



Kyle G. Mathews



Professor, Small Animal
Surgery

Education

DVM, University of Wisconsin
Internship, University of
Pennsylvania
Residency and MS, University of
Minnesota
Diplomate, American College of
Veterinary Surgeons

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Title:

Research emphasis:

Development of minimal to non-invasive alternatives to current surgical techniques. Including invention of: a) canine juvenile pubic symphysiodesis (minimally invasive procedure to alter pelvic geometry in dogs predisposed to hip dysplasia), b) non-invasive topical therapy of canine fungal rhinitis, c) subtotal ear canal ablation (minimally invasive alternative to ear canal ablation for end-stage otitis), d) muscle sparing laryngoplasty, and e) photodynamic lymphatic ablation. Dr. Mathews has extensive expertise performing surgery in a variety of non-human species in both clinical and experimental settings and is currently involved with treatment of urinary incontinence with stem cell therapy.

Selected publications:

Rowe E, Mathews KG, Tate LP, Linder KE. The effect of photoablation on cisterna chyli patency. *Vet Surg* 2014;43:642-649.

Arnold GA, Mathews KG, Roe S, et al. Biomechanical assessment of three soft tissue replacement materials – An *in vitro* evaluation of porcine small intestinal submucosa, canine fascia lata, and polypropylene mesh. *Vet Surg* 2009;38:834-44.

Mathews KG, Linder K, Davidson G, et al. Assessment clotrimazole gels for *in vitro* stability and *in vivo* retention in the frontal sinus of dogs. *Am J Vet Res* 2009;70:640-647.

Mitsui A, Mathews KG, Linder K, et al. Effect of fascial abrasion, fasciotomy, and fascial excision on cutaneous wound healing in cats. *Am J Vet Res* 2009;70:532-538.

Application:

- Surgical disease morbidity reduction
- Oncologic surgery
- Wound healing / tissue regeneration

Collaboration potential:

- Large animal models of surgical diseases
- Surgical technique and biomedical implant development
- Regenerative medicine strategies for treating a variety of soft tissue diseases