

# Zweig

From the Harry M. Zweig  
Memorial Fund for Equine  
Research at Cornell University  
College of Veterinary Medicine



No. 58 November 2014

## Equine surgical innovations

A pair of unique surgical procedures performed on animals promises to revolutionize the ways surgeons repair cartilage and meniscus tears. In the first set of procedures, a cross-institutional, interdisciplinary team of surgeons and researchers tried a new method for cartilage repair on horses at the Cornell University Hospital for Animals on August 21.

Another team conducted a meniscus repair procedure on September 3 and 4 involving custom-designed, individualized replacement parts. With information from an MRI scan of the patient's joint, the researchers used a 3-D printer to assemble an artificial meniscus fitted to the patient's body.

The surgeons and researchers taking part in these groundbreaking trials include medical staff from Cornell's College of Veterinary Medicine, including Zweig grant recipient Dr. Lisa Fortier; the Hospital for Special Surgery (HSS), a section of the New York-Presbyterian Healthcare System and an affiliate of Weill Cornell Medical College in New York City; and the New York Giants football team.

"The goal is to make these technologies available for both

horses and people," said Lisa Fortier, professor of large animal surgery at Cornell's College of Veterinary Medicine.

The August 21 procedures involved one-hour surgeries on five horses to practice a new procedure and use a cartilage repair device developed by a biomechanical engineer at HSS who designed an off-the-shelf biocompatible scaffolding that can be surgically inserted into damaged cartilage for repair and to prevent the onset of arthritis. Cartilage defects occur due to overuse or from such traumatic episodes as a crucial ligament tear or rupture, for example.

"We know that any of those types of cartilage defects can lead to arthritis," which the procedure aims to prevent, Fortier said. Once cartilage is torn, there is currently no viable repair nor does it heal on its own.

"My goal is to be able to use these procedures in my own equine patients," said Fortier.



INSIDE: NEW DEAN FOR RESEARCH

3 NEW CHAIRMAN OF THE NYS GAMING COMMISSION  
3 LET'S TALK TICKS

# Dr. Bettina Wagner to lead research at College



Dr. Bettina Wagner has been appointed Associate Dean for Research and Graduate Education at the Cornell University College of Veterinary Medicine. Her five year term began September 1, 2014. Dr. Joel Baines, who previously held the position, became the Dean of Louisiana State University's School of Veterinary Medicine effective September 1, 2014.

Wagner's research has focused on equine immunology, particularly immune responses and protective mechanisms in neonates and young foals. For this work she was honored with a two-year term as the Harry M. Zweig Assistant Professor in Equine Health in 2009.

"Bettina is an outstanding scientist who has made major contributions to the detection of animal diseases and brings enormous credibility to this important leadership position," said Dr. Michael Kotlikoff, the Austin O. Hooey Dean of Veterinary Medicine.

As Associate Dean, Wagner will be responsible for the strategic leadership and advancement of research and graduate education at the College. She will oversee research administration across the College, forging collaborative partnerships between researchers and other stakeholders across the College.

Managing the College Research Office, which facilitates grant applications, she will forge opportunities for faculty collaborations; implement research initiatives; serve as Chair of the College Research Affairs Committee. In addition she will provide administrative oversight for internal grant programs, including the Zweig Memorial Fund Program; serve as Director of the Veterinary Investigator Program and as Associate Director of the Cornell University Agriculture Experiment Station, and provide strategic leadership for the College's research programs and summer research programs.

## 35th Anniversary of Zweig Fund

With support from the Harry M. Zweig Memorial Fund for Equine Research for over 30 years, the College of Veterinary Medicine has been able to conduct cutting edge research benefiting the equine species, which helps provide protection and preventative planning for the equine industry, thus helping to ensure a healthy and positive future for the horse racing industry. By legislation, the Zweig Fund receives a percentage of revenue to support research benefitting equine health. Cornell has developed equine research projects in the following areas supported, in part, by the Zweig Fund: reproduction, orthopedics, genetics, cardio-respiratory functions, nutrition, and infectious diseases.

In addition, the Zweig Fund has been instrumental in supporting the careers of young equine researchers through the Harry M. Zweig Assistant Professor in

Equine Health program and the Zweig Equine Clinical Fellowship program.

To mark the 35th anniversary of the Fund, we wish to demonstrate the College's appreciation and to share its accomplishments by hosting a series of research presentations for the Zweig Committee. The presentations will be in support of the Harry M. Zweig Memorial Fund, and are intended to further promote the efforts of the Fund and to demonstrate a greater awareness of equine health and research.

The presentations are scheduled for mid-November at the Cornell Ruffian Equine Specialists, a Cornell University Affiliate center for equine sports medicine and critical care located at 111, Plainfield Avenue, Elmont, NY 11003. Learn more at: [ruffian.cornell.edu/](http://ruffian.cornell.edu/)



# Chairman of the New York State Gaming Commission



Mark D. Gearan is the president of Hobart and William Smith Colleges in Geneva, N.Y. He previously served in many public leadership roles, including Director of the Peace Corps and Assistant to the President, Director of Communications, and Deputy Chief of Staff to President Bill Clinton. He is an appointee of the Bipartisan Policy Center's Commission on Political Reform. Gearan earned his B.A. in government at Harvard University and his law degree at Georgetown University.

## Let's talk ticks

Cornell University's Animal Health Diagnostic Center ([ahdc.vet.cornell.edu](http://ahdc.vet.cornell.edu)) answers frequently asked tick questions:

### What should I do if I find a tick attached to me or my horse?

Don't panic. Remove the tick with a good sharp set of tweezers and protective gloves. There are also various products for tick removal on the market of variable efficacy. Do not attempt to burn or suffocate the tick as this causes the tick to release additional, potentially infectious, saliva into the wound. Observe the feeding site for signs of infection. Keep the tick in an escape proof container pending further testing.

### What are the dangers of ticks?

Ticks are vectors for a number of diseases. After they attach to the horse, they can begin transmitting infectious diseases, such as Anaplasmosis. For other pathogens like *Borrelia burgdorferi*, the causing agent of Lyme disease, it takes 18-24 hours before the bacteria are transmitted. Not all ticks carry pathogens.

### What is Lyme disease and how common is it?

Lyme disease is the most common vector-borne disease in the United States. It is transmitted by ticks. The disease affects humans, dog, horses and possibly other animals. Lyme disease is caused by infection with bacteria in the genus *Borrelia*. Only some horses that get bitten by infected ticks will also develop Lyme disease.

### How do I know if a tick is infected with Lyme disease?

The percentages of pathogen-infected ticks vary from region to region. Lyme disease is endemic in the northeastern part of the US and occurs less frequently in other regions. Only a proportion of ticks are infected with *Anaplasma* or *Borrelia*. The Animal Health Diagnostic Center at Cornell University offers tick identification and PCR to identify if a tick was infected with *Anaplasma* or *Borrelia*. If the tick was infected with *Borrelia*, a follow up Lyme Multiplex test on the horse's blood should be performed three to four weeks after the tick was removed.



The Harry M. Zweig Memorial Fund for Equine Research honors the late Dr. Harry M. Zweig, a distinguished veterinarian, and his numerous contributions to the state's equine industry. In 1979, by amendment to the pari-mutuel revenue laws, the New York State legislature created the fund to promote equine research at the College of Veterinary Medicine, Cornell University. The Harry M. Zweig Committee is established for the purpose of administering the fund and is composed of individuals in specified state agencies and equine industry positions and others who represent equine breeders, owners, trainers, and veterinarians.

#### CORNELL UNIVERSITY COLLEGE OF VETERINARY MEDICINE 2015 HARRY M. ZWEIF MEMORIAL FUND COMMITTEE

##### Jean Brown

*Sr. Vice President, Operations  
Blue Chip Farms, Inc.  
Wallkill, N.Y.*

##### Gabriel Cook, DVM

*New England Equine Practice  
Patterson, N.Y.*

##### Janet Durso, DVM

*Middletown, N.Y.*

##### Mark D. Gearan

*Chairman  
New York State Gaming Commission  
Schenectady, N.Y.*

##### Paul Kelley

*Kelley Racing Stable, LLC  
Gansevoort, N.Y.*

##### Michael I. Kotlikoff, VMD, PhD

*Austin O. Hooey Dean of Veterinary Medicine  
Cornell University College of Veterinary Medicine,  
Ithaca, N.Y.*

##### Paul C. Mountan, DVM

*Rhinebeck, N.Y.*

##### Robert M. Tugel, DVM

*Avon, N.Y.*

##### Patricia Wehle

*Fairport, N.Y.*

##### Robert Williams

*Executive Director  
New York State Gaming Commission  
Schenectady, N.Y.*

##### William Wilmot, DVM

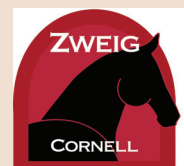
*NYS Thoroughbred Breeding & Development  
Fund Corp. Saratoga Springs, N.Y.*

##### Anna Zweig

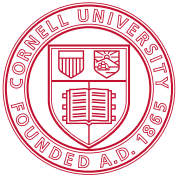
*Middlebrook Farms  
Nassau, N.Y.*

##### Brian Zweig

*Rensselaer, N.Y.*







Cornell University  
College of Veterinary Medicine

## Winner's Circle

"Shake it Cerry" (top) and "Father Patrick" (bottom), winners of this year's Zweig Trot held at Vernon



Prefer to receive this newsletter electronically? Please email [lam78@cornell.edu](mailto:lam78@cornell.edu) with the subject "Subscribe Zweig newsletter." We will add your email address to a list and remove your name from the print mailing list. You can read the searchable electronic newsletter online or download at your convenience at <http://bit.ly/ZweigNews>.