



Brian C. Gilger



Pathogenesis of Ocular Immunologic and Inflammatory Disorders

Research emphasis:

In the Laboratory of Ocular Immunology, Toxicology, and Drug Delivery, we study the pathogenesis of ocular immunologic and inflammatory disorders and have developed innovative methods to treat these potentially blinding diseases. We have been especially interested in sustained drug delivery, immunomodulation through gene therapy, and ocular pharmacology and toxicology. We study the two main causes of blindness in horses in the southern United States, equine recurrent uveitis and fungal keratitis. We are also interested in studying these naturally-occurring diseases, since they are models of common human diseases.

Application:

- Ocular inflammation / uveitis
- Immune-mediated ocular disease
- Ocular drug delivery
- Ocular toxicology

Collaboration potential:

- Ocular models
- Clinical trials
- Ocular devices
- Gene therapy applications

Selected publications: (limit 4)

Schaefer E, Walsh M, Abbaraju S, Amin R, Salmon J, Weiss S, Grau U, Velagaleti P, **Gilger B**. Sustained release protein therapeutics from subcutaneous thermosensitive biocompatible and biodegradable pentablock co-polymers. *J Controlled Release* 2016.

Gerding JC, **Gilger BC**. Prognosis and impact of equine recurrent uveitis. *Equine Veterinary Journal* 2015 Apr 18. doi: 10.1111/evj.12451).

Gilger BC, Mandal A, Shah S, Mitra AK. Episcleral, intrascleral, and suprachoroidal routes of ocular drug delivery – Recent research advances and patents. *Recent Patents on Drug Delivery and Formulation* 2014 (DOI:10.2174/187221130802150707093509).

Gilger BC, Abarca EA, Salmon JH, Patel S. Treatment of posterior uveitis by injection of triamcinolone acetonide into the suprachoroidal space using microneedles. *Invest Ophthalmol Vis Sci* 2013;54(4):2483-2492.

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