

BPA from canned foods may be harming dogs (Time.com) 12/19 (KOLR-TV/KOZL-TV (Springfield, MO)) 12/19

University of Missouri veterinarians have studied the levels and effects of BPA (bisphenol A) in dogs fed a canned diet. In this small study, dogs that were used to eating food stored in bags were then fed a canned diet for 2 weeks and levels of BPA were measured. Levels of BPA nearly tripled after being fed the canned food, even one labeled as BPA free, and changes in the dogs' gut microbiome and metabolism were associated with these increases.

BPA is an endocrine-disrupting chemical that in humans has been linked to reproductive problems and other issues. Other common sources of BPA include canned goods, water bottles and receipts. Besides the health implications for the dogs this study also showed that dogs may be good bio-sentinels for human health concerns as well

Comment: Could this possibly be a contributing factor to some reproductive issues that can occur? While the findings of this study are very interesting, I would like to see the study extended to at least 8, if not 12, weeks as it is common knowledge that dietary changes take 8-12 weeks to see their full effect. And do we know which came first the BPA level increases or the changes to the gut microbiome? Did just the fact that there was a diet change cause these effects?! SEM

Nanoparticle mixture shows promise as broad-spectrum anti-venom (ScienceMag.org) 12/20

An experimental nanoparticle mixture may become the basis for broad, stable snake anti-venom. Animal studies have shown this approach to be effective against bee venom and the hope is that by using the same technology anti-venom against numerous common snake venom toxins can be developed. Animal studies to test the broad spectrum particle snake anti-venom are expected to begin soon. If successful it may lead to the development of broad spectrum snake anti-venom that would not need refrigeration and be inexpensive to manufacture having the potential to save thousands of lives.

Comment: Hopefully if this is successful it would work for our canine companions as well. SEM

Azithromycin gel prevents Lyme disease, study finds (NewsMax.com/Agence France-Press/Relaxnews) 12/21 (ScienceDaily) 12/20

In a human study a topical azithromycin gel prevented Lyme disease when applied twice a day for three days within 72 hours of being bitten by a tick. The treatment was applied directly to the tick bite and was 100 percent effective. Use of this treatment could potentially replace the current use of strong antibiotics for three weeks to treat those suspected of having this disease.

Comment: A very promising new treatment for human Lyme disease. Unfortunately due to our dogs' fur this treatment may not be a viable one for our dogs. Tick protection and Lyme vaccinations will still probably be our canines' best defense. SEM

Study finds dogs may retain episodic memories (ScientificAmerica.com) 1/10

Once thought to be a uniquely human capability, some studies suggest that dogs may also retain the capability of episodic memory – the ability to recall an experience tied to time, places and feelings.

Comment: I am not sure why this seems to be a surprise since dogs, as well as many other species, are sentient beings. SEM

FDA: Dogs die after ingesting skin cancer cream (NBC News) 1/18

A skin cancer prevention and treatment cream, fluorouracil sold under the brand names Carac, Efudex and Flouroplex, caused the accidental death of five dogs that ingested the cream. The drug kills fast-growing cells and symptoms – vomiting, seizures and death – occur within hours of exposure. No reports of cats being affected have occurred as yet but they too could be at risk especially due to their grooming habits.

Comment: An important reminder to keep ALL medications safely out of pets (and children's) reach and to dispose of containers, contaminated cloths, etc. properly – with this particular medication it took only a small exposure to cause symptoms and death. SEM

Researchers develop new canine influenza vaccines (New Atlas) 1/27

Current canine influenza vaccines on the market are made using either inactivated or killed canine flu virus but researchers at the University of Rochester have developed two vaccines to combat H3N8 canine influenza using live-attenuated (genetically modified) virus. This approach may provide better long term as well as broader protection and clinical trials are planned. These vaccines have the potential to protect humans from cross-species infections (which are a possibility but have not occurred yet) as well.

Comment: Dogs, as well as humans, can use all the help they can get to help prevent the flu. SEM

Napping dogs shed light on memory, learning (ScientificAmerican.com) 2/7

An old adage “let sleeping dogs lie” may be a useful training tool. Research is showing that sleep enhances learning and learning deepens sleep in dogs. The research suggests that newly acquired information is re-processed and consolidated during sleep. The researchers also looked at the effect it may have on both short term and longer term learning, finding that the type of post-training activities seemed to affect a dog’s performance. Short term post-learning activities of sleeping and walking improved subsequent performances but more training and Kong play did not. Looking at performance after a week it was found that the post-learning activities of sleep, walking or Kong play markedly improved the dogs’ subsequent performances but dogs who were given more training did not improve.

Comment: *This study shows that you can overtrain your dog! Give 'em a break and they will be better off for it! SEM*

Rabies: Medicine's new anti-cancer weapon? (ScienceMag.org) 2/10

South Korean researchers packaged cancer-fighting nanoparticles with rabies surface proteins to help the nanoparticles get into the central nervous system by slipping past the blood-brain barrier. The particles could then be activated by lasers to combat targeted tumors. There is some skepticism about how the nanoparticles actually get into the brain and there are concerns for potential unwanted side effects including the nanoparticles taking a long time to clear out of the liver where they may accumulate. Animal studies showed promise and research using this technology is continuing.

Comment: *This is an interesting concept that one day may prove useful in brain cancer treatment. Turning humankind's most deadly disease to help treat cancer! SEM*

FDA OKs generic for treating heartworm disease (U. S. Food and Drug Administration) 2/17

The first FDA-approved generic heartworm treatment, Diroban, has been approved for use in class 1-3 heartworm disease. Diroban is used in exactly the same manner as Immiticide – currently the only available medication to treat heartworm infection in dogs.

Comment: *Diroban is the same medication as in Immiticide. Immiticide has been in short supply for quite a while so the approval of another product is welcome news. Being a generic also means that the cost of treatment will most likely also be less expensive than the name brand product. SEM*