



Neurology Research Program Area

02606: The Genetic Background of Lumbosacral Transitional Vertebrae in Dogs

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Total Grant Amount: \$59,320.00; Grant Period: 4/1/2019 - 3/31/2020

Dogs of medium and large size or breed can suffer from a condition called lumbosacral transitional vertebrae (LTV), which means that the dog has a malformed vertebra in the caudal end of the spinal cord. Different types of LTV exist and radiographic screening is used to determine the form of LTV in dogs. The disorder can be seen right after birth and it is hereditary. However, it is not known how the disease is inherited, or what genes may contribute to this abnormal development of the spinal vertebrae. LTV is common in German Shepherd Dogs and the disorder predisposes the dogs to cauda equina syndrome. Affected dogs may become increasingly painful or may develop paralysis of the hind legs. There is a need to clarify the genetic background of LTV. The investigators plan to use genetic analyses to identify and confirm genetic risk factors that bring about LTV in dogs. The researchers will both search for regions in the dog genome that associate with the disease and will also investigate the possible contribution of known LTV candidate genes discovered in other species.