**One Health News Bits\***

**3-6-12**

[**Deforestation, illegal trade put Africa’s parrots at risk**](http://newswatch.nationalgeographic.com/2011/12/19/wildlife-trade-and-uncontrolled-deforestation-threaten-africa%E2%80%99s-parrots%E2%80%A6/)

Africa’s parrots are a unique assemblage of lovebirds, *Poicephalus* parrots, grey parrots, and Rose-ringed parakeets. All species are now under serious threat from escalating trade due to emerging markets in the Far East and habitat loss due to deforestation, agricultural development, climate change, and poor land management practices. South Africa has emerged as a global hub for the wild-caught bird trade with traders and importers taking advantage of an advanced avicultural industry in a country with under-resourced enforcement and permit officers. (12/19)

[**H5N1 is confirmed in 3 Hong Kong birds**](http://www.bbc.co.uk/news/business-16280698)

Health officials in Hong Kong confirmed that three birds, one dead chicken at a market and two dead wild birds, were infected with the deadly influenza strain H5N1. Chicken imports have been halted until the origin of the market chicken is known, and the city's flu status has been raised to "serious." Officials will likely cull more than 17,000 chickens to contain the disease. (12/20)

[**Influenza is identified in dead New England seals**](http://bostonglobe.com/metro/2011/12/20/flu-virus-linked-seal-deaths-off-new-england-coast/CGm1ytfcDbuxc0msgNnT9J/story.html)

Scientists found that H3N8, a type A influenza virus, caused five of the 162 seal deaths that have occurred off the New England coast since September, likely by making the seals susceptible to bacterial pneumonia. Although rare, transmission of H3N8 to humans from animals has occurred, and officials are cautioning people to keep themselves and their pets away from sick or dead seals. (12/20)

[**Vaccine shows promise in fight against malaria**](http://www.bbc.co.uk/news/health-16253364)

Early testing of a vaccine targeting the PfRh5 malaria protein has shown promise in animal studies, and human clinical trials are the next step, an Oxford researcher said. "We have found a way of making antibodies that kill all different strains of malaria parasites," said Dr. Sandy Douglas, primary author of a study reporting the development. (12/20)

[**HIV vaccine successful in animals is ready for human trials**](http://www.vancouversun.com/health/Canadian%2Bresearchers%2Bstart%2Bclinical%2Btrials%2Bvaccine%2BJanuary/5887090/story.html)

Canadian researchers working on a vaccine to prevent HIV announced Tuesday they have received approval from the U.S. Food and Drug Administration to begin clinical trials on humans in January. A team led by Dr. Chil-Yong Kang, a virologist at the University of Western Ontario in London, Ont., plans to start Phase 1 of clinical trials on 40 HIV-positive patients to test the safety of the vaccine. A total of three phases are involved in administering the vaccine. (12/20)

[**“Reverse zoonosis” is responsible for deadly coral infection**](http://www.physorg.com/news/2011-12-coral-killer.html)

There has been identified the first marine disease caused by humans, and it's proving fatal for Elkhorn coral in Florida. The disease is White pox, which causes a slowing of growth, followed by white patches of tissue loss that occurs all over the coral colony. Many diseases, such as swine flu, [avian flu](http://www.physorg.com/tags/avian%2Bflu/) and HIV are known as zoonotic, moving from animals to humans. Sutherland has identified a marine disease that is a "reverse zoonosis." "This is the first example of a [human pathogen](http://www.physorg.com/tags/human%2Bpathogen/) infecting a [marine organism](http://www.physorg.com/tags/marine%2Borganism/)," she says. (12/20)

[**Smokers risk pets’ lives, too**](http://www.standard.net/stories/2011/12/20/secondhand-smoke-harming-pets)

Encouraged by a recent survey that found 30% of owners said they would try to quit smoking if it harmed their pets, veterinarian Clayne White and health official Gloria Yugel are educating owners on the dangers of secondhand smoke for pets. Studies have found that virtually all pet species, including birds, rabbits, guinea pigs, dogs and cats, are susceptible to respiratory conditions and certain cancers as a result of exposure to secondhand smoke. (12/20)

[**Human noise may cause decompression sickness in sea mammals**](http://www.dailymail.co.uk/sciencetech/article-2077123/Now-thats-just-bad-design-Not-whales-surface-breathe-bends-just-like-human-divers.html)

Scientists discovered nitrogen bubbles in the tissues of beached marine mammals that died and think that stresses from humans may have induced decompression sickness in these animals, leading to their deaths. "An apparent threat to these animals, such as sudden high levels of noise, could cause them to react; altering their dive trajectory or eliciting a fight-or-flight response -- that causes them to exceed their normal coping mechanisms for the prevention of the bends," said lead researcher Dr. Sascha Hooker. (12/21)

[**A history of H5N1’s discovery and spread**](http://www.cbc.ca/news/canada/story/2011/12/21/f-bird-flu-background.html)

H5N1, a highly pathogenic avian influenza virus, was first seen in Asia in a bird in 1996 and in a human in Hong Kong in 1997. Slowly, the virus has spread, with human infections reported in 15 countries, and it was the cause of death in Thai zoo animals that ingested chicken carcasses. This article traces avian influenza's impact and explores its potential for human-to-human transition. (12/21)

[**Certain bats are resistant to white-nose syndrome**](http://www.washingtonpost.com/national/health-science/little-brown-bats-found-that-appear-to-resist-disease-that-has-devastated-species/2011/12/21/gIQAwJD99O_story.html)

There is good news from Vermont this Christmas for the little brown bat, a threatened species that’s hanging on to existence “by a tiny little fingernail,” said a state conservationist who’s watched them die by the millions in the Northeast from a mysterious disease. Scientists who visited more than a dozen sites where the bats nest in the western part of the state found thriving colonies that appear to be resistant to [white-nose syndrome](http://www.washingtonpost.com/wp-dyn/content/article/2010/12/21/AR2010122105861.html), a disease caused by an aggressive fungus. Theirs and other species of bats’ survival is crucial for the agricultural industry in combatting mosquito/pest control. (12/21)

[**Scientists consider contraception to control elephant population**](http://www.scientificamerican.com/article.cfm?id=the-elephant-in-the-room)

Decimated elephant populations have rebounded on several South African reserves, where they may soon outgrow the landscape's resources. In an effort to stem population growth, scientists are considering use of the widely tested immunocontraceptive porcine zona pellucida vaccine, or PZP, instead of culling. (12/22)

[**New Orthobunyavirus isolated from infected cattle and small livestock ─ potential implications for human health**](http://www.ecdc.europa.eu/en/publications/Publications/Forms/ECDC_DispForm.aspx?ID=795)

In early November 2011, a new orthobunyavirus, provisionally named the Schmallenberg virus, was detected by metagenomic analysis and virus isolation from infected cattle in Germany. Similar findings have been reported from the Netherlands, where lambs have also been infected with the same virus in utero, resulting in congenital malformations. Epidemiological, immunological and microbiological investigations are ongoing in Germany and the Netherlands. Improved diagnostic methods, including serology, will facilitate identification of newly-affected holdings and geographic areas. (12/22)

[**Bird songs may improve mood and concentration**](http://www.mnn.com/earth-matters/animals/blogs/can-bird-songs-boost-your-brain)

A new study aims to examine the effect of bird songs on the human brain in an effort to determine whether the melodies improve mood and brain function. The three-year study will examine the effects of different species and whether recorded calls have the same effect as live birds. (12/22)

[**Reindeer see UV light; study may shed light on protecting human eyes**](http://news.discovery.com/animals/reindeer-uv-vision-santa-111223.html)

Unlike people, reindeer can see ultraviolet light -- which probably allows them to detect food and predators in a mostly white environment. The study makes reindeer the first large mammal known to have UV vision. "Reindeer are mammals and what we find may be related to humans," said Karl-Arne Stokkan, an Arctic biologist at the University of Tromsø in Norway. "In the view of potential climate change, we have also realized that reindeer may be an important 'signal-animal' because of their strong adaptation to an environment believed to suffer the biggest changes." (12/22)

[**Miniature horse with prosthetic leg inspires disabled children**](http://www.star-telegram.com/2011/12/23/3616520/in-texas-a-miniature-horse-with.html)

A miniature horse with a deformed leg gallops again with the help of a one-of-a-kind, $14,000 prosthesis designed and donated by ProsthetiCare of Fort Worth. Children with prosthetics and other handicaps learn important an important message of perseverance. "He just knows when people are different and the kids just take to him," owner Bob Williams said. "He gives them hope." (12/23)

[**CDC reports 12 cases of H3N2 influenza strain since August**](http://www.cbsnews.com/8301-504763_162-57348429-10391704/swine-flu-found-in-five-states-how-to-stay-safe/)

The CDC reported that 12 people in five states have contracted the swine-origin influenza strain H3N2 since August. The agency called on state health labs to report additional cases immediately. All 12 patients, 11 of whom are children, recovered. The most recent cases include a man who worked with pigs, and two children who go to the same day care center. (12/26)

[**Scientists debate man-made airborne influenza strain**](http://www.nytimes.com/2011/12/27/science/debate-persists-on-deadly-flu-made-airborne.html?_r=1)

Scientists at the Erasmus Medical Center in the Netherlands created an airborne version of the H5N1 strain of influenza in ferrets last summer, setting off a still-raging ethical debate. U.S. government advisers have urged scientific journals not to publish the details for fear they would fall into the hands of terrorists. Critics say scientists should never have been allowed to create the more powerful bug, but virologist Ron Fouchier says the information is important because similar mutations can happen in nature. (12/26)

[**An epidemiologist’s overview of rabies**](http://www.theatlantic.com/health/archive/2012/01/the-state-of-rabies-treating-a-disease-that-often-leads-to-death/250749/)

The U.S.  is exceptional when it comes to rabies because aggressive vaccination of dogs has largely relegated rabies to the realm of wildlife, while canines remain the main source of human rabies exposure in other countries, writes Dr. Larry Madoff, director of the Division of Epidemiology and Immunization at the Massachusetts Department of Public Health. In this article, Dr. Madoff comments on public awareness of potential exposures as well offers an overview of the virus and post-exposure prophylaxis procedures. (1/3)

**Comparative Research**

**3-6-12**

[**Genetic mutations are involved in some pancreatic cancers**](http://www.stanforddaily.com/2012/01/10/research-links-protein-complex-with-pancreatic-cancer/)

About one-third of pancreatic cancers in one study have a genetic alteration of the protein SWI/SNF that essentially turns off a protective protein, according to new research in mice. When reactivated by Stanford researchers, the protein actually slowed or completely halted the growth of some pancreatic cancers. "This is really strong genetic evidence that this complex plays a role in pancreatic cancer," said senior study author Jonathan Pollack. (1/10)

[**Naturally occurring hormone helps obesity in mice study**](http://www.bloomberg.com/news/2012-01-11/exercise-related-hormone-may-lead-to-obesity-therapy-harvard-study-says.html)

Irisin, a muscle cell hormone produced during exercise, decreased fat and regulated blood sugar when injected into obese, pre-diabetic mice, a study from Harvard found. The findings may lead to treatments for obese people who cannot exercise and for people with diabetes. (1/11)

[**Exercise helps cells clean house**](http://the-scientist.com/2012/01/18/cellular-workout/)

A study in mice found that exercise induces autophagy, a process whereby cells rid themselves of old parts and proteins, which helps ward off conditions such as diabetes, cancer and heart disease. Notably, the researchers further discovered that this process occurs not just in muscle cells during exercise, but also in liver and pancreas cells. (1/12)

[**Stem cells have new myelin form, mice study finds**](http://www.newscientist.com/article/mg21328475.400-ms-damage-washed-away-by-stream-of-young-blood.html)

When mice with myelin sheath damage, the same problem in people with multiple sclerosis, were injected with stem cells from younger, healthy mice, macrophages cleared away the debris around the myelin sheaths that prevents regeneration, a University of Cambridge study found. (1/14)

[**Parasites may be good medicine**](http://www.livescience.com/17923-parasitic-worms-wound-healing.html)

A recent study in mice found that the gastrointestinal parasite Nippostrongylus brasiliensis induces the immune system to produce wound-healing substances. Helminthic therapy, or the use of parasites to combat diseases of the immune system, has been studied for years using the pig parasite Trichuris suis to treat inflammatory diseases, but this study is the first to find the wound-healing byproducts of parasitic infection. Scientists hope to use that information to treat human ailments. (1/15)

[**Genetic study in dogs sheds light on human disease**](http://news.sciencemag.org/sciencenow/2012/01/sit-stay-scratch.html)

A recent genetic study in golden retrievers found that mutations in the recessive gene PNPLA1 are associated with ichthyosis, a scaly skin condition in both dogs and humans that can be deadly in some forms in people. Inbreeding of dogs for certain desirable traits also propagates deleterious genes, but in this case, scientists used this problem in dogs to help find a clue to treating human disease. (1/15)

[**New Ebola research finds protein targeted by the virus**](http://www.nytimes.com/2012/01/17/health/npc1-protein-may-give-ebola-its-opening.html)

Scientists from several facilities collaborated on research and found that mice engineered to lack a cellular protein called NPC1, which helps regulate cholesterol, survived infection with an Ebola-related virus. Ebola, a deadly hemorrhagic virus that affects people, causes up to 90% mortality. These findings may one day lead to new treatments for and prevention of Ebola. (1/16)

[**Pig pancreatic cells may lead to cure for diabetes**](http://minnesota.publicradio.org/display/web/2012/01/17/diabetes-part2/)

Germ-free pigs raised in a special environment may soon provide pancreatic islet cells, insulin-producing pancreatic cells, that could cure diabetes in humans. The pig project is part of a collaboration between the University of Minnesota and the Mayo Clinic, called Decade of Discovery, which aims to cure diabetes within 10 years. Other aspects of the project include reprogramming skin cells to act like islet cells and an artificial pancreas. (1/17)

[**New drug for spinal cord damage is tested in dogs**](http://www.sciencedaily.com/releases/2012/01/120118155338.htm)

A drug that mitigates spinal cord damage after physical injury is being tested on dogs with short legs and long torsos, such as dachshunds. The dogs in the study, often paralyzed from the waist down, will be injected with the drug, which has already been successful in mice, and monitored for progress. Researchers hope the drug may one day help humans suffering from spinal cord damage.  (1/18)

[**Enzyme helps pathogens enter cells, mice study finds**](http://www.thelantern.com/campus/researchers-at-ohio-state-may-have-found-new-disease-preventing-drugs-1.2745960#.T00Qy_FrMTZ)

Ohio State University researchers found that mice lacking PI3K gamma, an enzyme that recruits white blood cells to the site of infection, are resistant to infection from certain parasites, including leishmaniasis, a tropical disease of animals and humans transmitted by sand flies. The hypothesis now being tested is that certain pathogens take advantage of the enzyme's function, using it to enter cells and cause infection. If the mechanism of entry into the cell is blocked, the pathogen cannot cause disease. (1/19)

**[Researches develop nerve repair technique in rodent model](http://www.statesman.com/news/local/ut-scientist-has-found-way-to-get-paralyzed-2189031.html)**

University of Texas at Austin neurobiology professor George Bittner's research identified a means to rapidly repair acute nerve injury. Using a combination of microsurgery and chemicals, Bittner and colleagues re-established motor function in rats whose sciatic nerves were severed. In the study, paralyzed rats were able to move their legs several minutes after treatment. (2/20)

[**Stem cell study in mice may lead to new fertility hope**](http://www.bbc.co.uk/news/health-17152413)

Recent research from Massachusetts General Hospital identified stem cells in women that lead to egg production in the ovaries, challenging the long-held belief that women are born with a limited number of eggs. Although more research is needed, these findings may provide new avenues for treating infertility. (2/26)

[**Scientists reverse memory loss in mice**](http://consumer.healthday.com/Article.asp?AID=662245)

A recent Massachusetts Institute of Technology study in mice with an Alzheimer's-like disease found that high levels of histone deacetylase 2 (HDAC2) are associated with memory loss and blocking buildup of the protein can prevent memory loss. The findings may eventually provide a new avenue for treating Alzheimer's disease in people.  (2/29)

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