**One Health News Bits**

**9-2-13**

[**Dog detects deadly bacterial infection in humans**](http://www.webmd.com/digestive-disorders/news/20121212/dog-sniffs-c-diff-infection)

Cliff, a 2-year-old beagle, has been trained to detect the bacterium Clostridium difficile, which is responsible for up to 14,000 human deaths annually in the U.S. Cliff correctly identified the infection in 25 of 30 people and determined that 265 of 270 uninfected people didn't have the bacteria. Researchers say dogs could be trained to detect the infection more quickly than conventional tests. "One big question for me is, 'What else can a dog's amazing sensory apparatus be utilized to detect?'" said physician Bruce Hirsch, an infectious disease specialist. (12/13) *Acquired from Animal Health Smartbrief.* <http://www.webmd.com/digestive-disorders/news/20121212/dog-sniffs-c-diff-infection>

[**Lyme vaccine for humans does well in trials**](http://www.medicalnewstoday.com/articles/260471.php)

A novel vaccine for Lyme disease led to the production of antibodies against the borrelia organisms that cause the disease in the U.S. and Europe, without sparking major side effects, according to new research. The vaccine must undergo Phase III trials, but the research team is hopeful it will become a tool to help prevent Lyme disease in people. Dogs and humans contract Lyme disease from ticks, and the incidence of Lyme disease in the U.S. is increasing. (5/14) *Acquired from Animal Health Smartbrief.* <http://www.medicalnewstoday.com/articles/260471.php>

[**Can waste save the world? Veterinarian says it can**](http://www.washingtonpost.com/national/health-science/bodily-waste-from-animals-and-humans-can-help-solve-the-energy-crisis-author-says/2013/05/13/660f12d2-b359-11e2-baf7-5bc2a9dc6f44_story.html)

In his book "The Origin of Feces," veterinarian and epidemiologist David Waltner-Toews argues that using animal and human waste to create energy is a key route to global sustainability. Dr. Waltner-Toews cites several examples of how humans can capitalize on waste, including converting cow dung in Nepal and India into energy and using dog feces in Massachusetts to fuel a street light. (5/13) *Acquired from Animal Health Smartbrief.* <http://www.washingtonpost.com/national/health-science/bodily-waste-from-animals-and-humans-can-help-solve-the-energy-crisis-author-says/2013/05/13/660f12d2-b359-11e2-baf7-5bc2a9dc6f44_story.html>

[**Therapy animals can be the best medicine**](http://www.wftv.com/news/news/local/prescription-pups-benefits-therapy-dogs/nXp3w/)

Therapy dogs have been shown to decrease cortisol levels in children with autism and ameliorate pain in chronic pain patients, according to this report. The video features the story of how a therapy dog helps one war veteran cope with severe pain and physical therapy after debilitating injuries incurred when he stepped on an explosive device. (5/13) *Acquired from Animal Health Smartbrief.* <http://www.wftv.com/news/news/local/prescription-pups-benefits-therapy-dogs/nXp3w/>

[**Disease monitoring: Technology advances, but challenges remain**](http://www.newsobserver.com/2013/05/12/2879998/professor-monitors-infectious.html)

Infectious disease specialist Tara Smith says landscape and lifestyle changes around the world mean diseases travel faster than ever, but technology has provided many new tools for discovering and monitoring such pathogens. Yet monitoring everywhere at once is still difficult: "The hard part is knowing what's going on in places where people don't have a health care contact -- rural Africa or even in rural Iowa," Smith says. (5/12) *Acquired from Animal Health Smartbrief.* <http://www.newsobserver.com/2013/05/12/2879998/professor-monitors-infectious.html>

[**Otter study finds parasites linked to zoonoses**](http://phys.org/news/2013-06-reveals-disease-causing-parasites-dead-otters.html)

Research undertaken by the Cardiff University Otter Project has revealed a number of disease-causing parasites in the bodies of dead otters. The findings were revealed at the BBC Summer of Wildlife event held at the National Museum of Wales. (6/18) *Acquired from Animal Health Smartbrief.* <http://phys.org/news/2013-06-reveals-disease-causing-parasites-dead-otters.html>

[**Even low levels of chemicals may pose dangers to invertebrates**](http://www.nature.com/news/pesticides-spark-broad-biodiversity-loss-1.13214)

Agricultural pesticides have been linked to widespread invertebrate biodiversity loss in two new research papers. Pesticide use has sharply reduced the regional biodiversity of stream invertebrates, such as mayflies and dragonflies, in Europe and Australia, finds a study published today in the Proceedings of the National Academy of Sciences. (6/17) *Acquired from Animal Health Smartbrief.* <http://www.nature.com/news/pesticides-spark-broad-biodiversity-loss-1.13214>

[**PEDV proves tough to control, lethal for piglets**](http://www.nbcnews.com/business/outbreak-deadly-piglet-virus-spreads-13-states-6C10378085)

The porcine epidemic diarrhea virus that's new to North America has spread to 13 states and more than 100 swine since it was detected last month, in an outbreak that's proving tougher to control than experts first thought. The illness hasn't been a serious issue among adult pigs in the U.S., but the mortality rate for piglets ranges from 50% to 100%. Experts say there is no risk to humans, but the virus continues to raise concerns among pork producers. (6/19) *Acquired from Animal Health Smartbrief.*  <http://www.nbcnews.com/business/outbreak-deadly-piglet-virus-spreads-13-states-6C10378085>

[**The “intense” debate over when and how dogs became domesticated**](http://www.nature.com/news/dog-genetics-spur-scientific-spat-1.13227)

Scientists investigating the transformation of wolves into dogs are behaving a bit like the animals they study, as disputes roil among those using genetics to understand dog domestication. In recent months, three international teams have published papers comparing the genomes of dogs and wolves. On some matters — such as the types of genetic changes that make the two differ — the researchers are more or less in agreement. Yet the teams have all arrived at wildly different conclusions about the timing, location and basis for the reinvention of ferocious wolves as placid pooches. (6/18) *Acquired from Animal Health Smartbrief.* <http://www.nature.com/news/dog-genetics-spur-scientific-spat-1.13227>

[**Many animals may be smarter tan they get credit for, studies show**](http://www.theguardian.com/science/shortcuts/2013/jun/19/animals-know-more-than-you-think)

Chickens can plan ahead and may have better spatial skills than young children; sheep can recognize colors and shapes; pigs and monkeys can use mirrors to find hidden food; and even flies can remember their destinations and get there despite distractions, according to a variety of studies from the past few decades. "Finding sophisticated learning and awareness in animals can alter the way people think about the species and may result in better welfare in the long run," said researcher Donald Broom. (6/19) *Acquired from Animal Health Smartbrief.* <http://www.theguardian.com/science/shortcuts/2013/jun/19/animals-know-more-than-you-think>

[**Forensic ornithologist takes on Everglades pythons**](http://www.npr.org/2013/06/19/184827651/animal-csi-inside-the-smithsonians-feather-forensics-lab)

Smithsonian National Museum of Natural History forensic ornithologist Carla Dove is in the midst of a mystery, examining bits of feathers and tiny bone fragments to help wildlife officials in Florida determine which native bird species are being killed by Burmese pythons in the Everglades. Her line of work was launched after a 1960 plane crash that was caused by a flock of starlings. (6/19) *Acquired from Animal Health Smartbrief.* <http://www.npr.org/2013/06/19/184827651/animal-csi-inside-the-smithsonians-feather-forensics-lab>

[**Veterinarians to test contraceptive vaccine in wild dogs**](http://www.usatoday.com/story/news/nation/2013/06/20/dogs-birth-control/2443099/)

Two Western American Indian tribes are working with veterinarians to study the use of a contraceptive vaccine that's been used in wildlife to keep populations under control. Under the program, veterinarians will capture 300 wild female dogs and administer the government vaccine GonaCon. The animals will also be microchipped, collared and tattooed before being released. They'll be recaptured after a year to assess their response to the vaccine. The research is a collaboration between the USDA National Wildlife Research Center and Oklahoma-based Spay First. (6/20) *Acquired from Animal Health Smartbrief.* <http://www.usatoday.com/story/news/nation/2013/06/20/dogs-birth-control/2443099/>

[**Okla. Puppy with rabies raises concerns that others were exposed**](http://www.news9.com/story/22635478/officials-search-for-man-who-sold-rabid-puppy-in-sulphur)

Public health officials are searching for a man who sold a litter of five or six 10-week-old puppies in Sulphur, Okla., saying one of the puppies was confirmed to have rabies. Authorities also want to talk to anyone else who may have come in contact with the puppies because they will need treatment. (6/19) *Acquired from Animal Health Smartbrief.* <http://www.news9.com/story/22635478/officials-search-for-man-who-sold-rabid-puppy-in-sulphur>

[**H7N9 virulence is less than first thought**](http://www.businessweek.com/news/2013-06-23/new-bird-flu-is-less-deadly-than-previously-thought-study-finds)

H7N9 influenza, a zoonotic disease that emerged in China in March, isn't as deadly as first thought, according to a report by the Chinese Center for Disease Control and Prevention and the University of Hong Kong, which said the mortality rate is roughly 36% for H7N9 patients who are admitted to hospitals. Some 27,000 undetected, milder cases may have also occurred. New infections have slowed, likely due to warmer weather and the closing of live poultry markets, considered the source for most human infections. (6/23) *Acquired from Animal Health Smartbrief.*  <http://www.businessweek.com/news/2013-06-23/new-bird-flu-is-less-deadly-than-previously-thought-study-finds>

[**Feline-inspired search-and-rescue robot fastest in its class**](http://www.smh.com.au/technology/sci-tech/robot-that-runs-like-a-cat-springs-to-life-in-switzerland-20130621-2ondg.html)

Swiss researchers say they have created a small four-legged, high-speed robot that runs like a cat in a bid to create a new breed of robots for use in search and rescue operations. Researchers added that the "cheetah-cub robot", the size of a small house cat or cheetah cub, moves as fast as an adult human walking briskly. (6/24) *Acquired from Animal Health Smartbrief.* <http://www.smh.com.au/technology/sci-tech/robot-that-runs-like-a-cat-springs-to-life-in-switzerland-20130621-2ondg.html>

[**Owners should watch out for blastomycosis**](http://www.chicagonow.com/steve-dales-pet-world/2013/06/blastomycosis-whats-the-real-threat/)

Owners need to be aware of symptoms of blastomycosis in their dogs, according to veterinarian Seth Ghantous. The fungal organism that causes the disease can be found in moist soil and causes symptoms including skin lesions, respiratory tract infections and neurological problems, among others. Early diagnosis is important, veterinarian Al Legendre says. (6/21) *Acquired from Animal Health Smartbrief.* <http://www.chicagonow.com/steve-dales-pet-world/2013/06/blastomycosis-whats-the-real-threat/>

[**Study IDs new fungal pathogen that affects cats, people**](http://phys.org/news/2013-06-feline-fungus-species.html)

University of Sydney veterinarian Vanessa Barrs began investigating in 2006 after three cats presented with unusual infections that spread from the nasal cavity to create growths in the eye socket. After six years of research, Dr. Barrs and an international team of experts identified the fungus as Aspergillus felis, a newly identified species with the power to cause dangerous respiratory infections in people as well as cats. The pathogen may be confused with the more easily treated Aspergillus fumigatus, Dr. Barrs said. (6/26) *Acquired from Animal Health Smartbrief.*  <http://phys.org/news/2013-06-feline-fungus-species.html>

[**Emerging disease: What we know, what we don’t, and what’s worrisome**](http://www.foxnews.com/health/2013/06/26/scariest-infectious-diseases-right-now/)

Emerging infectious diseases regularly occupy headlines, but it can be challenging to understand the true threat they pose. Mount Sinai Medical Center disease expert Daniel Caplivski explains which diseases are of concern and what is being done to monitor and prevent pandemics. Meanwhile, one health expert and veterinarian William Karesh tackles some commonly held misconceptions regarding zoonotic pathogens, emphasizing the widespread potential effects of outbreaks and the challenges of finding and monitoring new threats. (6/27) *Acquired from Animal Health Smartbrief.* <http://www.foxnews.com/health/2013/06/26/scariest-infectious-diseases-right-now/>

[**Vt. Children defend themselves from raccoon attack**](http://www.wcax.com/story/22685610/children-fight-off-raccoon-attack)

Three Vermont children fought off a raccoon attack while playing in the woods last weekend. The animal was never found, and one child who sustained multiple bites is undergoing post-exposure rabies prophylaxis. Ten-year-old Piper Rolfe, who is legally blind and has a degenerative illness, fought back with a stick, helping save her friend Irie Campbell, 11, from additional bites. (6/27) *Acquired from Animal Health Smartbrief.* <http://www.wcax.com/story/22685610/children-fight-off-raccoon-attack>

[**Service dog helps young man with no limbs succeed**](http://www.wishtv.com/news/local/marion-county/k-9-assistant-help-indiana-teen)

Brandon Scott was born without most of his four limbs due to a rare disease, but with the help of his service dog, Rona, he recently graduated from college and is planning a career in sports media or public relations. Rona was trained by Canine Companions for Independence and has been by Scott's side since he applied for a dog as a sixth-grader. (6/27) *Acquired from Animal Health Smartbrief.*  <http://www.wishtv.com/news/local/marion-county/k-9-assistant-help-indiana-teen>

[**H3N2v swine influenza infects 4 visitors to Ind. county fair**](http://www.wishtv.com/news/local/north-central/4-contract-swine-flu-from-grant-co-fair)

Four people contracted swine flu after visiting the Grant County Agricultural Fair last week, according to state health officials. Grant County Health Department officials say all individuals visited the fair prior to the illness and at least two had contact with swine. The State Board of Animal Health found 13 pigs that test positive for the H3N2v strain of the virus, known as swine flu. (6/27) *Acquired from Animal Health Smartbrief.* <http://www.wishtv.com/news/local/north-central/4-contract-swine-flu-from-grant-co-fair>

[**Canadian man succumbs to hantavirus infection**](http://www.ctvnews.ca/health/saskatchewan-man-s-death-linked-to-hantavirus-health-officials-1.1342447)

Health officials say a man in west-central Saskatchewan has died of complications stemming from the hantavirus. No details are being released other than that the man lived in the Heartland Health Region, and officials say a second death in the same health region is being investigated to determine if it was also caused by the virus. (6/26) *Acquired from Animal Health Smartbrief.* <http://www.ctvnews.ca/health/saskatchewan-man-s-death-linked-to-hantavirus-health-officials-1.1342447>

[**Understanding anthrax**](http://www.livescience.com/37755-what-is-anthrax-bioterrorism.html)

Anthrax is a zoonotic bacterial disease caused by Bacillus anthracis that infects a number of mammalian species, including humans. The most common form in humans is cutaneous anthrax, but gastrointestinal and respiratory disease, the most deadly form, also occur. Because it's a very durable pathogen and relatively easy to maintain in a lab, anthrax has been used as a terrorism agent, notably in Japan in 1993 and in the U.S. in 2001, where it killed five people and infected 17 others. (6/26) *Acquired from Animal Health Smartbrief.* <http://www.livescience.com/37755-what-is-anthrax-bioterrorism.html>