

CanCog Technologies: Naturally Occurring Dog Models of Epilepsy

CanCog Technologies is a neuroscience contract research company based in Toronto, Canada, providing in vivo preclinical services. CanCog Technologies has a range of rodent epilepsy models, including kindling. In addition, CanCog provides naturally occurring dog models of epilepsy. Dogs naturally develop idiopathic epilepsy and have a higher degree of genetic homology with humans than rodents, which makes it a strong candidate for translational models of human disease, providing additional evidence for efficacy of new therapeutics prior to establishing clinical trials in people. The incidence of epilepsy in dogs ranges up to 5% and as 20- 75% may become intractable to treatment. The clinical and EEG changes in canine spontaneous epilepsy are very similar to those that occur in people. Ambulatory EEG recordings can be collected. Despite well established rodent models of epilepsy, approximately 30% of human epileptic patients do not respond to treatment, indicating a need for additional models.

CanCog Technologies has an established network of collaborating board certified veterinary neurologists in Canada and also in Europe and is able to identify naturally occurring cases of epilepsy, either newly diagnosed or intractable cases. The Canadian neurologists practice in a densely populated area of southern Ontario (10M population) and thus have a large population of dogs upon which to draw. One of the collaborators, Dr Roberto Poma, is in academic referral practice and he has a primary research focus on epilepsy. CanCog Technologies is currently conducting a clinical trial with privately owned dogs identified through this network.

Canine epilepsy is frequently polygenic in nature. In miniature wirehaired dachshunds a specific gene mutation has been identified that is identical to the genetic mutation associated with Lafora Disease in teenagers. CanCog Technologies is proposing to establish a breeding colony of affected dogs in order to provide a population of research animals for future studies of this condition. In addition, CanCog Technologies currently maintains a population of approximately 200 beagle dogs. A proportion of these dogs have idiopathic epilepsy and they could be made available for studies with interested sponsors.

More information about CanCog Technologies can be found at www.cancog.com