

One Health News Bits
1/4/2014

[Leaving no trace in the fight against cancer](#)

Dr. John Berg, a veterinary surgeon at the Cummings School of Veterinary Medicine at Tufts University, hopes his research could one day lessen the odds of cancer recurrence in both animals and people. He's testing a new surgical tool developed at the Massachusetts Institute of Technology that will let doctors know whether even a single malignant cancer cell remains after the surgical removal of a cancerous tumor. Berg is using the technology on dogs with cancer, and preliminary results from dozens of cases prove promising. (2/11) *Tufts Now*

<http://now.tufts.edu/articles/'spotlight'-drug-detects-lingering-cancer-cells>

[Dogs and people: Back-to-back in treating spinal injuries](#)

Experimental treatments for spinal cord injuries in dogs conducted at Iowa State University could someday lead to more effective therapies for humans suffering from similar injuries. Dr. Nick Jeffery, a professor of neurology and neurosurgery at the ISU College of Veterinary Medicine, said the new treatment methods he's studying in dogs can offer a more realistic picture of how humans would respond to new treatments. Dogs included in the research suffer from spontaneous spinal injuries and offer a much closer match to human injuries than those produced in laboratory experiments on rats. (11/13) *Iowa State University News Services*

<http://www.news.iastate.edu/news/2013/11/13/jefferyspinalinjury>

[Accordinging Animals Dignity](#)

This is only going to build, because at the same time that scientific advances force us to gaze upon the animal kingdom with more respect, the proliferation of big and little cameras- of eyes everywhere- permits us to eavesdrop not just on animals play but also on animal persecution. Advocates and researchers are determined to virally defeat our animal kingdom and not turn away, or claim ignorance, as easily as we once did. (1/13) *The New York Times*

http://www.nytimes.com/2014/01/14/opinion/bruni-according-animals-dignity.html?nl=todaysheadlines&emc=edit_th_20140114&r=1

[Animals' secrets hold the key to helping humans](#)

Researchers can learn much about human health from studying animals, and not just the mammals to which we're most closely related, writes biochemist Alison Woollard of the University of Oxford. From the tiny *Caenorhabditis elegans* nematode worms that were the first to have their genome mapped, to the *Aequorea victoria* jellyfish that produces a glow-in-the-dark protein enabling scientists to trace proteins through the body, to zebrafish that can repair up to 20% of damaged heart muscles in just weeks, knowledge about the diverse animal kingdom continues to contribute to improving the human condition. (12/28) *BBC*

<http://www2.smartbrief.com/redirect.action?link=http%3A%2F%2Fwww.bbc.co.uk%2Fnature%2F25430552&encoded=eXjpCajgpLCwfxnYcIdzgdCicNBHut>

2014's biggest global health concerns, according to the CDC

The CDC has identified five major public health threats for this year. They include the appearance of new pathogens, as occurred in the country of Georgia last year when a virus related to smallpox surfaced. Globalization of travel and food supplies continues to foster the rapid spread of disease, posing another major threat. Rounding out the list are antibiotic resistance, accidental or intentional release of pathogens from labs or health facilities, and bioterrorism with such agents as anthrax or pneumonic plague. (1/2) *St. Louis Post-Dispatch*

http://www.stltoday.com/lifestyles/health-med-fit/health/health-matters/top-health-threats-in/article_2ca6dee9-a217-5bc6-b811-5ff5022299ff.html

How marine mammals are harbingers of human health threats

Veterinarian Frances Gulland and marine biologists are evaluating marine mammals off the coast of California, fueled by the understanding that data on the animals' health, toxin exposure and other metrics may help protect human health. Harbor seals tend to carry pesticides and other chemicals in their blubber, and they also harbor pathogens, such as vibrio bacteria, that are zoonotic. (1/6) *Contra Costa Times (Walnut Creek, Calif.)/Santa Cruz Sentinel (Calif.)*

http://www.contracostatimes.com/news/ci_24847523/scientists-focus-harbor-seals-samplers-environment

Experts report breakthrough in EEE research

University of Pittsburgh researchers found that Eastern equine encephalitis virus particles hide from a host's immune system by restricting replication, allowing the virus access to the host's brain without alerting the immune system. The deadly zoonotic disease, which causes progressive brain inflammation, is transmitted to humans via mosquitoes.

Although it is rare in the U.S., it is spreading to urban mosquitoes that feed on humans, experts say. The findings could lead to a vaccine. (1/13) *WESA-FM (Pittsburgh)*

<http://wesa.fm/post/pitt-researchers-make-discovery-about-deadly-mosquito-borne-virus>

T. gondii enzyme could be key to treating infected humans

Indiana University School of Medicine researchers have discovered a protein in the toxoplasmosis pathogen that could serve as a target for treatment in infected humans. The CDC estimates some 60 million Americans carry *Toxoplasma gondii*, often contracted through eating contaminated, undercooked meat. The enzyme plays a role in gene regulation, and it shares few similarities with human proteins, making it a good target for medications. The findings may fuel development of a treatment for malaria, which is caused by a parasite that shares similarities with *T. gondii*. (1/7) *Medical News Today*

<http://www.medicalnewstoday.com/articles/270826.php>

CSU veterinary professor takes on cancer in pets and humans

Veterinarian Susan LaRue is the head of the Colorado State University Flint Animal Cancer Center radiation oncology department and also has research and teaching responsibilities. Dr. LaRue's research focuses on the similarities between naturally occurring cancers in pets and humans. She says she is proud of CSU's leading role in radiation oncology, but she laments that too often, students with promising research skills

end up choosing more lucrative positions due to the debt they accrue during veterinary school. (1/15) *The Coloradoan Fort Collins, Colo.*

http://www.coloradoan.com/article/20140114/NEWS01/301140088/Meet-the-professor-Colorado-State-s-LaRue-studies-cancer-in-dogs-and-cats?nclick_check=1

N.J. may allow evacuating families to bring pets on public transportation

New Jersey Gov. Chris Christie may sign a revised bill allowing domestic animals to ride public transportation during emergency evacuations as long as the animal is not a threat to public health. An initial version was rejected by Christie, who called for changes such as specifying conditions under which animals will not be allowed on public transportation and language explaining that passengers with service animals receive priority in such situations. The revised measure has cleared the state Assembly and heads to the Senate.

(1/15) *Asbury Park Press (Neptune-Asbury Park, N.J.)*

<http://r.smartbrief.com/resp/eYAlCajgpLCxeXmdCidzgdCicNtRal?format=standard>

Researcher: Second strain of Powassan virus carried by deer in Maine

A second strain of the Powassan virus could be "something of a game-changer" because it is passed to humans via the deer tick rather than woodchuck ticks, researchers say.

"The problem is it's getting in deer ticks and deer ticks are much more abundant and bite people all the time," said biologist Charles Lubelczyk of the Maine Medical Center Research Institute. An artist in the state recently died from the virus after being bitten by a tick in the fall, when deer ticks are more active. (12/24) *Portland Press Herald (Maine)*

<http://r.smartbrief.com/resp/eWAbCajgpLCwadATCidzgdCicNOdEU?format=standard>

How equine care fits into One Health

Veterinarian Neil Williams explains how the One Health initiative, which addresses the interconnectedness of human, animal and ecological health, applies to horses. Horses exist at the intersection of these factors, interacting with wildlife, the environment, other horses and humans. "We must be forward thinking in our approach to health and realize that the subjects we specialize in are not within a vacuum and that an integrated One Health concept is needed to safeguard the health of horses," Dr. Williams writes. (1/11)

The Horse/Equine Disease Quarterly

<http://r.smartbrief.com/resp/eYmKCajgpLCwvdfJCidzgdCicNnYqe?format=standard>

Understanding cryptosporidiosis

Cryptosporidium parvum is among the most common zoonotic pathogens in the world, causing a severe gastrointestinal infection in humans characterized by potentially life-threatening diarrhea, according to veterinarian Momar Ndao. Water contaminated with fecal matter from infected humans or animals is the main source of infection, and the pathogen can persist in the environment for months, Dr. Ndao explains, adding that one FDA-approved drug can help mitigate symptoms in otherwise healthy individuals. Dr. Ndao's research may lead to new therapies for cryptosporidiosis. (1/8) *News-Medical.Net*

<http://r.smartbrief.com/resp/eYfSCajgpLCwsippCidzgdCicNpsCM?format=standard>

Pathogens piggyback on jet-setting humans, rapidly spreading far-flung diseases

Public officials worry about far-flung diseases—the latest bird flue, the new MERS coronavirus—the incidents above pretty much explain it. In other words, bugs travel or as public health folks like to put it, infectious diseases know no borders. Researches are still looking for these “bugs travels” to prevent contagious infections from person-to-person.

(1/10) *The Edmonton Journal (Alberta)/The Canadian Press*

<http://r.smartbrief.com/resp/eYmKCajgpLCwvdfKCidzgdCicNywvd?format=standard>