**One Health News Bits**

November 26, 2012 (d)

[**Facing anti-malaria nets, mosquitoes alter habits**](http://in.reuters.com/article/2012/09/19/us-anti-malaria-idINBRE88I10020120919)

Insecticide-treated bed nets are considered a central weapon in the global fight against malaria - an infectious disease transmitted by parasite-carrying mosquitoes. Malaria kills more than 650,000 people a year, according to the World Health Organization - most of them babies and children in sub-Saharan Africa. In the new study, French researchers zeroed in on mosquito behavior before and after all households in two African villages were given insecticide-treated nets. (9/19)

[**Changes in *Anopheles funestus* biting behavior following universal coverage of long-lasting insecticidal nets in Benin**](http://jid.oxfordjournals.org/content/early/2012/09/20/infdis.jis565)

Behavioral modification of malaria vectors in response to vector control methods is of great concern. We investigated whether full coverage of long-lasting insecticide-treated mosquito nets (LLINs) may induce a switch in biting behavior in Anopheles funestus, a major malaria vector in Africa.

[**Genome Comparison casts light on dark areas of DNA**](http://www.nih.gov/researchmatters/october2011/10242011genome.htm)

A massive effort to sequence and compare 29 mammalian genomes has shed new light on the “dark matter” of the genome, the over 98% of DNA that doesn’t code for proteins. The DNA that lies outside of gene sequences was once called “junk DNA.” But researchers now know that these non-coding regions have important biological functions.

[**Circadian changes in long noncoding RNAs in the pineal gland**](http://www.pnas.org/content/109/33/13319.short?rss=1)

Long noncoding RNAs (lncRNAs) play a broad range of biological roles, including regulation of expression of genes and chromosomes. Here, we present evidence that lncRNAs are involved in vertebrate circadian biology.

[**New SARS-related virus investigated by health officials**](http://www.msnbc.msn.com/id/49145381/ns/health-health_care/#.UGvuSE3A-Sr)

A person in Saudi Arabia has died and a man from Qatar who recently visited Saudi Arabia has been hospitalized with a new coronavirus, a virus in the same family as severe acute respiratory syndrome, which killed some 800 people worldwide in 2002. Officials say they are investigating other possible cases but can't yet say whether there is a public health threat. (9/24)

[**Next human pandemic likely to emerge from animals**](http://www.nytimes.com/2012/09/23/opinion/sunday/anticipating-the-next-pandemic.html)

Many notable human infectious disease outbreaks in recent history have come from animals, including influenza, AIDS, Ebola and hantavirus, writes author David Quammen. He adds that experts agree the next major pandemic disease is likely to be an RNA virus that originates in animals and develops the ability to infect and be passed among humans. (9/22)

[**Va. State veterinarian stresses importance of rabies barrier**](http://washingtonexaminer.com/the-3-minute-interview-dr.-julia-murphy/article/2508889#.UGvuvU3A-Sp)

According to Virginia state public health veterinarian Julia Murphy, the state typically has 500-600 annual cases of rabies in wildlife, mostly raccoons, skunks and foxes, and there have been no human cases in the country this year. Dr. Murphy says vaccinating pets for rabies creates a barrier between wildlife, the main rabies reservoir, and humans. (9/24)

[**Veterinarians: More than just “animal doctors”**](http://www.aardvarks2zebras.org/?utm_source=smartbrief&utm_medium=email)

It's easy to get bogged down into thinking that physicians only take care of people and veterinarians only take care of animals, but that's far from the truth. Veterinarians play critical roles in animal and human health, but these roles are often overlooked or unrecognized. To learn more about the role veterinary medicine plays in "One Health" — not just animal health but its impact on human and environmental health — [visit AVMA's Aardvarks to Zebras Web site](http://www.aardvarks2zebras.org/?utm_source=smartbrief&utm_medium=email).

[**Mountain Gorilla Veterinary Project treats endangered gorillas**](http://www.chicagonow.com/steve-dales-pet-world/2012/09/gorilla-doctors-help-to-save-mountain-gorillas/)

Veterinarians work to sustain the world's population of mountain gorillas, estimated at 780, in Congo, Uganda and Rwanda as part of the nonprofit Mountain Gorilla Veterinary Project. Veterinarians treat gorillas injured in traps set for other wildlife but also note that infectious diseases passed to gorillas from tourists are a health concern. "Being such a close relative to people, gorillas are susceptible to many of the same viruses and infectious disease that we are, and often more susceptible since they don't have any immunity to these things," said veterinarian Dawn Zimmerman, regional veterinary manager of the organization. (9/25)

[**Pets shed light on possible human health risks**](http://www.environmentalhealthnews.org/ehs/news/2012/pets-and-environmental-health)

Because animals share the house, furniture, lawn and other space with humans, they can serve as sentinels for diseases and health threats that may be linked to those shared environments. Studies have shown connections between household products such as flame retardants and lawn chemicals and diseases in pets, findings that may help both pets and people. "People are beginning to realize the untapped resource that companion animals present for research in human health," said veterinarian Rodney Page, director of the Colorado State University Animal Cancer Center.  (9/25)

[**Parasites pose often invisible threat to pets, humans**](http://www.highlinetimes.com/2012/09/24/opinion/don%E2%80%99t-worm-out-deworming-your-pets)

Many owners believe because they live in a certain climate or can't see signs of infection, parasites aren't a problem, writes veterinarian Tram Le. On the contrary, Dr. Le says, parasite eggs are microscopic and only shed intermittently, yet they pose serious, sometimes deadly, health risks for people and pets. Educating children, using proper hygiene and obtaining regular, preventative veterinary care, including serial fecal exams and deworming treatments, will help prevent parasite infections.  (9/24)

[**Cats help alert couple to carbon monoxide leak**](http://www.coshoctontribune.com/article/20120925/NEWS01/120925003/Cat-helps-save-Ohio-couple-from-carbon-monoxide-poisoning?odyssey=tab%7Ctopnews%7Ctext%7CFrontpage&nclick_check=1)

The cat, who was dropped off at the farm of Rod and Michelle Ramsey, paid his owners back by saving their lives last week. Carbon monoxide, a colorless, odorless toxic gas, was filling their home. Rod and Michelle had headaches. All they wanted to do was sleep. Tiger wouldn't let them. (9/25)

[**Antibiotic-resistant pathogens persist in antibiotic-free pigs**](http://www.sciencedaily.com/releases/2012/09/120917152053.htm)

Researchers from North Carolina State University have found identical strains of antibiotic-resistant Campylobacter Coli (C. coli) in both antibiotic-free (ABF) and conventionally raised pigs. This finding may indicate that these antibiotic-resistant pathogens can persist and thrive in the environment, regardless of antimicrobial usage by pork producers. (9/17)

[**How dogs fight cancer**](http://blogs.smithsonianmag.com/ideas/2012/09/how-dogs-fight-cancer/)

 Doctors and veterinarians are working together more than they ever have before, exchanging notes and insights about their research and seemingly dissimilar patients. “Dogs live side-by-side in our environments with us,” notes Elaine Ostrander, genetics researcher for the National Human Genome Research Institute at the National Institutes of Health. “They drink the same water, they breathe the same air, they’re exposed to the same pesticides and they often eat some of the same food.” Now, their species is becoming a key weapon in fighting human diseases, particularly cancer. (9/17)

[**New hemorrhagic virus related to Ebola and rabies, research finds**](http://vitals.nbcnews.com/_news/2012/09/27/14127587-new-virus-in-africa-looks-like-rabies-acts-like-ebola?lite)

Scientists have sequenced a newly identified virus that killed two teenagers in Congo in 2009 and infected at least two nurses, finding that it is related to both Ebola and rabies, two severe, devastating diseases. Scientists suspect the Bas-Congo virus, which causes an acute hemorrhagic fever, may be transmitted by biting insects or bats as well as contact between humans. "This is probably the tip of the iceberg. I believe there are many, many more of these emerging viruses that have yet to be discovered," said Dr. Charles Chiu of the University of California, San Francisco. (9/27)

[**Lungworm isn’t the usual species found in Maine moose, study finds**](http://bangordailynews.com/2012/09/28/outdoors/university-of-maine-research-tackles-issue-of-lungworm-in-moose/?ref=latest)

Biologists monitoring Maine's moose, which are sometimes found dead infested with ticks and lungworms, had assumed the worm was a common parasite, but according to new research, the worms more closely resemble a species found in red deer and fallow deer in Sweden and red deer in New Zealand. Veterinarian Anne Lichtenwalner, director of the University of Maine Animal Health Laboratory, and UM graduate Darryl Ann Girardin used DNA analysis to make the discovery. Finding a new parasite in an unexpected host animal is concerning: "They're hitchhikers, and now they're suddenly adapting what they do to a new food source — us [in cases of swine or avian influenza], or the moose in this case — they cause more pathogenicity," said Dr. Lichtenwalner. (9/28)

[**Creutzfeldt-Jakob disease considered in woman’s death**](http://www.spokesman.com/stories/2012/sep/28/womans-brain-tissue-to-be-tested-for-disease/)

Disease investigators have sent a brain tissue sample of a deceased 32-year-old Spokane woman to a national research lab to be tested for Creutzfeldt-Jakob disease, an incurable condition that has multiple variants, including one called mad cow. An autopsy of Amanda Greenwalt Wheaton noted that CJD was a potential diagnosis. She died Aug. 24. (9/28)

[**EEE virus overwinters in snakes, study finds**](http://www.livescience.com/23619-venomous-snakes-harbor-brain-swelling-virus.html)

Recent research indicates the Eastern equine encephalitis virus survives the winter in snakes. The reptiles do not become sick, but researchers believe their slowed immune systems during hibernation can't eradicate the virus. Mosquitoes likely pick up the virus from snakes when the reptiles emerge from hibernation and spread it to other species, including humans. About six cases of EEE occur in humans every year in the U.S., resulting in severe brain inflammation that can cause disability or death, according to the CDC. The new research may lead to targeted eradication of those mosquito species that feed on the snakes early in the year. (10/1) <http://www.livescience.com/23619-venomous-snakes-harbor-brain-swelling-virus.html>

[**North Dakota reports first case of bovine anthrax this year**](http://www.kfyrtv.com/News_Stories.asp?news=59553)

The North Dakota State University Veterinary Diagnostic Laboratory confirmed a case of anthrax in a cow, the first in the state this year. The combination of short grasses and parched pastures makes anthrax spore ingestion more likely, according to state veterinarian Susan Keller. Dr. Keller advised cattle owners to consult with a veterinarian about the anthrax vaccine for their animals. (10/1) <http://www.kfyrtv.com/News_Stories.asp?news=59553>

[**Tiny turtles pose big threat to children**](http://shine.yahoo.com/healthy-living/pet-turtles-blamed-salmonella-outbreak-crackdown-kids-favorite-173200897.html)

It's illegal to sell pet turtles with shells shorter than 4 inches because they have been linked to zoonotic salmonella infections, according to the FDA. The CDC reports that among recently infected people, 63% are 10 or younger and 29% are younger than 1. Younger children are most at risk because they tend to handle the animals, which carry salmonella from their intestinal tract on their bodies, and then touch their mouths, according to veterinarian Joseph C. Paige, an FDA Center for Veterinary Medicine consumer safety officer. (10/1) <http://shine.yahoo.com/healthy-living/pet-turtles-blamed-salmonella-outbreak-crackdown-kids-favorite-173200897.html>

[**Woman treated after being attacked by potentially rabid fisher**](http://news.providencejournal.com/breaking-news/2012/10/lincoln-woman-being-treated-for-rabies-after-attack-by-fisher.html)

Traci Chartier was bitten by what she believed to be a fisher when she tried to shoo it away from her dog. Chartier is now in Rhode Island Hospital being treated for an infection and receiving precautionary shot for rabies. The wild animal ran off. (10/1) <http://news.providencejournal.com/breaking-news/2012/10/lincoln-woman-being-treated-for-rabies-after-attack-by-fisher.html>

[**Advances mean that scientists can identify emerging diseases faster than ever**](http://www.npr.org/blogs/health/2012/10/03/162150791/why-experts-can-pounce-on-new-diseases-faster-as-they-emerge)

It's been a decade since SARS infected 8,000 people globally, killing 900, and public health monitoring has come a long way since then. Scientists are more prepared than ever to identify and help stop the spread of emerging diseases. Experts around the world now have rapid access to information, thanks to communication and technology advancements including HealthMap, a website tracking disease outbreaks in real time; the International Health Regulations, which mandate reporting of outbreaks; and advances in genetic sequencing. "Communication about health-related issues just travels with the speed of light today," said infectious disease specialist and physician William Schaffner of Vanderbilt University. (10/3) <http://www.npr.org/blogs/health/2012/10/03/162150791/why-experts-can-pounce-on-new-diseases-faster-as-they-emerge>

[**People can pass influenza to pets**](http://www.ktvz.com/news/New-twist-You-could-give-your-dog-cat-the-flu/-/413192/16843884/-/8uw7sxz/-/index.html)

Dogs, cats and ferrets have contracted influenza from humans, and some of those animals have died, prompting concerns over "reverse zoonosis," the transmission of disease from people to animals. "We worry a lot about zoonoses ... but most people don't realize that humans can also pass diseases to animals, and this raises questions and concerns about mutations, new viral forms and evolving diseases that may potentially be zoonotic," said veterinarian Christiane Loehr, an associate professor at Oregon State University's College of Veterinary Medicine. Dr. Loehr and veterinarian Jessie Trujillo at Iowa State University's College of Veterinary Medicine are researching reverse zoonosis to help predict and prevent emerging threats. (10/3) <http://www.ktvz.com/news/New-twist-You-could-give-your-dog-cat-the-flu/-/413192/16843884/-/8uw7sxz/-/index.html>

[**Leptospirosis: A zoonotic disease in your own backyard**](http://www.kake.com/news/headlines/Wichita-Veterinarians-172587231.html)

Veterinarians in Wichita, Kan., have seen an increase in canine leptospirosis, and they suspect the disease may be as close as pet owners' backyards because urban wild animals such as skunks and raccoons are carrying the illness, said veterinarian Gary Stamps. A disease transmitted by exposure to urine from infected animals, usually via standing water, leptospirosis causes life-threatening kidney problems in dogs. Humans can contract the illness, which causes flulike symptoms and is potentially fatal in people, from wildlife or infected dogs, said veterinarian Mollie Lusk. A vaccine is available for dogs, and early diagnosis and prompt treatment are the best course for dogs and people with the illness. (10/3) <http://www.kake.com/news/headlines/Wichita-Veterinarians-172587231.html>

[**Study: Oral bacteria passed between dogs and their owners**](http://online.wsj.com/article/SB10000872396390443294904578044453419380668.html?mod=dist_smartbrief)

In a Japanese study, researchers evaluated oral bacteria in people and dogs, finding that the species share microbes. According to the study, 10 bacteria common to human oral plaques were present in dogs, while a bacterium species generally relegated to the canine mouths was found in some dog owners. Bacterial sharing was greater in cases where contact between humans and dogs was high, but even low-contact relationships resulted in transmission of bacteria between species. (10/8) <http://online.wsj.com/article/SB10000872396390443294904578044453419380668.html?mod=dist_smartbrief>