

First canine ehrlichiosis vaccine developed in Israel. (Israel21c) ½

A serendipitous laboratory finding has led to a vaccine being developed against the potentially deadly tick-borne disease, canine monocytic ehrlichiosis. While investigating how long ticks need to be attached to dogs in order to transmit the disease, the researcher noticed several dogs in the study did not become sick and the ticks on these dogs did not become infected, this led to the development of the vaccine. Further research is needed before the vaccine can be marketed commercially.

Comment: If this vaccine becomes available it will be a great development in the fight against one tick-borne disease which currently can only be prevented by tick control and treated by a lengthy course of antibiotics. SEM

Compared to technology, the dog's nose still knows. (ExtremeTech) 1/15

German scientists are working to develop high-tech devices to detect minute traces of exhaled gases to locate live humans trapped in rubble. A group of researchers devised a study, using human volunteers sitting in enclosed spaces, to identify compounds that would be candidates to use when looking for life amid disaster areas. Twelve molecules were identified but some may not be suitable for use in the field. Any instrument designed to pick up these molecules needs to operate quickly, and be portable if not fairly mobile. Another consideration in devising any hand-held equipment is that its human operator emits the same molecules so this issue needs to be dealt with as well. - placing the equipment on a robot, like the DARPA's Alpha Dog may overcome this obstacle.

Comments: Personally if such a robot were developed I still would like the warmth and companionship of a search dog to find me. I don't think robot dogs have been developed yet that know how to lick! SEM

DNA, diet shed light on dog evolution. (ScienceMag.org) 1/23

A new study using genetic analysis has shown that dogs have more genes that code for the starch-digesting enzyme, amylase, and a longer enzyme, maltase, which help dogs digest a more humanlike diet. The study concludes that dogs evolved to eat a more varied diet than their wolf ancestors, bolstering the theory that dogs may have coevolved with humans and their diet.

Comment: Genetic research has opened up a whole new way of looking at evolution – interesting stuff! SEM

Tobacco plants used to develop new rabies treatment. (News-Medical.Net) 2/2

Researchers in London have developed a monoclonal antibody, against rabies, using a genetically altered tobacco plant. The new antibody prevents the rabies virus from attaching to nerve endings around the site of a bite, keeping the virus from traveling to the brain. The antibody was purified from the plant leaves and has been shown to neutralize a broad panel of rabies viruses. Producing a cost effective treatment for people helps to ensure adequate rabies prevention for low-income families in developing countries.

Comment: *Rabies is essentially 100 % fatal if left untreated. From personal experience the cost of the current standard rabies vaccine, human immunoglobulin, has skyrocketed due to vaccine shortages, a less expensive alternative would be a welcome change for all but especially for developing countries.* SEM

Gene therapy reverses type 1 diabetes in dog, study finds. (eMaxHealth.com) 2/7

Researchers from Barcelona, Spain cured type 1 diabetes, an auto-immune disease, in dogs with a single session of gene therapy given by a simple intra-muscular injection. Complete remission of the disease persisted for 4 years and no dogs developed complications often seen secondary to diabetes. Previous studies in mice were also successful, leading to the study in dogs, with the hopes that this can be translated into a treatment for human use.

Comment: *More exciting developments using genes! What is unclear from the article is whether the length of the study was for only four years and therefore that was along as they know the dogs stayed in remission or whether the dogs needed another treatment after 4 years. Either way it still is a remarkable medical breakthrough.* SEM

U.K. Company introduces preloaded insulin pen for dogs and cats. (Plastic & Rubber Weekly (U.K.)) 2/11

VetPen has been developed by a U.K. medical device specialist, Owen Mumford, and is the world's first insulin pen for diabetic dogs and cats. The pen is available in two sizes – an 8 unit pen for cats and small dogs and a 16 unit pen for larger dogs – and is currently in the European Union and Switzerland. It will be launched soon in other countries.

Comment: *If this insulin pen is reasonably priced this will be of great benefit to pet owners who have to treat diabetic pets – especially cats that often need just very small doses of insulin that can be hard to draw up from an insulin vial. If gene therapy works to cure diabetes (as in the previous article) the VetPen may become obsolete very quickly – not necessarily a bad thing.* SEM

How science of Iditarod dogs saves soldiers' lives. (<http://www.alaskadispatch.com/article/how-science-iditarod-dogs-saves-soldiers-lives>) 2/19

Research on the physical stamina and metabolism of Iditarod dogs has led to breakthroughs in the way the military trains and feeds bomb-sniffing dogs during wartime patrols.

Comment: *Okay PETA and HSUS now what do you have to say now about sled dog races – that they are helping save soldiers lives???* SEM