



A Newsletter Published by the Marion duPont Scott Equine Medical Center

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The Marion duPont Scott Equine Medical Center is fully integrated with the missions of the Virginia-Maryland Regional College of Veterinary Medicine, consistent with the land grant traditions of Virginia Tech and the University of Maryland. Our constituents are those with an interest in the horse: students, veterinarians, horse owners, and horse professionals. Our faculty and staff strive to provide:

- Pre-eminent equine health care services for the region;
- Exemplary educational experiences for all of the Equine Medical Center's veterinary students;
- New knowledge for the well-being of the horse, and for the economic benefit of the equine industry



## New Faculty Member to Focus on Molecular Research



Dr. Jennifer G. Barrett has joined Virginia Tech's Marion duPont Scott Equine Medical Center as an assistant professor of equine surgery. In this tenure track ap-

pointment, Barrett will be utilizing the center's newly constructed molecular research lab and directing investigations into tendon and ligament healing and repair.

She will also serve as a practicing surgeon at the hospital and as an instructor for the center's veterinary and graduate students.

"Dr. Barrett is an expert in the area of tissue regeneration — specifically involving tendons, ligaments, and cartilage — and will be conducting research in that area," said Dr. Nat White, Jean Ellen Shehan Professor and Director of the Marion duPont Scott Equine Medical Center. "We are pleased with the experience and enthusiasm that she brings to this new initiative and look forward to the discoveries that we can bring back to the hospital for direct application to these problems."

Prior to joining the equine medical center, Barrett, who earned a doctor of veterinary medicine degree from Cornell University, and a Ph.D. in molecular biol-

ogy from Yale University, conducted a residency in equine surgery at the University of Illinois' Veterinary Teaching Hospital. She held a postdoctoral research position in the University of Wisconsin's Comparative Orthopaedics Research Laboratory in Madison and completed an internship in equine medicine and surgery at Rood and Riddle Equine Hospital in Lexington, Ky.

Barrett was honored in 2006 with both the American Association of Equine Practitioners' Research Fellow Scholarship and the American College of Veterinary Surgeons' Resident Research Presentation Award. Her work has been published in various prestigious scientific publications including the Journal of Orthopaedic Research, the Journal of Veterinary Internal Medicine and the Journal of Cell Biology, and she has lectured at several universities including the University of Illinois and Yale University.

"I am excited about this position because it gives me an opportunity to perform research and practice in an area where there is a high population of performance horses. It is like bringing the lab right to the patients," said Barrett. "I will be using what is currently known in molecular biology to develop tissue engineering techniques to help treat problems that are important to both horses and people, including tendon injuries and osteoarthritis."

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## Director's Message by Dr. Nat White

The faculty and staff at the Marion duPont Scott Equine Medical Center are fortunate to have the loyalty and patronage of those individuals who entrust us with the care of their horses. Many of these owners, trainers and veterinarians have helped to create an outstanding equine medical care institution with their generous contributions of time, capital and expertise.

Beginning with the founding gift from Mrs. Marion duPont Scott, the private sector has supported all aspects of the center's activities, from equipment purchases and facility improvements to staff training and business planning. Directed contributions have been instrumental in the creation of the treadmill facility, the farrier shop, the isolation unit, the MRI Suite, the Memorial Garden, the equine ambulance, our new outpatient barn, and the state-of-the-art molecular research laboratory that is currently under construction. An operating endowment that has received contributions over many years has allowed the hospital to address its highest priorities in a timely manner. Endowments for faculty positions, as well as for staff education and retention, have been critical to maintaining the center's expertise in the dynamic arena of equine health care.

Individuals have donated time and knowledge to help with business and financial plans, marketing, foal watch, patient care, and library maintenance. This assistance from supporters has been integral to the hospital's success in caring for each and every patient and in training the world's future veterinarians and specialists.

By choosing to support the center, donors have provided the means for faculty and staff to make critical advancements in patient care and research. Every donation is important to us. Each act of kindness from our friends impacts both our center and the entire industry by allowing us to develop new treatments and remain on the forefront of equine medicine and surgery. At the Marion duPont Scott Equine Medical Center, your generosity and gifts truly make a difference.

To EMC Donors: You are an inspiration and your dedication to our success improves the care for each horse we see. Thank you for your support!

*Nathaniel A. White II, DVM, MS, Diplomate ACVS, Jean Ellen Shehan Professor and Director*

*To contact Dr. White, please visit his online profile at <http://emc.vetmed.vt.edu/bios/white.html>.*

Donations made possible the recent addition of MRI for anesthetized horses.



# Critically Ill Foals Receive Care at Equine Medical Center

During the first 30 days of life, newly born horses (called “foals”) are especially sensitive to bacteria and other dangers commonly found in their every day surroundings. Each year between January and June, dozens of these foals are brought to Virginia Tech’s Marion duPont Scott Equine Medical Center for treatment where the hospital’s experts work diligently to return the critically ill young animals to full health.

“We work with extremely compromised patients that sometimes arrive to us with diseases involving multiple organs,” said Dr. Anne Desrochers, clinical assistant professor in equine medicine. “It is very fulfilling to see many of these little babies go home happy and healthy after having been so sick.”

Common problems that can affect foals include prematurity, neonatal sepsis (infection), hypoxic ischemic encephalopathy (brain damage resulting from a lack of oxygen which is also known as “dummy foal”) and diarrhea. “These diseases can occur due to exposure to pathogens in utero or after birth,” said Desrochers.

Due to their delicate nature, neonates that are brought in for emergency treatment are always seen first by members of the hospital’s internal medicine team who specialize in the physiologic interaction among internal body systems. These board certified experts oversee and implement their care along with help from residents, interns and nurses.

“The nature of a neonate’s illness can be more volatile because their immune defenses are not quite as vigorous as those of adults,” said Dr. Martin Furr, the Adelaide C. Riggs Chair in Equine Medicine.

Furr notes that all horses have very sensitive organ systems that can be damaged by sitting or lying down for extended periods of time. A foal’s small size (the average healthy neonate weighs approximately 100-120 lbs)



Foal Intern Dr. Kati Maria Emilia Vainio cares for a patient.

allows the clinicians to prevent this problem by moving the patient often and repositioning their body as needed.

“Their small size enables us to manage their posture so that they don’t become compromised as a result of lying on the mats,” said Furr.

Unlike in human medicine in which infants are often separated from their mothers, foals that are brought to the center are typically kept in the same stall as the mare. This practice is both a convenience for the owner and a benefit to the patient.

“When the foal is healthy and gets back home, we want them to have a full and normal life with their mothers so, in most cases, it is best if they stay together during treatment,” said Desrochers. “The mares are usually extremely cooperative because they seem to understand that we’re here to help.”

Integral to the success of the center’s neonatal care service is the Foal Watch Volunteer Program which matches volunteers with cases requiring around-the-clock attention. Participants in the program sit with sick patients for assigned periods of time in order to observe and report any physical or behavioral changes.

“It is important to be very alert with neonates because their weakened state makes them susceptible to other complications,” said Furr. “Our faculty, staff and volunteers, very carefully monitor these patients to avoid

problems such as sores, eye infections and imbalance in blood glucose levels.”

According to Penny Archer, director of volunteer services at the center, the Foal Watch Volunteer Program runs from the time that the first foal is admitted in early February to the time that the last patient leaves in late June. Horse experience is not necessary but all participants undergo mandatory training.

“The goal is to supplement the equine medical center’s workforce with a capable and trained volunteer team,” said Archer. “They are an extra pair of eyes, hands and ears in the intensive care unit.”

Although the task of bringing a sick foal back to health can be very challenging and demanding, those who participate in the healing process note that it is also extremely fulfilling.

“The first time they start nursing, the first time that they take steps, it makes your job worthwhile,” said Desrochers. “It’s very demanding to deal with because the foals are usually so sick and vulnerable and not every patient recovers, but at the end of the day, it is always worth it.”

Information regarding the Marion duPont Scott Equine Medical Center’s clinicians and services is available online at [www.equine-medicalcenter.net](http://www.equine-medicalcenter.net). Appointments for neonatal consultations may be scheduled by calling 703/771-6800.



Mrs. Shelley Duke receives a standing ovation during the Distinguished Service Award presentation on Sept. 13.

## Equine Medical Center Presents its First Distinguished Service Award to Shelley Duke



Mrs. Shelley Duke, owner and manager of Rallywood Farm in Middleburg, Va., has been named the first recipient of the Marion duPont Scott Equine Medical Center's

Distinguished Service Award.

The accolade was established to recognize individuals who have generously and tirelessly provided leadership and expertise to help the equine medical

center attain a higher level of achievement in service, teaching and research. The award was presented during a Sept. 13 meeting of the center's council in recognition of Duke's extraordinary dedication and exemplary volunteer service.

"Shelley is a friend, advocate, and leader for the equine medical center," said Dr. Nat White, Jean Ellen Shehan Professor and Director. "Her enthusiasm, tremendous efforts and exceptionally high standards have contributed greatly to the hospital's transformation into a premier equine healthcare and teaching facility, and this commendation is richly deserved."

Duke, a member of the Virginia Tech Board of Visitors, has spent more than 20 years working towards the betterment of equine healthcare and veterinary programs at the university. She has served as chair of the center's council since 1999 and is credited with establishing the hospital's highly successful volunteer program.

"Growth is a dynamic experience when the result is being able to see and feel the fruits of one's efforts," said Duke. "I feel proud to represent the Marion duPont Scott Equine Medical Center and am sincerely appreciative of this honor."

### Marion duPont Scott Equine Medical Center

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