**Title:** A pilot study to evaluate the effect of anesthesia in cats undergoing routine dental procedures at a primary care center on symmetric dimethylarginine (SDMA), clusterin, cystatin B and inosine levels

**Investigators:**
Ira G. Roth, DVM, Director Community Practice Clinic
Alison Meindl, DVM

For more information please contact Dr. Roth via email at igroth@uga.edu or the Clinical Trials Coordinator Lisa Reno at lisar@uga.edu.

**Study description:**
SDMA (symmetric dimethylarginine) is a biomarker excreted by the kidneys that is an indicator of acute kidney injury or kidney disease. Early increases in SDMA levels make it a more sensitive indicator of kidney disease than creatinine. The purpose of the study is to determine if duration of anesthesia has an effect on the levels of SDMA and the acute renal injury markers clusterin, cystatin B and inosine in cats undergoing routine dental procedures.

The study will enroll 30 cats undergoing dental procedures at the UGA Community Practice Clinic: 15 cats that are healthy adults at least 12 months of age, and 15 cats that have Stage II renal disease according to the International Renal Interest Society (IRIS) guidelines. Upon evaluation all enrolled cats will receive a physical examination and have a teaspoon of blood and urine collected for routine labwork prior to anesthesia in addition to baseline biomarker evaluation. After the dental procedure has been completed, an additional teaspoon of blood and urine will be collected from all cats for evaluation of biomarker levels post anesthesia. A recheck evaluation will be performed 14 days later to assess recovery of the cats and to collect a final blood and urine sample for biomarker analysis.

The study will cover the cost of pre-anesthesia labwork (complete blood count, serum chemistry, and T4) as a benefit to the clients, in addition to paying for biomarker analysis of the blood and urine samples. The Day 14 recheck will also be paid for by the study. Clients are responsible for the cost of the initial office visit, baseline urinalysis, and all routine costs associated with the dental procedure.

**Duration of study:**
This study is currently OPEN.

**Potential benefits to veterinary medicine:**
Veterinarians are now using the level of SDMA in the blood to determine if cats are developing kidney disease. Clusterin, cystatin B and inosine are currently under evaluation for use in pets and may also prove useful in early determination of kidney disease. Studies in people have shown promise using measurement of these markers to evaluate kidney function.