**One Health News Bits**

**3-9-13**

[**No Horsing Around with This Parasite**](http://www.vetmed.ufl.edu/2012/11/15/uf-researchers-rare-human-parasite-found-in-u-s-horse-for-first-time/)

A rare, potentially fatal species of parasite never before found in North America has been identified in a Florida horse, leading researchers to caution about possible transmission to humans. University of Florida veterinarians [identified the parasite](http://echo4.bluehornet.com/ct/19315905:21706137266:m:1:2008126168:7060C5C706A9D18D9DBEC29E4037BB25:r), called Leishmania siamensis, and noted that this particular species of parasite previously had been found only in Thailand and parts of Europe, while other species of Leishmania have been found all over the world. No Leishmania infections of any species had been previously reported in a horse native to the United States. The UF discovery raises awareness of how widespread the parasite is and suggests a need for watchfulness regarding potential transmission to humans, the researchers said. Acquired from AVMA Health Bytes. <http://www.vetmed.ufl.edu/2012/11/15/uf-researchers-rare-human-parasite-found-in-u-s-horse-for-first-time/>

[**New Borrelia illness identified in humans**](http://r.smartbrief.com/resp/efwkBXzCwNCftGjDCidmoaCicNLDLx?format=standard)A new tick-borne disease, still unnamed, has been discovered in 18 human cases in New York and New England, according to researchers from institutions including Yale University and New York Medical College. The pathogen, Borrelia miyamotoi, was first identified in ticks in Japan in 1995. Symptoms include headaches, muscle aches, fatigue and recurring bouts of fever, the latter a feature distinct from Lyme disease. Doxycycline and amoxicillin given after the first episode of fever apparently are effective. Acquired from Animal Health Smartbrief. <http://www.reuters.com/article/2013/01/17/usa-health-ticks-idUSL1E9CHFZF20130117>

[**Eastern equine encephalitis cases mounting, researchers report**](http://r.smartbrief.com/resp/efwkBXzCwNCftGjECidmoaCicNTmrA?format=standard)Eastern equine encephalitis, a dangerous mosquito-borne disease, was responsible for more human illness in 2012 than in previous years, according to a new report. Beginning in the mid-2000s, 15 children in Massachusetts and New Hampshire were diagnosed with the illness and only four emerged unscathed, while four died and the remainder had lasting neurological effects. The CDC reports a maximum of 10 cases nationwide in typical years. Better diagnostics may contribute to better detection but the virus' activity has also likely increased, said infectious disease specialist and physician Asim Ahmed of Children's Hospital Boston. "This virus is rare, but it's among the world's most dangerous viruses, and it's in your own backyard," he said. Acquired from Animal Health Smartbrief. <http://consumer.healthday.com/Article.asp?AID=672580>

[**Rare infection from dog bite leaves woman seriously ill**](http://r.smartbrief.com/resp/efzBBXzCwNCftVbwCidmoaCicNAKam?format=standard)

A Texas woman is in the intensive care unit of an Austin hospital after a dog bit her and gave her a rare bacterial infection, forcing doctors to amputate her legs and fingers. Robin Sullins, a dog lover and mother of four, was bitten while intervening in a scuffle between two family dogs on Christmas day, suffering minor cuts on her hand and leg. She was treated at a local emergency room after becoming violently ill, and then transferred to University Medical Center Brackenridge on Dec. 28 as her condition rapidly deteriorated. *Capnocytophaga canimorsus*, the bacterium that infected Sullins, is found in the mouths of nearly a third of all healthy cats and dogs, and doctors say it is not usually dangerous. <http://abcnews.go.com/Health/texas-womans-legs-fingers-amputated-dog-bite/story?id=18251766>

[**Ebola Virus Antibodies in Fruit Bats, Bangladesh**](http://wwwnc.cdc.gov/eid/article/19/2/12-0524_article.htm)

Filoviruses are zoonotic pathogens that cause episodic, lethal, hemorrhagic outbreaks among humans and nonhuman primates and case-fatality rates up to 80%. Pathogenicity varies among Ebola viruses, from Zaire Ebola Virus (ZEBOV), which is highly lethal in humans, to Reston Ebola Virus (REBOV), which causes disease in pigs and macaques but asymptomatically infects humans. To determine geographic range for Ebola virus, researchers tested 276 bats in Bangladesh. Five (3.5%) bats were positive for antibodies against Ebola Zaire and Reston viruses; no virus was detected by PCR. These bats might be a reservoir for Ebola or Ebola-like viruses, and extend the range of filoviruses to mainland Asia. <http://wwwnc.cdc.gov/eid/article/19/2/12-0524_article.htm>

[**Nipah Virus Strikes Back**](http://bdnews24.com/health/2013/01/23/nipah-virus-strikes-back)

**The virus that killed nearly 80 percent of its total infections in Bangladesh has struck back killing an 8-year-old boy in Dhaka and leaving his father critically ill, the government’s disease monitoring agency, IEDCR confirms.** The bat-borne nipah virus that infects a person only after drinking raw date sap and later can pass on to other persons through contact is a cause of public health concern in Bangladesh as it breaks out every year during Jan-Apr. Drinking raw date or palm sap in the morning is an old practice in Bangladesh, especially in rural areas, but IEDCR suggests drinking boiled sap or molasses and washing hands with soap after caring patients. <http://bdnews24.com/health/2013/01/23/nipah-virus-strikes-back>

[**Veterinarian searches for culprit in sea otter deaths**](http://www.mercurynews.com/science/ci_22508871/veterinarian-melissa-miller-runs-sea-otter-csi-at)Veterinarian Melissa Miller, a wildlife pathologist at the Marine Wildlife Veterinary Care and Research Center, has been conducting necropsies on dead sea otters for 15 years and has found evidence that the animals are suffering from the effects of land-based toxins. In 2007, Dr. Miller found that 31 sea otters had died over the years from exposure to microsystin, a toxin produced by freshwater algae, and she suspects other such toxins in runoff are also wreaking havoc. Wetlands used to filter such compounds, but many have been destroyed. Acquired from Animal Health Smartbrief. <http://www.mercurynews.com/science/ci_22508871/veterinarian-melissa-miller-runs-sea-otter-csi-at>

[**Mysterious substance coats feathers of birds off England's coast**](http://www.livescience.com/26803-mysterious-substance-seabirds-england.html)

A mysterious greasy substance has been found on hundreds of seabirds, some dead, others injured that have been washing up along England's south coast. Environmental officials with the U.K.'s Maritime and Coastguard Agency (MCA), who are investigating the case, still don't know where the greasy substance came from, but they believe it is a "refined mineral-based oil mixture." <http://www.livescience.com/26803-mysterious-substance-seabirds-england.html>

[**Dolphins buoy dying companion by coalescing into living raft**](http://www.newscientist.com/article/dn23108-dolphins-form-life-raft-to-help-dying-friend.html)

Kyum Park of the [Cetacean Research Institute](http://www.nfrdi.re.kr/page?id=en2_sub_2_01_2_0200) in Ulsan, South Korea, and colleagues were surveying cetaceans in the Sea of Japan in June 2008 and followed a group of about 400 long-beaked common dolphins ([*Delphinus capensis*](http://eol.org/pages/313022/overview)). In the late morning they noticed that about 12 dolphins were swimming very close together with one female having swimming difficulties. The other dolphins crowded around it, often diving beneath it and supporting it from below. After about 30 minutes, the dolphins formed into an impromptu raft: they swam side by side with the injured female on their backs. Researchers speculate that this behavior may be a display of empathy, mutual benefit, or bonding in this highly intelligent animal. <http://www.newscientist.com/article/dn23108-dolphins-form-life-raft-to-help-dying-friend.html>

[**Survey of Canadian Public Health Personnel reveal zoonotic disease knowledge gaps**](http://www.ncbi.nlm.nih.gov/pubmed/23280193)

Investigations of zoonotic disease transmission in Canada are often pursued by Public Health Inspectors (PHIs). A survey was conducted to assess the knowledge, perceptions and education of Canadian PHIs regarding zoonotic diseases. Researchers identified gaps in knowledge, particularly with regard to rabies and transmission of gastrointestinal pathogens by companion animals. Their responses suggested that there is a need for improvement in both the quantity and the quality of continuing education on zoonotic diseases, with PHIs tending to feel that their training on zoonotic diseases prior to working as PHIs was deficient in some areas. [Zoonoses Public Health. 2012 Dec 28. doi: 10.1111/zph.12029. [Epub ahead of print]](http://www.ncbi.nlm.nih.gov/pubmed/23280193)

[**Emerging zoonoses: When should we start to worry?**](http://www.guardian.co.uk/commentisfree/2013/feb/14/coronavirus-conundrum-panic-button-sars)A new coronavirus has sickened only a handful of people worldwide, but about half have died and the confirmed cases raise the specter of another SARS epidemic. The issue and other emerging diseases also raise difficult questions about when health officials need to sound the alarm about exotic diseases, writes author and medical researcher Mark Honigsbaum. "The paradox is that the digital technologies that enable us to monitor the emergence of exotic diseases and take action to prevent pandemics are the very same technologies that spread fear." Acquired from Animal Health Smartbrief.  <http://www.guardian.co.uk/commentisfree/2013/feb/14/coronavirus-conundrum-panic-button-sars>

[**Study: In the right conformation, prions serve a purpose**](http://www.nature.com/news/proteins-behind-mad-cow-disease-also-help-brain-to-develop-1.12428)Prions responsible for causing bovine spongiform encephalopathy and similar diseases, including Creutzfeldt–Jakob disease, which infects humans, may actually serve a role in helping brains to develop, according to a report in Journal of Neuroscience. Researchers discovered that prion proteins could be helpful or infectious depending on whether the protein was correctly formed. Normal prions were fundamental in protecting nerves, while misfolded prions caused the infectious diseases. Acquired from Animal Health Smartbrief. <http://www.nature.com/news/proteins-behind-mad-cow-disease-also-help-brain-to-develop-1.12428>

[**Leptospirosis: The deadly zoonotic disease next door**](http://www.northjersey.com/community/191510251_Pet_Q.html)Veterinarian Mary Ann Crawford explains that leptospirosis is contracted via contact with infected urine that may be present in water or moist soil, and it can affect dogs and humans. Because leptospirosis causes nonspecific symptoms and can progress to deadly liver or kidney infections in dogs, ill dogs should be evaluated by a veterinarian as soon as possible, Dr. Crawford advises. A vaccine is available for dogs and is the best way to prevent leptospirosis infection, she writes. Acquired from Animal Health Smartbrief. <http://www.northjersey.com/community/191510251_Pet_Q.html>

**[Vaccinating dogs for leptospirosis protects humans, too](http://www.oregonlive.com/pets/index.ssf/2013/02/pet_talk_leptospirosis_re-emer.html" \t "_blank)**

Leptospirosis is a common and widespread zoonotic that can be transmitted through infected urine present in water and moist soil. Oregon Public Health Veterinarian Dr. Emilio DeBess suspects a resurgence of the disease because people stopped vaccinating for Leptospirosis as often, as the vaccine became associated with adverse reactions. However, new vaccines are more protective and less likely to cause adverse reactions and vaccinating can prevent disease transmission to dogs’ human counterparts. <http://www.oregonlive.com/pets/index.ssf/2013/02/pet_talk_leptospirosis_re-emer.html>

[**Flock of blackbirds exposes Ky. town to zoonotic disease**](http://news.yahoo.com/bird-invasion-brings-real-life-horror-kentucky-city-205852369.html)Millions of blackbirds have come to roost in a Kentucky town, and their droppings potentially contain histoplasmosis, a zoonotic fungal pathogen that can cause serious illness in humans, according to veterinarian Wade Northington, who directs the Murray State University Breathitt Veterinary Center. Wildlife experts think warmer temperatures led to the birds roosting near the town rather than in their usual spot farther south. Acquired from Animal Health Smartbrief. <http://news.yahoo.com/bird-invasion-brings-real-life-horror-kentucky-city-205852369.html>

[**New coronavirus claims sixth victim**](http://abcnews.go.com/Health/wireStory/uk-patient-dies-sars-coronavirus-18534543)A patient under treatment after contracting a recently discovered SARS-related coronavirus has died at a U.K. hospital, bringing the total human fatalities from the virus to six out of 12 infections. Officials are unsure of the virus' origin and transmission, but they believe it may be harbored by animals such as camels, goats and bats and may also pass from person to person. Acquired from Animal Health Smartbrief. <http://abcnews.go.com/Health/wireStory/uk-patient-dies-sars-coronavirus-18534543>

[**Schmallenberg virus detected in wild ungulates in Europe**](http://www.bbc.co.uk/news/science-environment-21452990)

Schmallenburg virus (SBV), which is spread by insects, causes birth defects in lambs and can reduce milk yields in cattle having a huge financial impact on farms. Researchers now believe that it has spread to wild deer serving as potential reservoirs for the disease. The UK's deputy chief veterinary officer, Alick Simmons, said a vaccine against SBV is not yet available but several are being developed. He believes that over time, through vaccination or natural spread, SBV will become less of a problem. <http://www.bbc.co.uk/news/science-environment-21452990>

[**Ariz. may give miniature horses service-animal designation**](http://www.thehorse.com/articles/31384/arizona-bill-would-recognize-miniature-horses-as-service-animals)Miniature horses could be considered service animals if a pending measure is passed by the Arizona Legislature. Arizona state Rep. Heather Carter introduced the bill. Advocates say the animals' behavior, vision, stamina and lifespan make them well-suited to the job. Acquired from Animal Health Smartbrief. <http://www.thehorse.com/articles/31384/arizona-bill-would-recognize-miniature-horses-as-service-animals>

***Comparative Research One Health News Bits***

**3-9-13**

[**Virus May Shed Light on Cancer Causes**](http://news.ucdavis.edu/search/news_detail.lasso?id=10441)

Rare brain tumors emerging among raccoons in Northern California and Oregon may be linked to a [newly discovered virus](http://echo4.bluehornet.com/ct/19315902:21706137266:m:1:2008126168:7060C5C706A9D18D9DBEC29E4037BB25:r) identified by a team of researchers that includes members from the University of California Davis School of Veterinary Medicine. The discovery of the virus in the cancer-stricken animals, dubbed raccoon polyomavirus, could lead to a better understanding of how viruses can cause cancer in both animals and humans. Raccoons live only two to three years, so their short lifespans can provide a model for studying how these viruses spread, how they cause cancer and how easily they can jump from species to species. Acquired from AVMA Health News Bytes. <http://news.ucdavis.edu/search/news_detail.lasso?id=10441>

[**Doggedly Pursuing Human Vaccines**](http://news.uga.edu/releases/article/man/)

Researchers at the University of Georgia College of Veterinary Medicine have discovered that a virus commonly found in dogs may serve as the foundation for the next great breakthrough in [human vaccine development](http://echo4.bluehornet.com/ct/19315903:21706137266:m:1:2008126168:7060C5C706A9D18D9DBEC29E4037BB25:r). The parainfluenza virus 5, which is thought to contribute to upper respiratory infections in dogs, is harmless in humans. Scientists say they can use the virus as a vehicle to deliver vaccines to protect people against diseases that have eluded vaccine efforts for decades, including HIV, tuberculosis and malaria. Acquired from AVMA Health News Bytes. <http://news.uga.edu/releases/article/man/>

[**When Less Is More**](http://www.vetmed.auburn.edu/news-at-the-college/recent-news/pathobiology-professor-s-vaccine-platform-gives-immune-systems-a-boost)

Here's a different twist on the pursuit to find a vaccine that can wage a better fight against some of the toughest diseases. Researchers at Auburn University's College of Veterinary Medicine are experimenting with [drastically lowered doses of vaccines](http://echo4.bluehornet.com/ct/19315904:21706137266:m:1:2008126168:7060C5C706A9D18D9DBEC29E4037BB25:r) that have shown early promise in creating an intracellular immune response that can serve as either a preventive measure or as a way to treat chronic infections. The findings may lead to ways to prevent and treat chronic conditions such as malaria, tuberculosis, HIV, dengue fever and cancer. Acquired from AVMA Health News Bytes. <http://www.vetmed.auburn.edu/news-at-the-college/recent-news/pathobiology-professor-s-vaccine-platform-gives-immune-systems-a-boost>

**[Tobacco plants used to develop new rabies treatment](http://www.news-medical.net/news/20130202/Scientists-produce-monoclonal-antibody-in-tobacco-plants-that-neutralizes-rabies-viruses.aspx" \t "_blank)**

In an attempt to create a more cost-effective treatment for people in impoverished countries who are infected with the rabies virus, researchers in London developed a monoclonal antibody to rabies using leaves of the tobacco plant. The antibody blocks the virus from adhering to nerve endings at the site of the initial bite. "An untreated rabies infection is nearly 100% fatal and is usually seen as a death sentence. Producing an inexpensive antibody in transgenic plants opens the prospect of adequate rabies prevention for low-income families in developing countries," said researcher Leonard Both. Acquired from Animal Health Smartbrief. <http://www.news-medical.net/news/20130202/Scientists-produce-monoclonal-antibody-in-tobacco-plants-that-neutralizes-rabies-viruses.aspx>

[**Mice shed light on human evolution**](http://news.sciencemag.org/sciencenow/2013/02/sweaty-human-evolution-through-a.html?ref=hp)Research using mouse models has helped advance countless lines of disease research, and a new study shows that the approach can be used to explore the evolutionary origins of humans, too. Harvard University researchers were able to show how a gene variant may have played a role in human adaptation to hot, humid climates. "It's one of the first papers that clearly shows that a change that was important in recent human evolution can be modeled in the mouse," said evolutionary geneticist Wolfgang Enard, who was not part of the study. Acquired from Animal Health Smartbrief. <http://news.sciencemag.org/sciencenow/2013/02/sweaty-human-evolution-through-a.html?ref=hp>

[**Cell transplant improves function in monkeys with Parkinson’s**](http://www.latimes.com/news/science/sciencenow/la-sci-sn-parkinsons-stem-cells-20121203,0,5101424.story)

A research team in Japan has used stem cells harvested from bone marrow to restore function in macaques with Parkinson’s. The cell transplants didn’t cure the macaques, but they did safely improve motor skills in the animals. The results suggest that stem cells from bone marrow might someday be a useful source for treatments of Parkinson’s in humans.

(12/3) <http://www.latimes.com/news/science/sciencenow/la-sci-sn-parkinsons-stem-cells-20121203,0,5101424.story>

[**Interleukin-10 tested for neuropathic pain in dogs, possibly humans**](http://www.dailycamera.com/science-environment/ci_22195744/cu-boulder-prof-lafayette-veterinarian-target-dogs-chronic)

Veterinarian Robert Landry, a diplomate with the American Academy of Pain Management, is teaming up with University of Colorado professor Linda Watkins in a therapeutic trial involving interleukin-10 to treat animals with chronic, debilitating neuropathic pain. Two dogs treated so far have shown positive results, and the treatment may one day prove useful in treating pain in humans. "Our ultimate goal is to find a means by which clinical pain control can be improved so as to relieve human suffering," Watkins said. (12/14) <http://www.dailycamera.com/science-environment/ci_22195744/cu-boulder-prof-lafayette-veterinarian-target-dogs-chronic>

[**White matter “explosion” helps explain human intelligence**](http://www.livescience.com/25655-chimp-brains-reveal-human-intelligence.html)

Researchers compared serial MRIs of the brains of young humans, chimpanzees and macaques and found that human brains undergo an "explosion" in the growth of white matter during the first two years of life that is significantly greater than developmental changes seen in the other species. "That probably helps to explain why those first few years of human life are so critical to set us on the course to language acquisition, cultural knowledge and all those things that make us human," said George Washington University evolutionary neuroscientist Chet Sherwood, who did not contribute to the study. (12/18) <http://www.livescience.com/25655-chimp-brains-reveal-human-intelligence.html>

[**Veterinarians and medical doctor work together on howler monkey nasal endoscopy**](http://www.sltrib.com/sltrib/news/55484520-78/eli-zoo-monkey-doctors.html.csp)

Eli, a 15-year-old howler monkey who lives at Utah's Hogle Zoo, underwent endoscopy and flushing of the nasal cavity and sinuses this week. Eli developed nasal discharge a few months ago, and a CT scan confirmed sinusitis. Veterinarians Nancy Carpenter and Erika Crook assisted Richard Orlandi, a surgeon at the University of Utah School of Medicine, who said Eli was his first monkey patient. (12/18) <http://www.sltrib.com/sltrib/news/55484520-78/eli-zoo-monkey-doctors.html.csp>

[**Frog secretions contain medically active compounds, study finds**](http://www.npr.org/blogs/health/2012/12/17/167255929/scientists-look-for-new-drugs-in-skin-of-russian-frog?ft=1&f=1007)

Russian scientists have isolated 76 compounds from the body secretions of frogs that may have medical applications for humans. Production of synthetic compounds that mimic these frog peptides may lead to new drugs for people, although it is often a long and arduous process to develop a drug from a natural substance, notes Jun O. Liu, a pharmacology professor at the Johns Hopkins University School of Medicine. (12/17) <http://www.npr.org/blogs/health/2012/12/17/167255929/scientists-look-for-new-drugs-in-skin-of-russian-frog?ft=1&f=1007>

[**Bovine IVC patch saves life of liver cancer patient**](http://www.dailymail.co.uk/health/article-2254604/A-patch-cows-heart-rebuilt-liver-Pioneering-surgery-sees-British-woman-saved-bovine-tissue.html)

U.K. surgeons are pioneering a new use for bovine heart tissue in humans, including a recent operation that saved the life of a woman diagnosed with a rare liver cancer initially deemed inoperable. Surgeons used the tissue to patch the patient's inferior vena cava, a portion of which was removed along with part of the liver. Bovine tissue, which is also used in heart surgery, is similar in texture and flexibility to the human tissue it replaces and less likely than synthetic alternatives to be associated with infection, says surgeon Hassan Malik. (12/29) <http://www.dailymail.co.uk/health/article-2254604/A-patch-cows-heart-rebuilt-liver-Pioneering-surgery-sees-British-woman-saved-bovine-tissue.html>