



02875: Canine Pituitary Adenoma Organoids (CaPitO) as an in vitro Model for Canine Cushing's Disease

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Pituitary-dependent hypercortisolism (PDH) caused by a pituitary tumor (adenoma) is one of the most common endocrine disorders in dogs. Medical treatment options that focus on the pituitary tumor are currently lacking. In this project, investigators aim to validate three-dimensional Canine Pituitary adenoma Organoids (CaPitOs) as a model for canine PDH, and use this to find new pituitary-targeted treatment options. Organoids are grown from stem cells and resemble the primary organ or tumor they derive from and therefore can be viewed as avatars of the tumor that can be cultured in the laboratory. Investigators will perform next generation sequencing techniques to identify new treatment targets and then inhibit these targets with drug screens in the validated CaPitOs. Drugs identified in this study may eventually improve the survival and quality of life of dogs with PDH, improve the treatment of PDH in humans, as well as offer a sound but less-invasive alternative to pituitary surgery.

Cash contribution: \$2,500

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