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## NEWS & EVENTS

### Ophthalmology Resident Wins National Phi Zeta Award

Kevin Donnelly, DVM '10, a third-year veterinary ophthalmology resident at the MU College of Veterinary Medicine, has received a national Phi Zeta award for outstanding research in the basic science category.

The objectives of the Society of Phi Zeta are to recognize and promote scholarship and research pertaining to the welfare and diseases of animals. Every year, the national society recognizes two manuscripts, one for basic science research and another for clinical research. Each veterinary school's Phi Zeta chapter is allowed to submit one manuscript in each category.

"This award is a tremendous honor for me and our research group," Donnelly said. "To be selected for this award among so many innovative research projects feels incredible."

Donnelly's manuscript, "Decorin-PEI nanoconstruct attenuates equine corneal fibroblast differentiation," was published in *Veterinary Ophthalmology* in May 2013. His co-authors were Elizabeth Giuliano, DVM, MS, an associate professor of veterinary ophthalmology; Ajay Sharma, PhD, an assistant research professor of veterinary ophthalmology; Ashish Tandon, PhD, a postdoctoral fellow; Jason T. Rodier, MD, a postdoctoral fellow; and Rajiv R. Mohan, PhD, MSc, the Ruth M. Kraeuchi Endowed Professor in Veterinary Ophthalmology.

Corneal disease, one of the most common issues faced in veterinary ophthalmology, frequently results in vision impairment due to scarring, known as fibrosis. The MU ophthalmology group has pursued a variety of methods to attempt to inhibit or decrease [corneal fibrosis](#).

In the research described in Donnelly's manuscript, the team used nanoparticle gene therapy to insert DNA that codes for an antifibrotic protein, decorin, into normal equine corneal cells in cell culture and then simulated injury. The goal was to cause the corneal cells to overproduce the



antifibrotic protein to reduce scarring. The researchers demonstrated that gene therapy with this protein was safe and effective at inhibiting fibrosis in an in vitro model of equine corneal fibrosis.

Donnelly said he was grateful for the guidance of his primary research mentors, Giuliano and Mohan.

"To be a part of this incredibly productive laboratory and vision science group has richly added to my residency experience while at MU," Donnelly said.

After receiving his doctor of veterinary medicine degree from MU in 2010, Donnelly completed a rotating internship at the University of Pennsylvania. He then returned to MU for his residency, which he will complete in June.

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College of Veterinary Medicine  
W-203 Veterinary Medicine Building  
Columbia, MO 65211  
Phone: (573) 882-3554  
E-mail: [cvmwebmaster@missouri.edu](mailto:cvmwebmaster@missouri.edu)



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