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Mosquito survey identifies reservoir of disease
A large scale, five year study of mosquitoes from different ecological regions in Kenya, including savannah grassland, semi-arid Acacia thorn bushes, and mangrove swamps, found a reservoir of viruses carried by mosquitoes (arboviruses) that are responsible for human and animal diseases. This research, published in BioMed Central's open access journal *Virology Journal*, highlights the need for continued surveillance in order to monitor the risk of disease outbreaks. (5/10) *Acquired from Animal Health Smartbrief.*
http://www.sciencedaily.com/releases/2013/05/130510075527.htm?goback=.gde_35214_member_240007745

Veterinarians in Australia not adequately protecting themselves from zoonoses
The infection control practices of veterinarians are inadequate with almost 50 percent of vets contracting infections from animals during their career, research led by the University of Sydney has found. "Not using appropriate protection when necessary is just like having unprotected sex with a stranger and thinking that it will be alright," Dr Dhand said. (5/13) *Acquired from Animal Health Smartbrief.*
http://phys.org/news/2013-05-inadequate-infection-vets-widespread.html

Frog once used in pregnancy testing may have played role in spread of fungusA frog once widely imported and bred by hospitals because it lays eggs when injected with a pregnant woman's urine may have brought a deadly amphibian infection to the United States. African clawed frogs infected with the fungus*Batrachochytrium dendrobatidis,*or Bd, could have brought the fungus to California shores, according to a new study. The frogs, *Xenopus laevis*, carried the infection in Africa decades before it showed up in North America, the research finds. (5/15) *Acquired from Animal Health Smartbrief.*
http://www.livescience.com/32043-pregnancy-test-frog-spread-fungus.html

Emerging coronavirus infects nurses who had contact with patients
Two health workers in Saudi Arabia have become infected with a potentially fatal new SARS-like virus after catching it from patients in their care - the first evidence of such transmission within a hospital, the World Health Organization said.
The new virus, known as novel coronavirus, or nCoV, is from the same family of viruses as those that cause common colds and the one that caused the deadly outbreak of Severe Acute Respiratory Syndrome (SARS) that emerged in Asia in 2003. (5/15) *Acquired from Animal Health Smartbrief.*
http://medcitynews.com/2013/05/two-nurses-catch-novel-coronavirus-from-patients-in-saudi-arabia/

Parasite that causes malaria increases mosquitoes' affinity for humans
Researchers found that infected insects were three times more likely to be lured towards a human scent. They believe that the deadly parasites are seizing control of their biting hosts and boosting their sense of smell. The research is published in the journal Plos One. (5/16) *Acquired from Animal Health Smartbrief.*
http://www.bbc.co.uk/news/science-environment-22544145

Yellowstone-area bison deaths raise worries about livestock disease
On Thursday, two dead bison were found near rental cabins in the Beattie Gulch area, with one in the Yellowstone River and one on the river's edge. Later that day, a third bison carcass was found off of Highway 89, but that was gone by Friday. Kathryn QannaYahu with the Gallatin Wildlife Association said that bison carcasses also were found by hikers just inside the park's northern border, leading to suspicions that the deaths could have come from a disease domestic sheep carry. (5/18) *Acquired from Animal Health Smartbrief.* http://helenair.com/news/local/state-and-regional/state-looking-into-two-bison-deaths-of-two-bison/article_915c2f1a-bf7f-11e2-82c6-001a4bcf887a.html

Camels: One of Australia's most devastating invasive species
An estimated 750,000 camels wreak havoc in the Australian outback. Brought to the country in the 19th century as work animals, their services were no longer needed as the internal combustion engine became widely used. Today, the animals decimate wild and agricultural lands, drinking water needed by farms and leaving a trail of damage in their wake. "Camels are almost uniquely brilliant at surviving the conditions in the outback. Introducing them was short-term genius and long-term disaster," said writer Simon Reeve. (5/18) *Acquired from Animal Health Smartbrief.* http://www.bbc.co.uk/news/magazine-22522695

An ounce of prevention
With patients admitted to hospitals suffering from coughs, progressing to fevers, brain inflammation and then death within a week, cases like these of H7N9 influenza in China illustrate both how far the world has come, and how far it still has to travel, on the journey towards building a system that can identify new infectious diseases and snuff them out before they become threatening. As the case of AIDS shows, a novel pathogen that spreads around the world unnoticed by the medical authorities can wreak havoc. (4/20) http://www.economist.com/news/science-and-technology/21576375-new-viruses-emerge-china-and-middle-east-world-poorly-prepared

Demented dogs do their bit for science
Ageing canines with symptoms such as memory loss and disorientation are preparing to take part in a world-first trial at the University of Sydney. Associate Professor Michael Valenzuela says 12 per cent of dogs older than 10 develop a form of dementia similar to the type that affects humans. (5/17) http://www.theaustralian.com.au/higher-education/demented-dogs-do-their-bit-for-science/story-e6frgcjx-1226644721474

Pet ownership and cardiovascular risk
This AHA Scientific Statement by Circulation and the American Heart Association addresses the prevalence of cardiovascular disease in populations and the benefits pet ownership can create. Specific CVD-related health issues addressed include systemic hypertension, hyperlipidemia, obesity, and more. (5/9) http://circ.ahajournals.org/content/early/2013/05/09/CIR.0b013e31829201e1.full.pdf+html

Smarter phones solve age-old health challenges in Tanzania
The grassy, dry bottom of an ancient volcanic crater in northern Tanzania that is home to more than 25,000 wild animals is the last place on earth visitors might expect to use a smartphone. But researchers in the area not only use smartphones in the crater to monitor human and animal health, they have figured out a way to leverage the technology to transform a sluggish and inefficient public health system. (5/20)
http://www.cahfs.umn.edu/appliedresearch/globalohimplement/CompellingStories/smartphones-tanzania/index.htm

Comparative Research One Health News Bits
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Marine mammals infected with H1N1, study finds
According to new research, the 2009 pandemic H1N1 influenza strain surfaced in elephant seals a year later. The University of California, Davis, One Health Institute and Wildlife Health Center study examined nasal swabs collected from some 900 marine animals between 2009 and 2011 and found H1N1 infection in two elephant seals and antibodies to the virus in 28 more. "The study of influenza virus infections in unusual hosts, such as elephant seals, is likely to provide us with clues to understand the ability of influenza virus to jump from one host to another and initiate pandemics," said researcher Adolfo García-Sastre.(5/15) *Acquired from Animal Health Smartbrief.*
http://www.sciencedaily.com/releases/2013/05/130515174402.htm

Building on animal advances, scientists clone human embryos
Scientists at Oregon Health & Science University said they have successfully cloned human embryos. The embryos serve as a source of stem cells that can be programmed to develop into specific cell types, such as heart cells, the researchers say. In the 1960s, John Gurdon at Oxford University cloned the first animal, a frog, and received a Nobel Prize for his work. (5/15) *Acquired from Animal Health Smartbrief.*
http://www.npr.org/blogs/health/2013/05/15/184223277/how-scientists-cloned-human-embryos

New treatment in dogs with dementia could mean hope for humans
University of Sydney researchers are evaluating a therapy for dementia and Alzheimer's disease using dogs with similar conditions. The study involves harvesting cells from tissue near the dog's stomach, growing millions of progeny cells and transplanting them into the animal's hippocampus, the area of the brain where memories are processed. Researchers expect that within months, signs of dementia will decrease. The study could lead to human trials if successful. (5/17) *Acquired from Animal Health Smartbrief.*
http://www.theaustralian.com.au/higher-education/demented-dogs-do-their-bit-for-science/story-e6frgcjx-1226644721474

Virus shows promise as prostate cancer treatment
Researchers at the Virginia-Maryland Regional College of Veterinary Medicine have found that a virus lethal to chickens could be a promising treatment for prostate

cancer in humans. The Newcastle disease virus is not harmful to humans, and researchers have discovered that a genetically engineered version of the virus kills prostate cancer cells of all kinds. The researchers hope that the development of the engineered virus will not only better fight prostate cancer, but also lessen the side effects commonly associated with prostate cancer hormone treatments and chemotherapy. (4/8) Acquired from AVMA Health News Bytes
http://www.vtnews.vt.edu/articles/2013/04/040813-vetmed-prostatecancer.html

Auburn studying hepatitis vaccine for canine osteosarcoma
The Auburn University Research Initiative in Cancer is conducting a study to assess whether a modified hepatitis vaccine can destroy canine cancer cells. Twenty owned dogs with osteosarcoma that have not yet undergone limb amputation will be involved in the study. Researchers hope to use the technique to treat numerous types of cancer in dogs and humans. "Dogs get skin cancer, dogs get blood cancers that are similar to human cancers, dogs get brain cancers ... similar to human cancers ... so what we learn in dogs is very applicable to humans," said veterinarian Bruce Smith, who directs the initiative. (5/8) *Acquired from Animal Health Smartbrief.*
http://blog.al.com/wire/2013/05/auburn_testing_bone_cancer_tre.html

German shepherd atopic dermatitis gene sheds light on human eczema
Genetics research on eczema has identified a canine mutation linked to higher risk for the inflammatory skin condition in German shepherds; atopic dermatitis in humans may stem from similar mutations. (5/9) *Acquired from Animal Health Smartbrief.*
http://www.medicaldaily.com/articles/15381/20130509/eczema-gene-discovered-german-shepherd-dogs.htm

Malaria hope: bacteria that make mosquitoes resistant
Researchers have found a strain of bacteria that can infect mosquitoes and make them resistant to the malaria parasite. The study, in the journal Science, showed the parasite struggled to survive in infected mosquitoes. (5/9) Acquired by Total e-Clips.
http://www.bbc.co.uk/news/health-22462487

Young blood reverses heart decline in old mice
Out with the old, in with the new. Pumping young blood around old bodies – at least in mice – can reverse cardiac hypertrophy – the thickening and swelling of the heart muscle that comes with age and is a major cause of heart failure. (5/9) Acquired by Total e-Clips. http://www.newscientist.com/article/dn23511-young-blood-reverses-heart-decline-in-old-mice.html

The neurobiology of individuality
Mice that explore more have higher levels of neurogenesis, suggesting a link between experience, brain plasticity, and the emergence of distinct personalities. When a group of genetically identical mice lived in the same complex enclosure for 3 months,

individuals that explored the environment more broadly grew more new neurons than less adventurous mice, according to a study published (5/9) Acquired by Total e-Clips. http://www.the-scientist.com/?articles.view/articleNo/35514/title/The-Neurobiology-of-Individuality/

Dog DNA may yield clues to human eczema

A gene associated with eczema in dogs has been identified, and that might one day lead to better treatments for people with the skin disease, a new study contends. It explores genetically engineered "astrocytes" that have improved rodents' memories and learning capabilities. (5/9) Acquired by Total e-Clips.
http://www.salon.com/2013/05/09/neurosciences_future_mice_with_human_brain_cells_partner/

Animals in research: Zebrafish

Zebrafish are probably not the first creatures that come to mind when it comes to animals that are valuable for medical research. Yet each year more and more scientists are turning to zebrafish to unravel the mechanisms underlying their favorite genetic or infectious disease, be it muscular dystrophy, schizophrenia, tuberculosis or cancer. (5/10) Acquired by Total e-Clips. http://medicalxpress.com/news/2013-05-animals-zebrafish.html#jCp