

**Bioengineer working to create contraceptive vaccine for pets (Boston Globe (tiered subscription model), The) 1/19**

A Harvard bioengineer is working to develop a contraceptive vaccine that will use immunotherapy to trigger the immune system to attack the hormone that controls reproduction in dogs and cats. The investigator also has developed an implantable device, which is currently undergoing testing, that activates the immune system to shrink tumors. For the contraceptive vaccine he is hoping to develop a one-time injection versus an implant.

*Comment: While I understand the need in some parts of the country and the world for such a product, I still have quite a concern about it getting into the wrong hands – read that as animal rights zealots – and it being used improperly. I would only be for this if there was a way to make it reversible and a way to test for it, never mind its use being STRICTLY regulated. SEM*

**Studies of aging dogs shed light on neurodegenerative disorders (Conversion (U.S.), The) 1/9**

As dogs age some may develop brain changes, showing symptoms such as loss of memory and accumulation of protein plaques in the brain, similar to those seen in people with Alzheimer’s disease. Affected old dogs naturally develop these changes and may resemble aging humans in a more natural and realistic way than do genetically modified mice. In aging beagles, a diet rich in antioxidants, such as Vitamin E and C, and fruits and vegetables, as well as exercise, social enrichment and “brain games” can significantly improve cognition as they age. The same may prove true for humans as well.

*Comment: Mom always said to eat your fruit and vegetables and our old dogs are showing us a good reason why. A nice study that is already being used by at least one dog food company (Purina ProPlan’s Bright Minds Diet). SEM*

**Studies measure injuries among canine athletes (ScientificAmerican.com/Dog Spies blog) 1/16**

Two studies looked at agility performance related injuries, one a handler survey and another similar but larger study published in the *Journal of the American Veterinary Medical Association*, found that most injuries were soft tissue in origin, most occurred during competition versus practice, and the majority were not chronic in nature. The obstacles most implicated in injuries were the A-frame, the dog walk and bar jumps and the breeds most often injured were Border Collies, Shetland Sheepdogs and Australian Shepherds which is not surprising. Even when adjusted for the popularity of the Border Collie as an agility dog, this breed was more frequently injured than other breeds.

*Comment: These are nice beginning studies that look at if what we are asking our agility dogs to do is safe for them. These studies seemed to indicate overall the sport is relatively safe for our dogs although maybe a look at some slight redesign of a few of the obstacles may be needed. I would like to see a study that looks at the conformation of agility dogs and compare the injury rate of “well put together” dogs versus those that are not. SEM*

**TED-Ed: How dogs “see” with smell (Huffington Post, The) 2/4**

Dogs have 60 times more olfactory receptor cells in their noses than humans (humans have 5 million cells while dogs have 300 million), their olfactory center takes up a relatively larger portion of their brain, they have a special organ called a vomeronasal organ that lets them sniff out hormones released by animals and humans, and they smell “in stereo” – smelling separately from each nostril which helps them figure out precisely where smells are coming from. How your dogs “sees” the world with its powerful sense of smell is explained in this TED-Ed video.

*Comment: A truly fascinating video to watch. SEM*

**Do you need a plush version of your pet? This company can help (ToyNews-Online.biz (U.K.)) 2/18**

Want a clone of your pet? Well now you can get one in the form of a custom made plush toy! Send in a photo of your pet to Cuddle Clones and they will send you back (for \$199.00) a toy version of your pet. Currently the company only delivers to the U.K. The firm also creates custom figurines and ornaments of your pet.

*Comment: Well not truly a veterinary topic these plush “clones” are wonderfully done. Check out their website at <http://cuddleclones.com> to see some of their remarkable creations. Now to wait until they will ship to the U.S. and to decide which pet to have “cloned”!! SEM*

**Penn study explores breed-temperament connection (PRI) 2/23**

A study by an animal behaviorist at the University of Pennsylvania’s Center for Interaction of Animals & Society has compiled behavioral data, submitted by dog owners, on over 80,000 dogs via an online tool, called C-BARQ. There is no other species of animal, other than dogs, that express such a wide variety of appearance and behavior. Using the data provided by C-BARQ, a more complex picture of dog behavior is more evident even within breeds than once thought – and this appears to be mostly due to the influence of the owner and the environment.

*Comment: An interesting study looking at breed behaviors that actually may be looking more at owner behaviors! SEM*

**Calif. Birds arrear to be link in Lyme disease chain (Los Angeles Times (tiered subscription model)/Science Now blog) 2/25**

The bacterium, *Borrelia burgdorferi*, was found in almost half of the birds tested in Mendocino County, Calif., suggesting the potential for bird-mediated geographic spread of vector ticks and spirochetes in the far-western U.S. A closely related spirochete, *B. bissettii*, was also found in some of the birds tested. This was the first time anywhere that this spirochete has been isolated from birds. *B. bissettii* causes a Lyme-like illness in people in central and southern Europe

*Comment: Now another way that Lyme disease may be spread. Make sure your dogs are vaccinated against Lyme and ensure that you are using good tick prevention for your dog as well as yourself. SEM*

**Dog owners in Minn. Report finding foreign objects in food left in yards (Minnesota Public radio/The Associated Press) 3/9**

Pet owners in Lakeville, MN are on the alert and authorities are investigating after several dog owners found hot dogs that had screws and nails concealed in them, in their yards. Two small dogs underwent surgeries to remove a total of 3 open safety pins and 11 screws. Balls of steel wool with suspicious capsules inside have also been found. A criminal investigation is ongoing.

*Comment: Another reminder that unfortunately there are bad people out there and due diligence is needed to keep our dogs safe. SEM*

**Oxytocin may be a biochemical link in dog domestication (ABC (Australia)) 3/16**

An Australian study looked at the impact of oxytocin on the ability of dogs to understand human cues. Oxytocin is a hormone well known to help mothers and babies bond and to help people understand emotions. Dogs in the study were administered oxytocin via a nasal spray or a saline placebo and those that were given the oxytocin spray outperformed those that did not receive it. This outperformance lasted up to 15 days after the spray was given. The investigator's hypothesis is that somewhere during the course of domestication something happened in dogs' brains to allow them to understand human social cues. Whether there may be a genetic difference in the oxytocin receptor gene in better performing dogs is being looked at. If found it may help improve selective breeding especially of service dogs.

*Comment: An interesting study and may explain why dogs seem to be able to see into our souls. SEM*

**Patent for spinal brace (Victoria Advocate) 4/2**

A small animal veterinarian from Texas has designed a spinal brace that may be helpful for dogs that have had spinal injury to heal better. The brace may be useful not only for post-operative dogs but may also be useful in cases in which the owner cannot afford costly surgery.

*Comment: This adds another tool for veterinarians to help dogs that suffer spinal or back injuries. SEM*

**Study links anti-inflammatory gene to longevity in mammals (LiveScience.com) 4/7**

University of California at San Diego School of medicine researchers found that the number of copies of a gene that fights inflammation may be the key to longevity in mammals. Evaluating 14 species of mammals the team found that species that had more copies of a specific gene that deflect immune system attacks, tended to live longer. Mice, which live only about 2 years, have on average 5 copies, humans who live about 80 to 100 years, averaged about 14 copies. One question is which came first – the ability to decrease inflammation in order to be able to live longer or living longer that needed the ability to fight off inflammation.

*Comment: Life span is associated with many factors and this study points to one major factor but it is still all about balance. SEM*

**Xylitol poisoning kills Wis. dog (KARE-TV (Minneapolis-St. Paul, Minn)) 4/23**

A 2 year old Golden Retriever had to be euthanized due to severe liver damage after eating xylitol containing Ice Breakers gum. Many products contain the artificial sweetener, xylitol.

*Comment: Nowadays many, many products contain xylitol from gum, toothpaste, nasal sprays, baked goods and also many oral liquid medications. **Xylitol while safe for humans but is deadly for dogs**. Check your label ingredients when buying products and also alert your veterinarian to make sure that any oral human liquid medication that they might prescribe is xylitol free. SEM*

**Researchers test vaccine for zoonotic Chagas disease (HealthDay News) 5/8**

An experimental vaccine against Chagas disease, a disease transmitted by “kissing bugs”, provided long-lasting protection against the disease in mice. The vaccine used three proteins from the parasite as antigens which caused the mice to produce antibodies against the disease. It is not known whether the vaccine will work in people or not.

*Comment: Maybe if the vaccine does not work in people it might work in other animals such as our dogs?? SEM*

**New Strain of rabies discovered in N.M. fox (Albuquerque Journal (N.M.) (free content) 5/19**

A previously undocumented strain of rabies was identified, via genetic sequencing, from an infected fox in New Mexico. The strain resembles, but is distinct, from the virus carried by bats. Further testing of other dead foxes and bats will be done to check for this rabies strain.

*Comment: While it is concerning that a new strain of rabies has been identified, the current rabies vaccines for animals and people should protect against this strain. SEM*