedsunstar.com/2012/11/24/2667799/valley-fever-help-for-humans-might.html>

[**NIH facility explores animal biology with the aim of helping people**](http://www.bethesdamagazine.com/Bethesda-Magazine/November-December-2012/The-Primate-Directive/index.php?cparticle=2&siarticle=1#artanc)

At the expansive but little-known NIH Animal Center, veterinarians and other researchers work to breed and prepare animals for research and pursue behavioral and genetic studies of primates, findings that ultimately inform scientists' understanding of humans. "Our mission is to put out research that can really help the country," says Shared Animal Facility veterinarian Ruth Woodward. The latest research projects at the facility, which places heavy emphasis on animal enrichment, include an effort to understand and possibly alter the developmental course of autistic behaviors in rhesus monkeys. (11/2012) <http://www.bethesdamagazine.com/Bethesda-Magazine/November-December-2012/The-Primate-Directive/index.php?cparticle=2&siarticle=1#artanc>